



Valley Path



Valley Path brand & wayfinding signage guidelines

April 13, 2015

★ Prepared for: Maricopa Association of Governments, AZ

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Executive Summary

The Phoenix metro area's bicycle network includes nearly 900 miles of off-street pathways. A cohesive wayfinding system will unify the network as it promotes the assets of the region while creating an appealing and intuitive cycling experience for all.

The Valley Path Brand & Wayfinding Signage Guidelines serve as a technical resource to guide parks and transportation agencies as they plan, design, and implement the brand and wayfinding signage along the off-street bicycle network in the Phoenix metro area. The Maricopa Association of Governments (MAG) and member agencies developed this manual in response to requests from the public for better uniformity and consistency of wayfinding signage throughout the regional off-street bicycle network.

The MAG bikeways network includes both on and off -street facilities. Existing off-street bicycle facilities consist of paved multi-use pathways through the urbanized areas, while the preserves occurring on the periphery of the metro area have natural surface recreational paths. On-street bike lanes and routes follow the rectilinear street grid while the off -street network largely follows miles of stormwater facilities and historic canals. Small scale neighborhood pathways feed into larger shared-use paths which extend through multiple cities. The focus of these wayfinding guidelines is the off-street bicycle network.

This document contains the results of the important process of gathering stakeholder and community input. The information within these guidelines will assist both current users of the bicycle network to find route options and discover new destinations, as well as entice non-system users to the option of bicycling. The wayfinding guidelines are aimed at both locals and visitors and are crafted to be easily understood and readily learned, while being legible and comprehensible to a wide range of users.

The document provides guidance for system brand applications, wayfinding element design, sign messaging, sign placement, and next steps. It should be used when signing new pathways for the first time as well as when replacing or retrofitting signs along existing pathways. MAG member agencies should follow these guidelines and continue to coordinate with valley neighbors to assure that information is conveyed to travelers in a consistent manner. The Valley Path Brand & Wayfinding Signage Guidelines are organized as follows:

Section 1: Valley Path Brand Standards

The first section of the guidelines describes the Valley Path Brand Standards. Fonts, colors, and accepted layouts and applications of the brand identity are detailed. Native artwork files shall be

available from MAG so that member agencies may consistently replicate the system brand mark retaining the quality standards described within this document.

Section 2: Valley Path Wayfinding Tools

Section 2 describes the Valley Path Wayfinding Tools with the goal of creating a unified system of elements to guide and provide information to users of the off-street bicycle network. A menu of sign options is provided including graphic standards and design details.

Section 3: Wayfinding Guidelines

Section 3 provides guidance related to destination selection and sign placement. A hierarchy of destination types and selection criteria is given so that municipalities consistently select and prioritize destinations for inclusion on signs. Placement guidance within this section describes how to sign the most typically encountered navigational challenges encountered while on the off-street bicycle network.

Section 4: Implementation Approach

The fourth section describes specific next steps municipalities may take towards the implementation of a wayfinding system along pathways within their community. The master plan process is described as well as the final design and fabrication process. Finally an estimate of unit costs and funding opportunities are described.

These guidelines are intended to offer flexibility to agencies that already have wayfinding signs in place while working towards the creation of a unified Valley Path system.

The wayfinding designs within this document follow the required standards for bicycle facilities found within the Manual on Uniform Traffic Control Devices (MUTCD). It is important to be in substantial conformance with the MUTCD standards in order to retain eligibility for federally available transportation funding resources.

These guidelines should be considered a living document, one which should be reviewed every five years to ensure that they remain compliant with federal standards as well as at the forefront of technical knowledge as the practice of wayfinding continues to evolve.

section 1

Valley Path Brand Standards

- 1.1 Introduction
- 1.2 Valley Path Brandmark
- 1.3 Brandmark with Path Name
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Hundreds of miles of paved pathways guide commuters, students, families, adventurers and outdoor enthusiasts around Phoenix metro area to various destinations. Always evolving, this Off-Street Bicycle Network required an identity that captured all of its assets, character, uses and potential. The Off-Street Bicycle Network is used in many ways by many people, but at its core, it is an outdoor connection to different areas of the Valley. People use that connection for commuting, exercise and as an escape from the motorized world.

This is Valley Path.

Brand Promise

The Valley Path promise is one of a safe, healthy outdoor transportation experience. Whether the goal is a commute to work, an exercise routine, a social activity or the best way to get to a destination within region, Valley Path is the outdoor connection. This promise will only strengthen as the Path continues to grow and connect the region even more in years to come.

Brand Personality

The Valley Path brand reflects the tone and attitude of the Off-Street Bicycle Network, as well as its role in the Phoenix metro area. It also incorporates the personalities of the people who populate the Network every day.

Brand Role

The Valley Path Brandmark has been developed to represent the Phoenix metro area's Off-Street Bicycle Network. Its primary role is promote the Network as an attraction and transportation corridor. The Network is still growing and evolving, but the brandmark is to remain constant as this change occurs. It promotes a visual connection throughout the region, linking cities, parks and destinations. It builds a feeling of trust for those using the Network, assuring them they are on the right path.

Valley Path brand personality is:

UNITING

Valley Path is made up of hundreds of miles of off-street pathways that wind through 27 incorporated cities and towns within the Phoenix metro area and the contiguous urbanized area. It connects the people of the valley to where they want to go.

FUNCTIONAL

Valley Path is an easy to access, safe way to get around the region and promotes a sustainable lifestyle. One of the main uses of the Path is commuting.

VIVID

What could be more beautiful than the desert backdrop at sunset on the Valley Path?

EXHILARATING

Valley Path promotes a healthy, outdoor lifestyle. It allows residents and visitors alike a chance to explore the Phoenix metro area and discover destinations along the way they may not have known about.

AN ESCAPE

No cars, no traffic jams, no horns or construction backups - just the serene, beautiful landscape of the valley. A chance to reflect on the day, or recharge for the day ahead.



The distinctive Valley Path Brandmark reflects the environment, energy and welcoming characteristics of this family-friendly, outdoor experience. The colors are representative of the mountains, sun and vegetation found along the Path. The name Valley Path describes the vast area the Path encompasses and is open to many types of users, not just cyclists. The path disappears into the distance, symbolizing new routes to explore as the Network continues to grow and evolve.

USAGE

The tagline should only be used in conjunction with the Valley Path brandmark. The brandmark and tagline should be used in all advertising collateral or materials that are promotional in nature. For wayfinding situations you may use the brandmark without the tagline. An exception would be on pedestrian kiosks. The tagline may be used as a design element in this case.



Valley Path

Brandmark with Tagline

The tagline: “Adventure Your Way” is the approved tagline for the Valley Path brandmark. It speaks to the fact that the network is a multi-use path, for bicyclists, runners and walkers - families, commuters and exercise enthusiasts alike. You can use the Path the way YOU want to. The tagline captures a touch of maverick attitude and adventurous spirit, while being concise and memorable.



Valley Path

Adventure Your Way

The Valley Path brandmark may also be used as shown below with specific path names and cities/towns. These are to be used primarily on wayfinding elements, or on maps of the Network.

The brandmark shall be used throughout the valley where established paths exist. Identification of managing jurisdictions and path names may be integrated into the brand mark by specific location as shown below. Existing path names may also be used on wayfinding elements apart from the brandmark, as a separate design element. (see at right.)

- PEORIA • NEW RIVER
- SCOTTSDALE • INDIAN BEND WASH
- TEMPE • WESTERN CANAL
- PHOENIX • ARIZONA CANAL
- GLENDALE • THUNDERBIRD PASEO



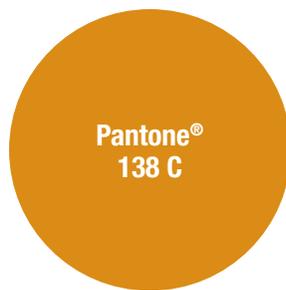
The Valley Path Brandmark is made up of three colors that represent the landscape the path traverses through (mountains, flowers), the time of day the path is used most often (dawn and dusk), and colors that will stand out in the environment. The colors also work well with other brands in the region.

Below are the Pantone® colors and CMYK, RGB and Web-safe color specifications.

PMS (Pantone® Matching System) is an industry standard system for color matching.

Pantone® is a registered trademark.

PRIMARY PALETTE - Brandmark colors

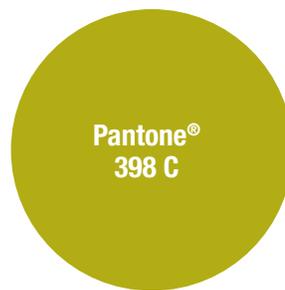


Pantone®
138 C

C: 0
M: 44
Y: 100
K: 13

R: 222
G: 124
B: 0

Web:
E17C00

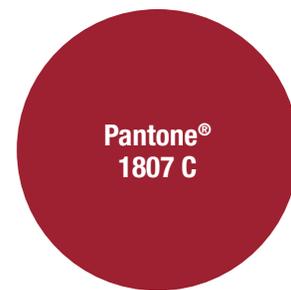


Pantone®
398 C

C: 14
M: 6
Y: 100
K: 24

R: 173
G: 164
B: 0

Web:
B2AC17



Pantone®
1807 C

C: 10
M: 93
Y: 71
K: 33

R: 164
G: 52
B: 58

Web:
A83338

KNOCKOUT LOGO - white logo on solid Primary Palette color

The Knockout logo has been specially designed to work on a solid color background. The background color should be limited to one of the Primary Palette colors, or Black.



Typography is an important tool in branding. It can convey a personality. The Valley Path typefaces are friendly and open, while at the same time modern and forward-thinking. They are also very legible at various sizes.

The Valley Path Brandmark and tagline have been specifically spaced and kerned for consistency using these typefaces. Always use the approved Brandmark artwork and do not attempt to recreate the Brandmark using the typefaces below. They are shown here for reference only.

Primary Brandmark Typeface

The Primary Brandmark typeface is **Insignia Roman**.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Brandmark Tagline Typeface

The Brandmark Tagline typeface is **Helvetica Neue 57 Condensed**.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Wayfinding Signage - Existing Path Typeface & MUTCD Sign Messages

The Wayfinding typeface is **Clearview Highway**.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Valley Path is an evolving network that connects the MAG Region. It provides a way to get to work, a way to exercise, a way to play and a way to enjoy the outdoors, either alone or with others. For this reason it is important to choose photographic images that capture the personality of the Brand. In materials that market Valley Path, choose images that show people of various ages, gender and culture using the path in a variety of ways. Rural path sections as well as more urban path sections should be shown. Photography of the landscape and natural features of the Path may be used as supporting images as well.

There should NEVER be images of an empty trail used in materials promoting the Valley Path. Instead, show images of the path being used. Do not reproduce photos that are of low or poor quality. Never use staged or contrived photography.

Below are some examples of good Valley Path imagery.



Images from GettyImages

Clear Space

Community input and careful design decisions resulted in the Valley Path Brandmark. It is essential that the Brandmark be treated with care and respect.

A set clear area should be maintained around the brandmark when it is used at all times. This area should be the height of the "V" in the word **Valley**. The clear area will vary depending on the scale the logo is used.

Brandmark



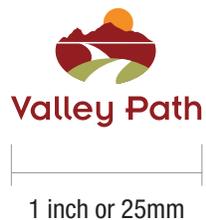
Brandmark with Tagline



Minimum Size

The Brandmark should not be used below a certain size, or it becomes illegible. Please refer to the guidelines below for the smallest the brandmark may be used.

Brandmark



Brandmark with Tagline

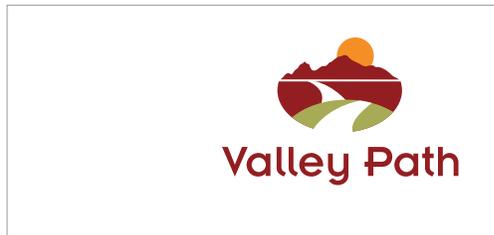


It is always preferred that the Brandmark appear on a white or light-colored background. Below are examples of the Brandmark used correctly on a background.

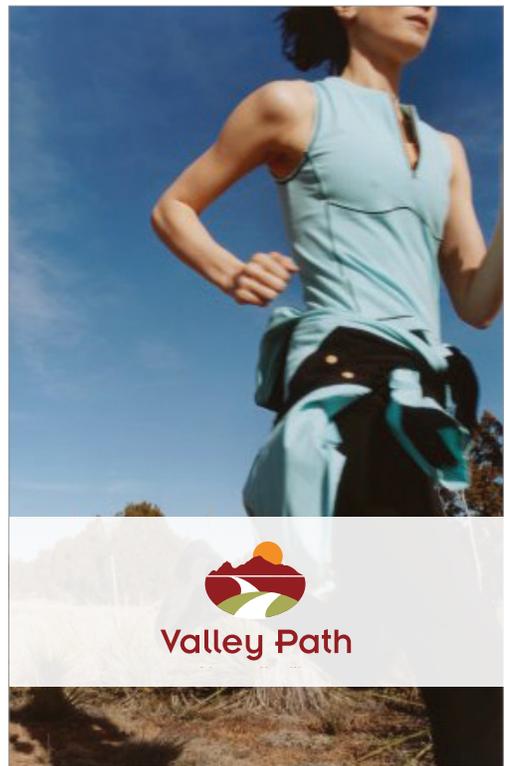
Usage on Dark Backgrounds

If a circumstance arises which requires a dark background, the Brandmark should be placed in a white or 90% screen of white contained box. Below is an example of the Brandmark used correctly on a dark background.

CORRECT



CORRECT



Examples of INCORRECT usage of the Brandmark

The Valley Path Brandmark was created specifically for the Maricopa Association of Governments Off-Street Network. It should be treated with care and respect. Using the Brandmark inconsistently will lessen its impact and tarnish the image of the Path itself.

INCORRECT

- Do NOT stretch or distort the brandmark



- Do NOT rearrange components of the brandmark



- Do NOT use the brandmark on a colorful/busy background



- Do NOT use the brandmark in a sentence



- Do NOT rotate the brandmark



- Do NOT change color, placement or size of the tagline



- Do NOT change the text of the tagline

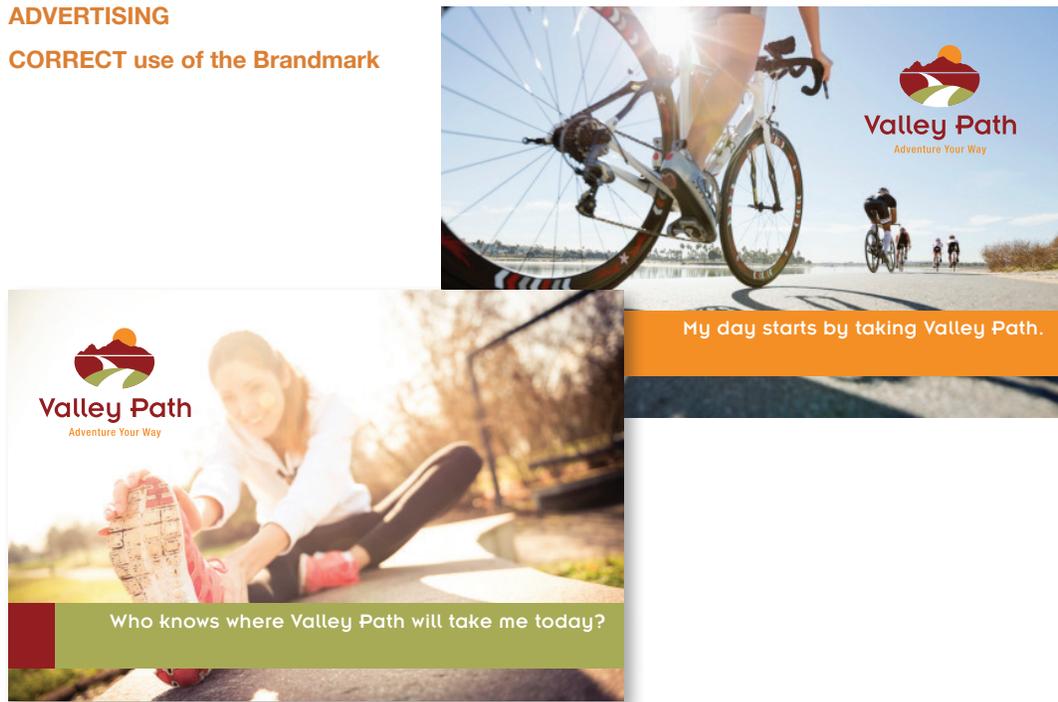


- Do NOT position the brandmark to be associated with any other entity



ADVERTISING

CORRECT use of the Brandmark



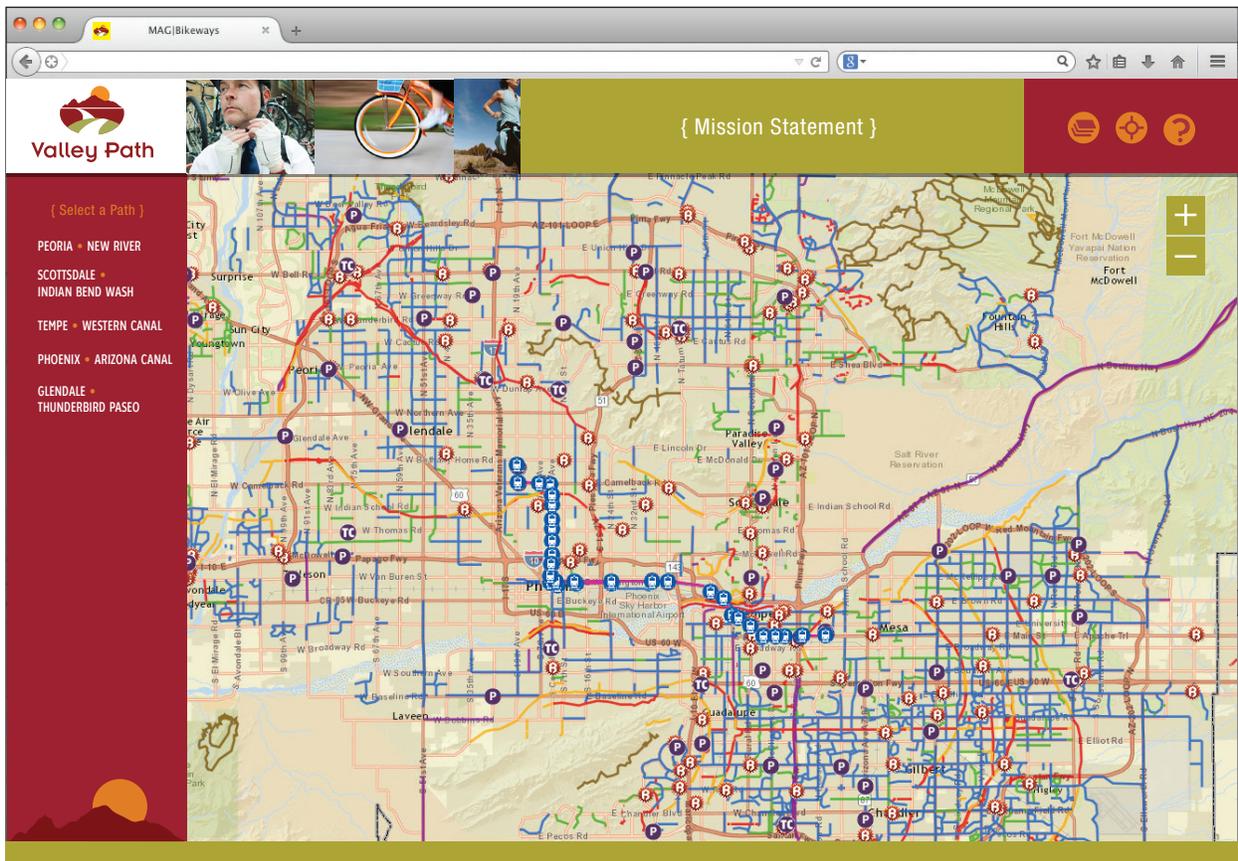
MERCHANDISE

CORRECT use of the Brandmark



WEBSITE

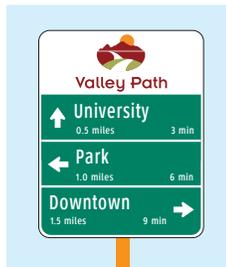
Using the MAG bike path map as a base, the Valley Path brand can be brought in as a header and side bar providing the user with quick links to established paths and possibly other links, like parking, public restrooms, public transit, etc.



SIGNAGE

A variety of signage has been developed for the Valley Path. The goal of the wayfinding signage is to create a unified look to wayfinding elements along the path, assuring the user they are in a safe area and providing them with the direction they need to reach their destination.

Below are a sampling of these signs. These and other sign types are detailed in Section 2 of this guidelines document.



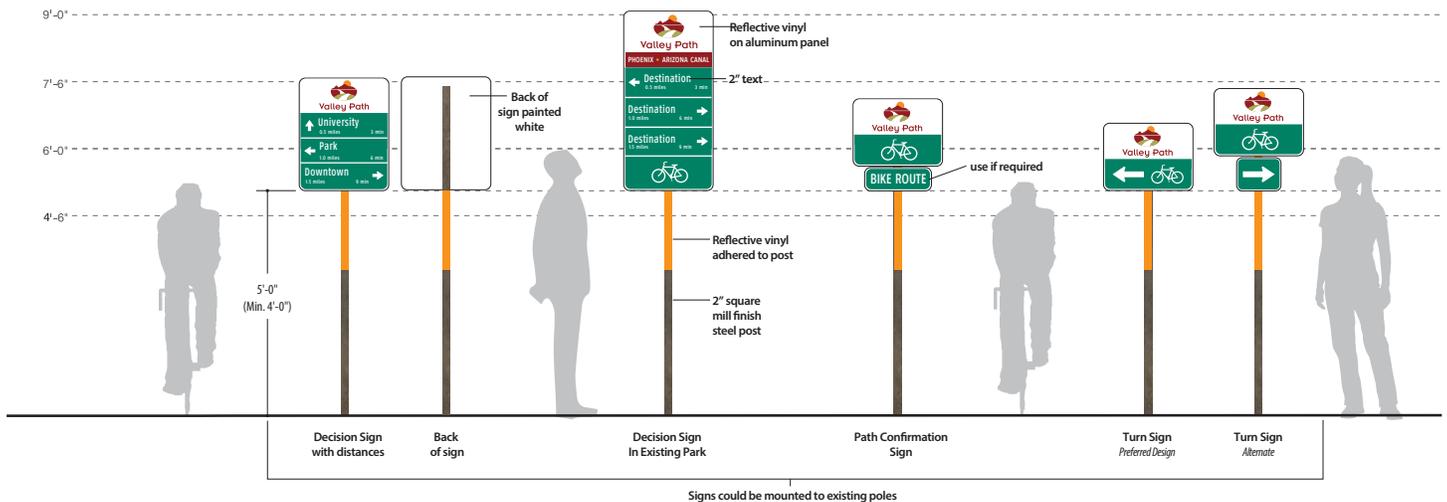
Sign Standard size: R2-4p

Sign Standard size: R2-4a

Sign Standard size: D-11
Sign Standard size: M7-1

Sign Standard size: D-11

Sign Standard size: D-11
Sign Standard size: M6-1



A Cohesive Look for Valley Path

Valley Path is made up of hundreds of miles of off-street pathways that wind through 27 incorporated cities and towns within the MAG Region and the contiguous urbanized area. Seeing the same wayfinding elements along the path, wherever you are in the region, helps the user trust that the information being presented is correct.

Aside from signage there are other ways to brand the path. There are also ways to mark the path itself, with pavement markings, painting underpasses, and using consistent streetscape elements along the path. Streetscape elements could use similar materials as the wayfinding signage, and may include:

- **Bike Racks**
- **Benches**
- **Shade Structures**
- **Trash receptacles**
- **Fitness Equipment**

Some examples are shown at the right. These are **examples only** and require further conversation with MAG.



Ramp to Path from neighborhood



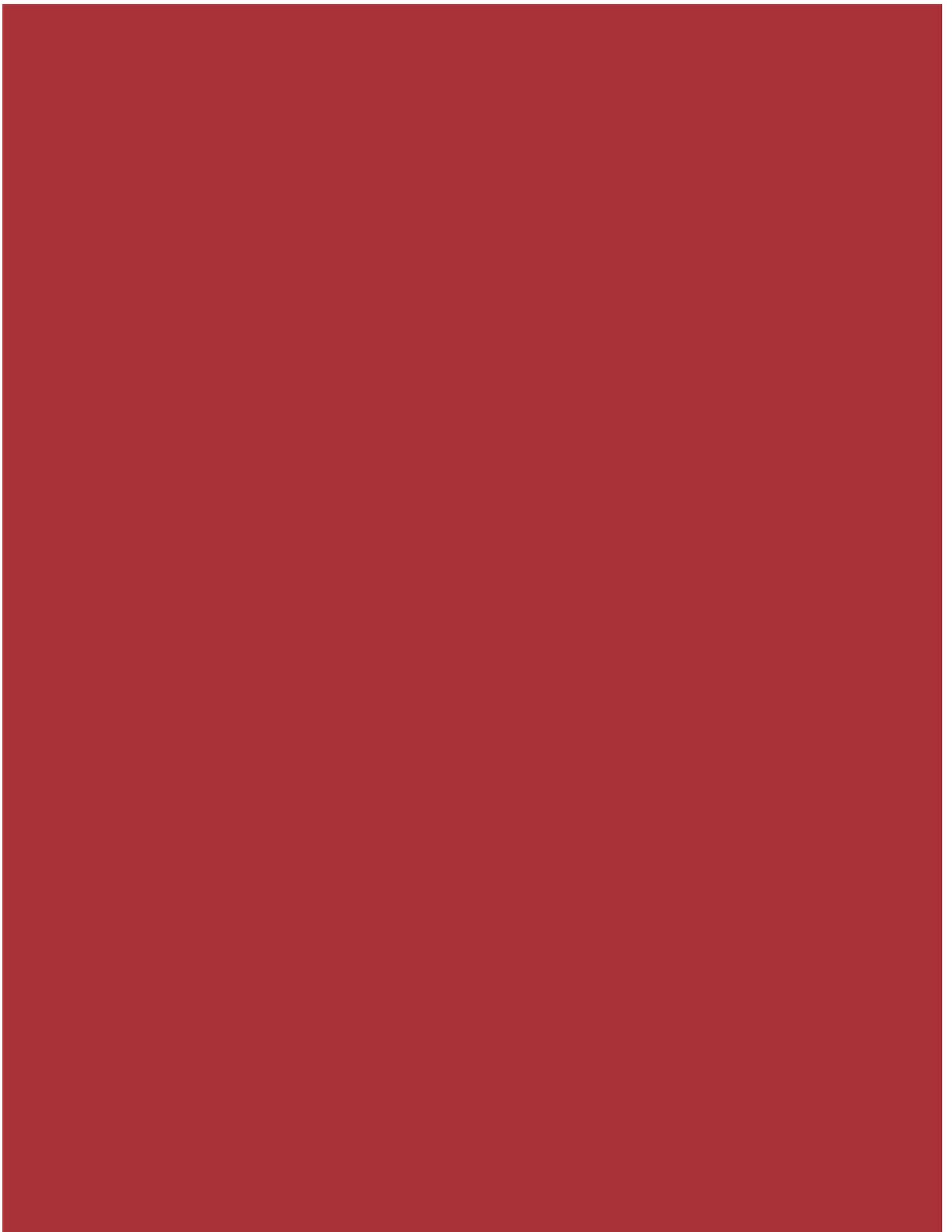
Painting /Branding underpasses



Trash Receptacle (area for logo)



Weathered steel bike rack



section 2

Valley Path Wayfinding Tools

- 2.2 Introduction
- 2.3 Graphic Standards
- 2.8 Menu of Sign Types
- 2.13 Signage Drawings
- 2.33 Signage Enhancements

Wayfinding Tools

A variety of wayfinding tools have been developed for the Valley Path. This "Kit of Parts" will allow each city to address the wayfinding needs of the Valley Path in their municipality.

It is important to maintain a cohesive look to the signage along the Valley Path as it crosses the MAG Region. There are opportunities for individual cities to be identified on some wayfinding elements, but the goal is to promote the Path first. For that reason, we have provided graphic standards to be used when implementing various wayfinding tools along the Valley Path.

The sign drawings contained in this section are NOT shop drawings. Any city wanting to install Valley Path signage must have shop drawings created by their sign shop or local fabricator and approved by the city. For larger structures, shop drawings may need to be signed and sealed by an Arizona registered architect or engineer.

Wayfinding Signage - MUTCD Sign Messages

The Wayfinding typeface is **Clearview Highway**.

Clearview Highway
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Primary Brandmark Typeface - Use on Brand Signage Elements

The Primary Brandmark typeface is **Insignia Roman**.

Insignia Roman
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Brandmark Tagline Typeface - Use on Brand Signage Elements

The Brandmark Tagline typeface is **Helvetica Neue 57 Condensed**.

Helvetica Neue 57 Condensed
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

TYPOGRAPHY & TYPEFACES

Please refer to Section 1 of this guidelines document for additional information about typography.

This page provides a reference for the typefaces for the Valley Path Wayfinding Signage.

Typefaces may not be changed. During fabrication, the height and width ratio of letter forms must be maintained proportionately.

MUTCD Signage:

Typeface for MUTCD signs is Clearview Highway. Type must be title case or upper and lower letters for primary destinations. All other words appearing on the signs should appear in all upper case.

Pedestrian Signage:

1" high copy is recommended for pedestrian directional signs.

These drawings are meant for DESIGN INTENT ONLY and are not for construction. Contractor shall verify and be responsible for all dimensions and conditions of the job. Contractor shall be familiar with the site and conditions it presents. This office must be notified of any variations from the dimensions and conditions shown on this drawing. Shop drawings and details must be submitted to this office for approval prior to proceeding with fabrication. All copy shall be proofread by client and legal requirements checked by legal department.

COLORS & MATERIALS

Consistent use of a color palette creates a recognizable “system”.

The Color Palette found on the following pages provides a reference for specifying a paint color or other material.

Paint is used as a protective coating when reflectivity is not required.

Reflective vinyl is required for MUTCD signs. It ensures additional visibility at night, promoting bike safety.

The Fabricator is required to submit painted color chips and material samples for approval prior to sign fabrication.

The ADA requires a minimum of 70% contrast between text and background for the legibility.

PMS (Pantone® Matching System) is an industry standard for color matching.

Pantone® is a registered trademark.

Paint Colors

	Name	Specification	Process
	P1 Umbria Red	To match PMS 1807C MP07505	Surface applied, exterior sign paint and protective top coat: MATTHEWS Acrylic Polyurethane w/ Clear Coat Satin finish.
	P2 Moline Orange	To match PMS 138C MP00170	Surface applied, exterior sign paint and protective top coat: MATTHEWS Acrylic Polyurethane w/ Clear Coat Satin finish.
	P3 Alga Green	To match PMS 398C MP00817	Surface applied, exterior sign paint and protective top coat: MATTHEWS Acrylic Polyurethane w/ Clear Coat Satin finish.
	P4 Ripasso Red	To match PMS 1817C MP13353	Surface applied, exterior sign paint and protective top coat: MATTHEWS Acrylic Polyurethane w/ Clear Coat Satin finish.
	P5 Pepsi Red	To match PMS 1797C MP12565	Surface applied, exterior sign paint and protective top coat: MATTHEWS Acrylic Polyurethane w/ Clear Coat Satin finish.
	P6 Clintonite Green	To match PMS 7492 MP14762	Surface applied, exterior sign paint and protective top coat: MATTHEWS Acrylic Polyurethane w/ Clear Coat Satin finish.
	P7 DOT Green	To match PMS 341C MP22384	Surface applied, exterior sign paint and protective top coat: MATTHEWS Acrylic Polyurethane w/ Clear Coat Satin finish.
	P8 Verizon White	To match PMS white MP27386	Surface applied, exterior sign paint and protective top coat: MATTHEWS Acrylic Polyurethane w/ Clear Coat Satin finish.

Reflective Vinyl Colors

	Name	Specification	Process
	V1 Umbria Red	To match PMS 1807C	Background & Characters 3M custom inks applied directly to 3930 with 3M approved clear UV/Graffiti Vinyl Over-laminates.*
	V2 Moline Orange	To match PMS 138	Background & Characters 3M custom inks applied directly to 3930 with 3M approved clear UV/Graffiti Vinyl Over-laminates.*
	V3 Alga Green	To match PMS 398	Background & Characters 3M custom inks applied directly to 3930 with 3M approved clear UV/Graffiti Vinyl Over-laminates.*
	V4 DOT Green	To match PMS 341 DOT Green	Background & Characters 3M custom inks applied directly to 3930 with 3M approved clear UV/Graffiti Vinyl Over-laminates.*
	V5 Verizon White	To match PMS White	Background & Characters 3M custom inks applied directly to 3930 with 3M approved clear UV/Graffiti Vinyl Over-laminates.*

A 3M warranty for reflective vinyl covers fading. Sherine Industries (see * below) provides a 3M warranty for custom colors against fading for 7 years. Contact Sherine Industries for more information.

These drawings are meant for DESIGN INTENT ONLY and are not for construction. Contractor shall verify and be responsible for all dimensions and conditions of the job. Contractor shall be familiar with the site and conditions it presents. This office must be notified of any variations from the dimensions and conditions shown on this drawing. Shop drawings and details must be submitted to this office for approval prior to proceeding with fabrication. All copy shall be proofread by client and legal requirements checked by legal department.

*MUST comply with MUTCD section Table 2A-3 – Minimum maintained retroreflectivity levels.

Approved Process: Durst RHO 161 TS printer. Sherine Industries: (604) 513-1887

NOTE: All 3M products are to be processed and applied according to 3M specifications. The seaming of material is NOT preferred. If the height of a sign panel is greater than 48 inches, the 3M 3930 material should be oriented vertically with stripes at 0 degrees, to avoid the seaming of material. If seaming is required, it should occur at the rule line or between messages.

Materials

	Name	Specification	Process
	M1 Perforated Screen	Side Stagger Slotted holes	Raw aluminum or stainless steel perforated screen
	M2 Graphic panel	Direct Embed Product or Equal	www.directembedcoating.com
	M3 Gabion Basket	Wire frame basket	N/A
	M4 Reflective Tape	To best match PMS 138	2" wide tape Adds safety feature of reflectivity at night
	M5 Mill Finish Steel	N/A	Pre-rusted and sealed with clear-coat
	M6 Aluminum Sign panel	.080" Aluminum	Reflective vinyl adhered to panel
	M7 Aluminum Sign post	2" sq Aluminum post - standard	Unpainted aluminum

COLORS & MATERIALS

Consistent use of a color palette creates a recognizable "system"

The Fabricator is required to submit painted color chips and material samples for approval prior to sign fabrication.

The ADA requires a minimum of 70% contrast between text and background for the legibility.

Arrows



ARROWS

Arrows approved for MUTCD signs

These drawings are meant for DESIGN INTENT ONLY and are not for construction. Contractor shall verify and be responsible for all dimensions and conditions of the job. Contractor shall be familiar with the site and conditions it presents. This office must be notified of any variations from the dimensions and conditions shown on this drawing. Shop drawings and details must be submitted to this office for approval prior to proceeding with fabrication. All copy shall be proofread by client and legal requirements checked by legal department.

PICTOGRAMS

Amenities Pictograms will be found on Pedestrian wayfinding elements such as Kiosks, Trail and Signage and maps.

Benefits of pictograms:

- Understandable
- Memorable
- Common Language
- Distinguishable
- Character
- Expandable

AMENITIES

 Restrooms A4	 Lite Rail A2	 Picnic Site A3	 Fishing A4
-------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------

ACCESS / INFORMATION

 Bike Path B1	 Pedestrian Trail B2	 Rollerblading B3	 Horseback Riding B4
 Pets Permitted B5	 Information B6		

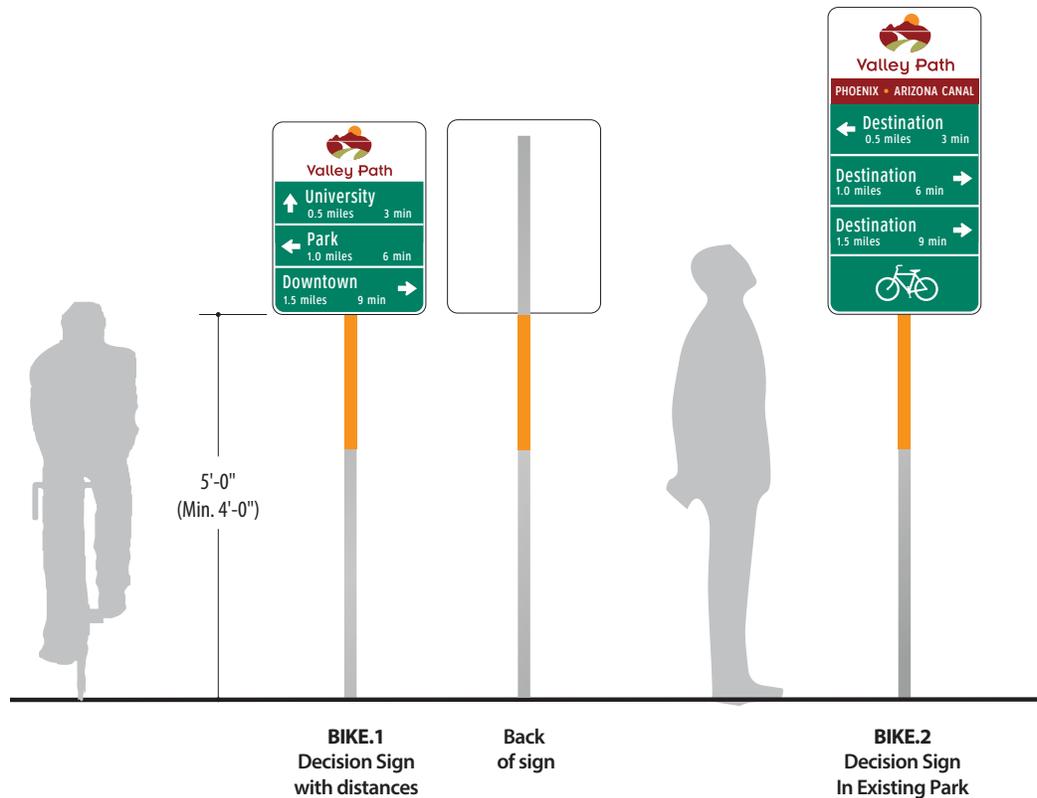
REGULATORY

 No ATVs Allowed C1	 No Skateboarding Allowed C2	 Motorcycles Not Allowed C3	 Horseback Riding Not Allowed C4
 Swimming Not Allowed C5	 No Dogs Allowed C6	 No Fishing Allowed C7	

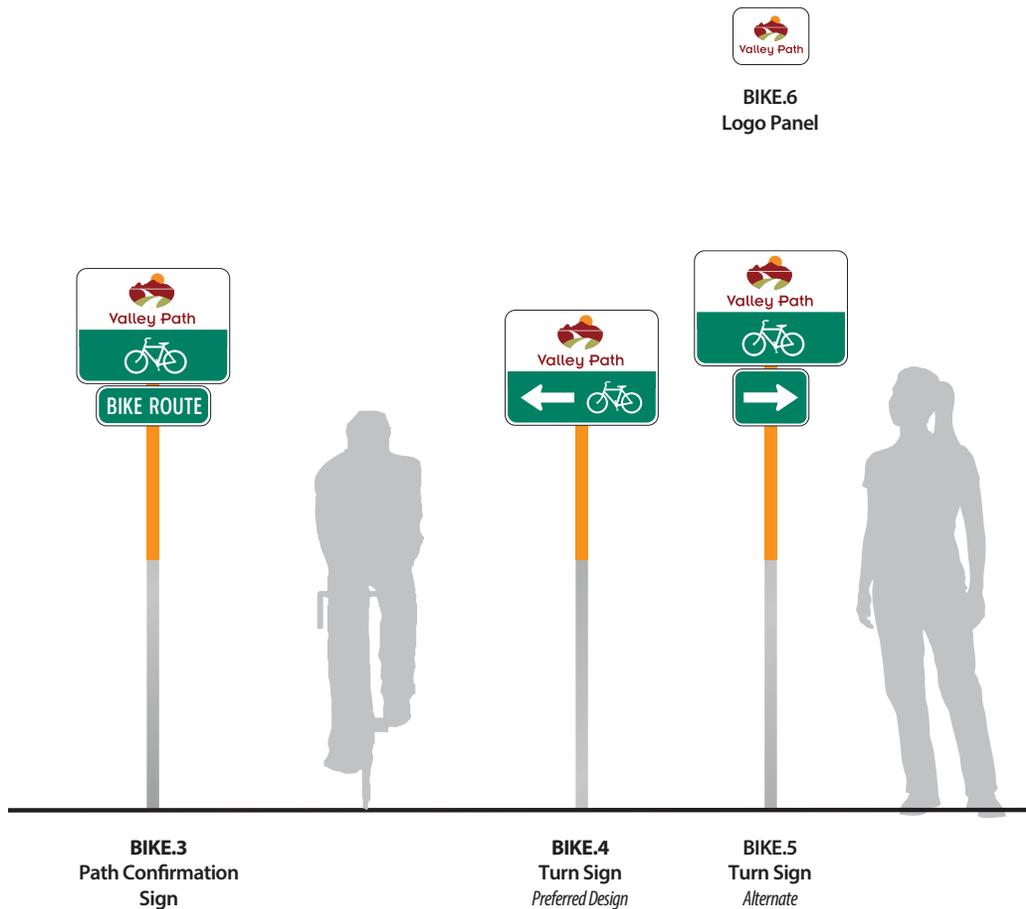
These drawings are meant for DESIGN INTENT ONLY and are not for construction. Contractor shall verify and be responsible for all dimensions and conditions of the job. Contractor shall be familiar with the site and conditions it presents. This office must be notified of any variations from the dimensions and conditions shown on this drawing. Shop drawings and details must be submitted to this office for approval prior to proceeding with fabrication. All copy shall be proofread by client and legal requirements checked by legal department.

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MUTCD SIGNS

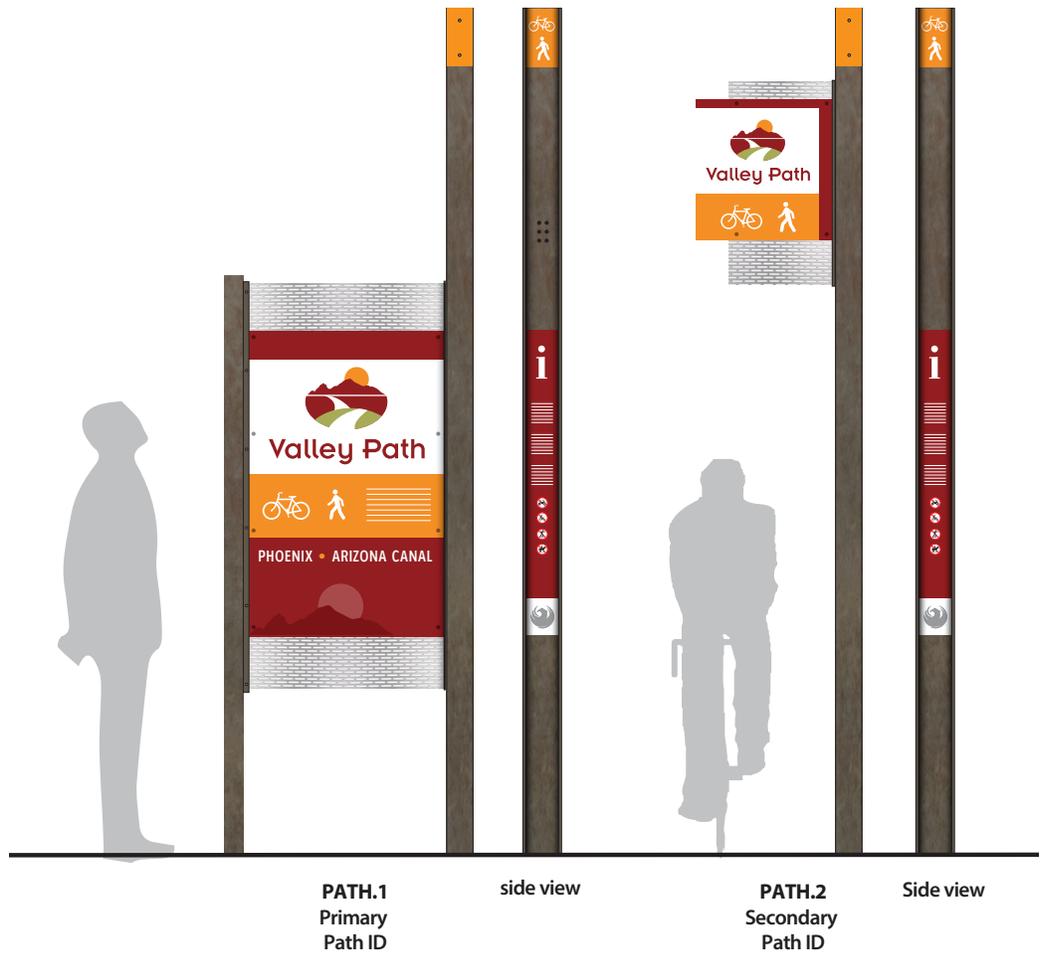


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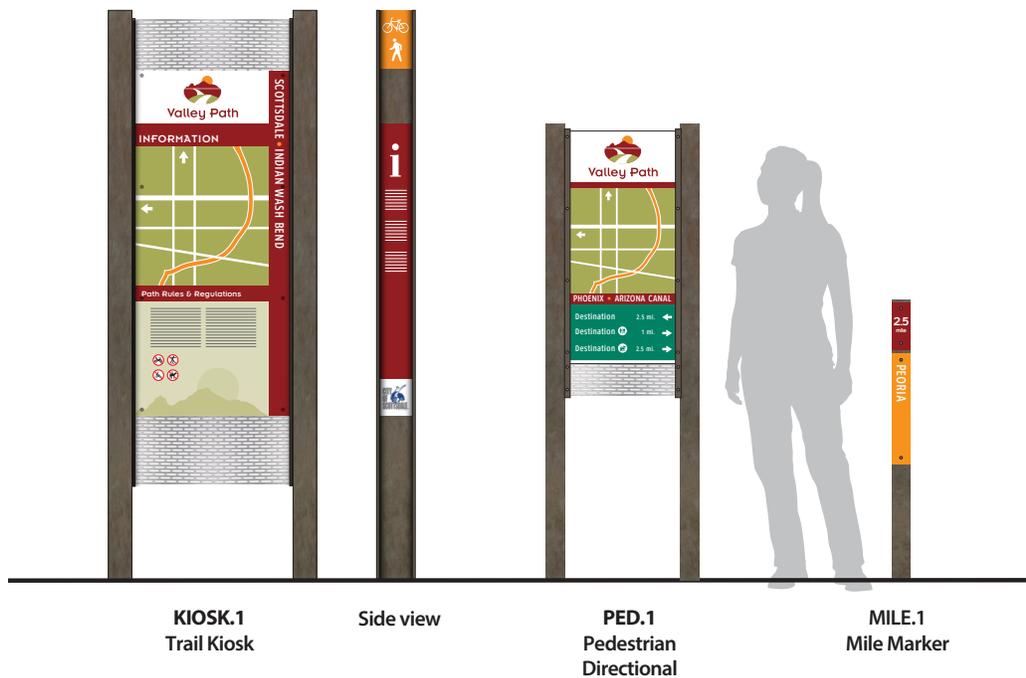


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BRAND SIGNAGE



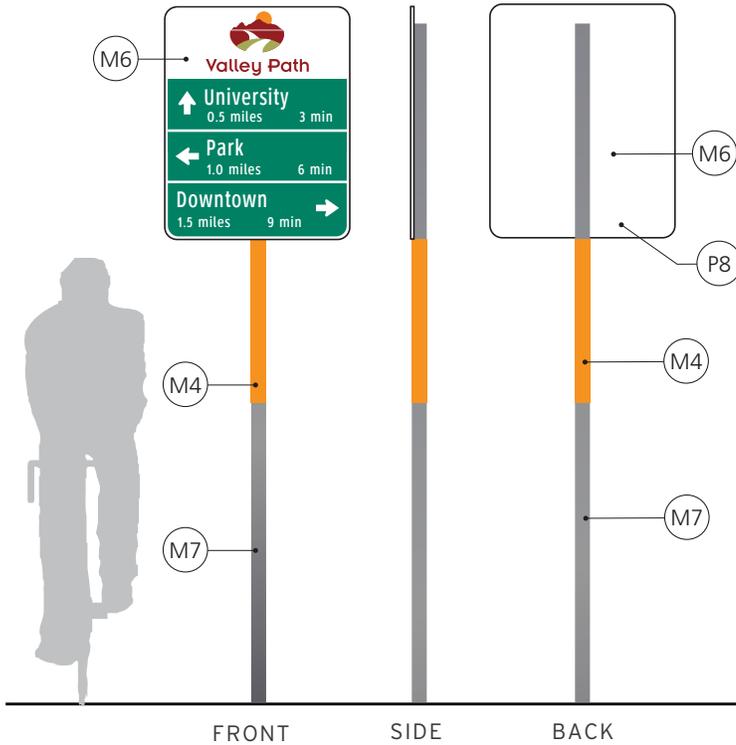
These drawings are meant for DESIGN INTENT ONLY and are not for construction. Contractor shall verify and be responsible for all dimensions and conditions of the job. Contractor shall be familiar with the site and conditions it presents. This office must be notified of any variations from the dimensions and conditions shown on this drawing. Shop drawings and details must be submitted to this office for approval prior to proceeding with fabrication. All copy shall be proofread by client and legal requirements checked by legal department.



These drawings are meant for DESIGN INTENT ONLY and are not for construction. Contractor shall verify and be responsible for all dimensions and conditions of the job. Contractor shall be familiar with the site and conditions it presents. This office must be notified of any variations from the dimensions and conditions shown on this drawing. Shop drawings and details must be submitted to this office for approval prior to proceeding with fabrication. All copy shall be proofread by client and legal requirements checked by legal department.

2.12

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**BIKE.1
DECISION SIGN**

The BIKE.1 Sign type is a decision bike sign and should be located at decision points along the Valley Path.

This is a MUTCD-compliant sign type, using MUTCD approved typefaces, arrows and icons. Signs are limited to three listings with time and distance to each destination.

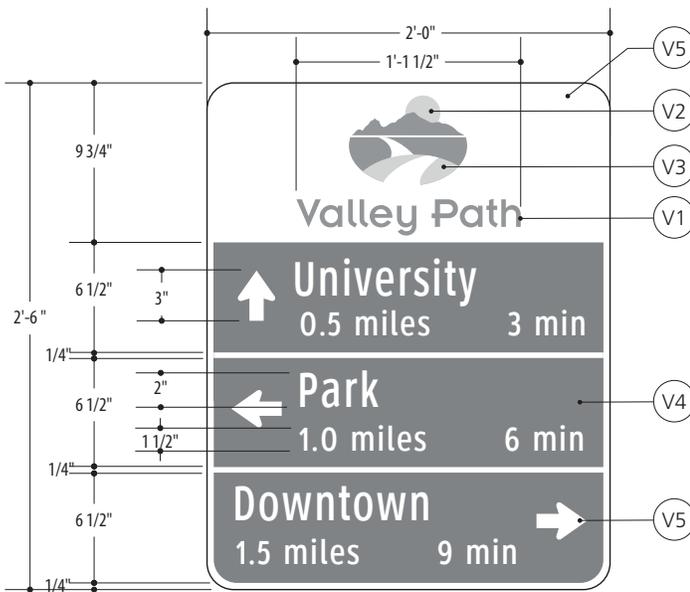
The top of the sign is a header panel with the Valley Path brand. Layouts are shown below for the graphic panel of this sign. The sign panel is a standard size panel (size R2-4).

This a single-sided sign. The back of the sign panel is painted white.

Refer to page 2.4 for the paint and material callouts on this drawing.

Refer to the following page for an elevation drawing of this sign type.

1 Color Schedule - BIKE.1
Scale: 3/8"=1'



2 Typical Layout Guidelines - BIKE.1
Scale: 1"=1'

These drawings are meant for DESIGN INTENT ONLY and are not for construction. Contractor shall verify and be responsible for all dimensions and conditions of the job. Contractor shall be familiar with the site and conditions it presents. This office must be notified of any variations from the dimensions and conditions shown on this drawing. Shop drawings and details must be submitted to this office for approval prior to proceeding with fabrication. All copy shall be proofread by client and legal requirements checked by legal department.

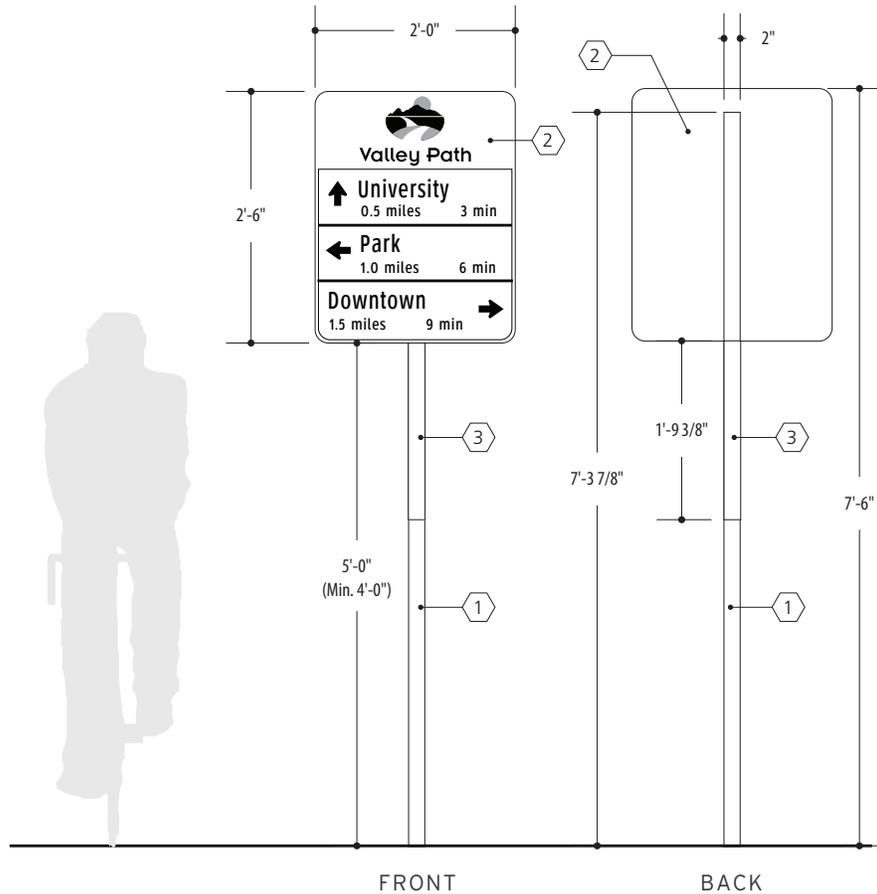
BIKE.1
DECISION SIGN

The BIKE.1 Sign type is a decision bike sign and should be located at decision points along the Valley Path.

This is a MUTCD-compliant sign type, using MUTCD approved typefaces, arrows and icons. Signs are limited to three listings with time and distance to each destination.

The top of the sign is a header panel with the Valley Path brand. The sign panel is a standard size panel (size R2-4)

This a single-sided sign. The back of the sign panel is painted white.



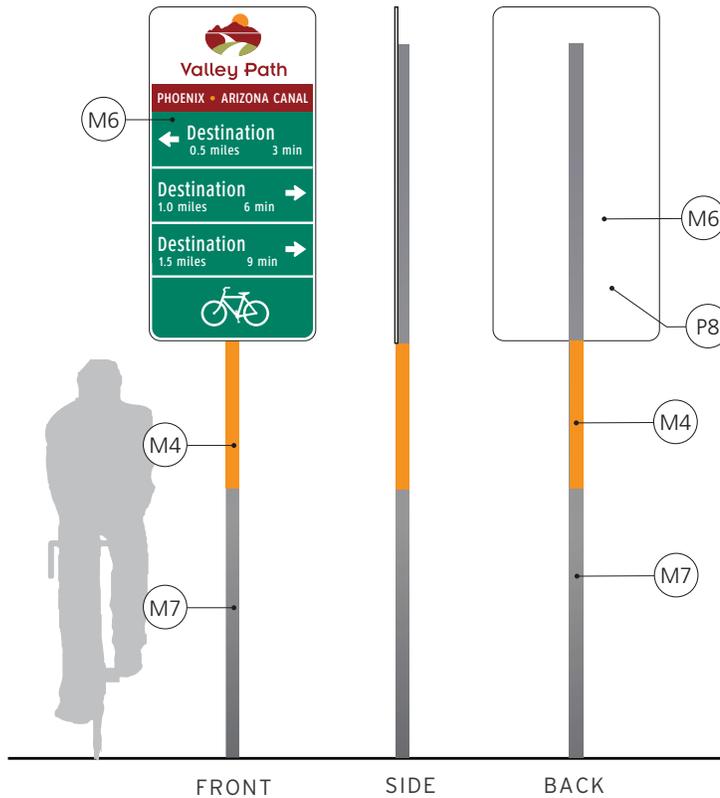
1 Elevations BIKE.1
scale: 1/2"=1'-0"

- ① Unpainted aluminum 2" sq tube*
- ② 0.80 aluminum panel (standard size R2-4) with reflective vinyl graphics, mechanically fastened to 2" steel sq tube
- ③ 2" wide reflective tape to best match PMS 138

NOTES:
Direct bury at least 2 ft from edge of sign panel to trail edge.

* Or equal (2" sq aluminum tube)

These drawings are meant for DESIGN INTENT ONLY and are not for construction. Contractor shall verify and be responsible for all dimensions and conditions of the job. Contractor shall be familiar with the site and conditions it presents. This office must be notified of any variations from the dimensions and conditions shown on this drawing. Shop drawings and details must be submitted to this office for approval prior to proceeding with fabrication. All copy shall be proofread by client and legal requirements checked by legal department.



BIKE.2
DECISION SIGN IN PARK

The BIKE.2 Sign type is a decision bike sign in an established park or trail area and should be located at decision points along the Valley Path.

This is a MUTCD-compliant sign type, using MUTCD approved typefaces, arrows and icons. Signs are limited to three listings with time and distance to each destination.

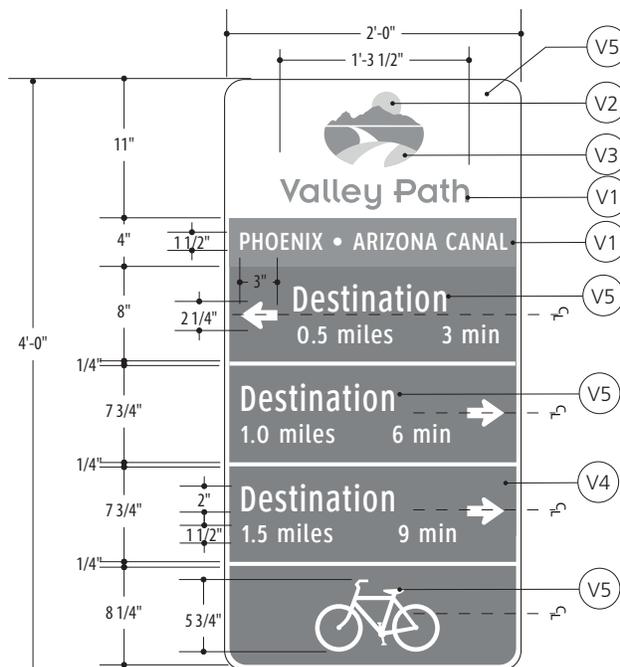
The top of the sign is a header panel with the Valley Path brand. There is a space allotted for a park or path name as well. (see page 1.3 for established path names and graphic treatment) The sign panel is a standard size panel (size R2-4a). Layouts are shown below for the graphic panel of this sign.

This a single-sided sign. The back of the sign panel is painted white.

Refer to page 2.4 for the paint and material callouts on this drawing.

Refer to the following page for an elevation drawing of this sign type.

1 Color Schedule - BIKE.2
Scale: 3/8"=1'



2 Typical Layout Guidelines - BIKE.2
Scale: 3/4"=1'

These drawings are meant for DESIGN INTENT ONLY and are not for construction. Contractor shall verify and be responsible for all dimensions and conditions of the job. Contractor shall be familiar with the site and conditions it presents. This office must be notified of any variations from the dimensions and conditions shown on this drawing. Shop drawings and details must be submitted to this office for approval prior to proceeding with fabrication. All copy shall be proofread by client and legal requirements checked by legal department.

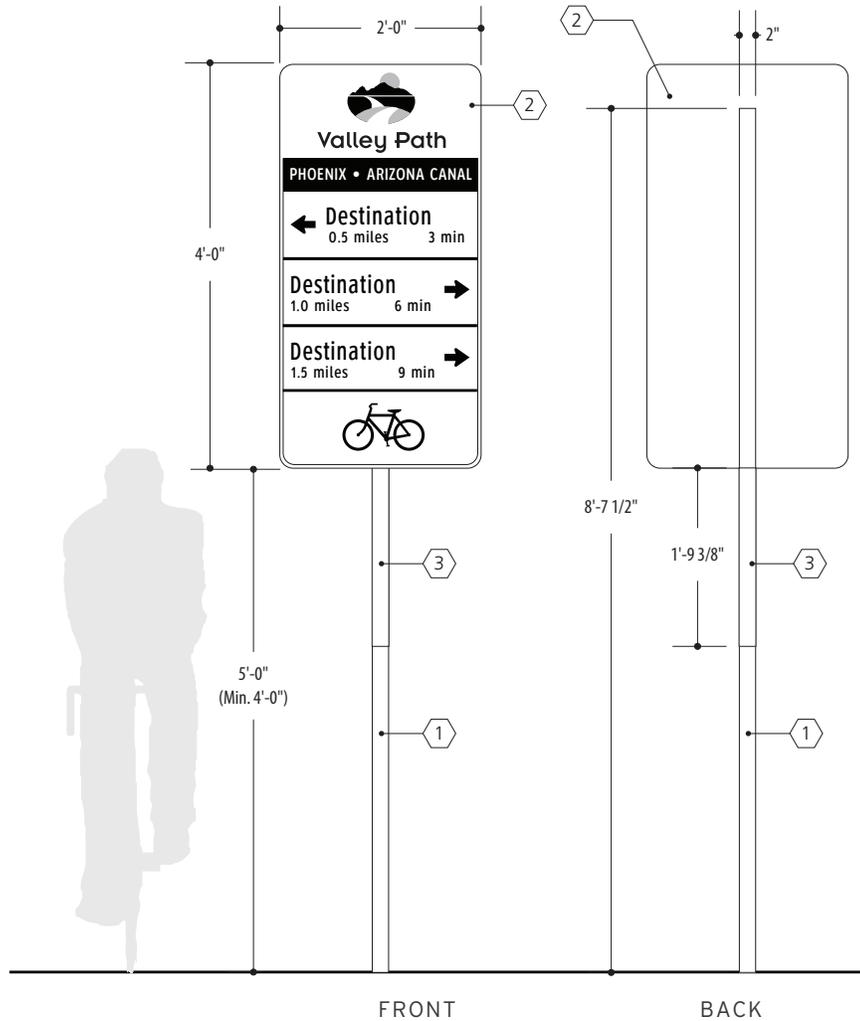
BIKE.2
DECISION SIGN IN PARK

The BIKE.2 Sign type is a decision bike sign in an established park or trail area and should be located at decision points along the Valley Path.

This is a MUTCD-compliant sign type, using MUTCD approved typefaces, arrows and icons. Signs are limited to three listings with time and distance to each destination.

The top of the sign is a header panel with the Valley Path brand. There is a space allotted for a park or path name as well. (see page 1.3 for established path names and graphic treatment) The sign panel is a standard size panel (size R2-4a).

This is a single-sided sign. The back of the sign panel is painted white.



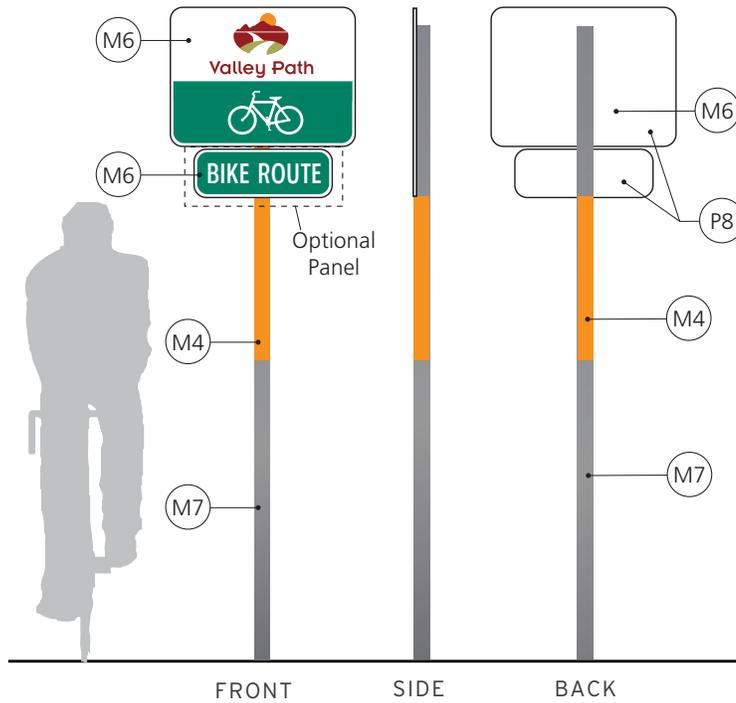
1 Elevations BIKE.2
scale: 1/2"=1'-0"

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- 1 Unpainted aluminum 2" sq tube*
- 2 0.80 aluminum panel (standard size R2-4a) with reflective vinyl graphics, mechanically fastened to 2" steel sq tube
- 3 2" wide reflective tape to best match PMS 138

NOTES:
Direct bury at least 2 ft from edge of sign panel to trail edge.

* Or equal (2" sq aluminum tube)



BIKE.3
PATH CONFIRMATION SIGN

The BIKE.3 Sign type is a path confirmation sign and should be located at points along the Valley Path to assure cyclists they are on the Valley Path.

This is a MUTCD-compliant sign type, using MUTCD approved typefaces, arrows and icons.

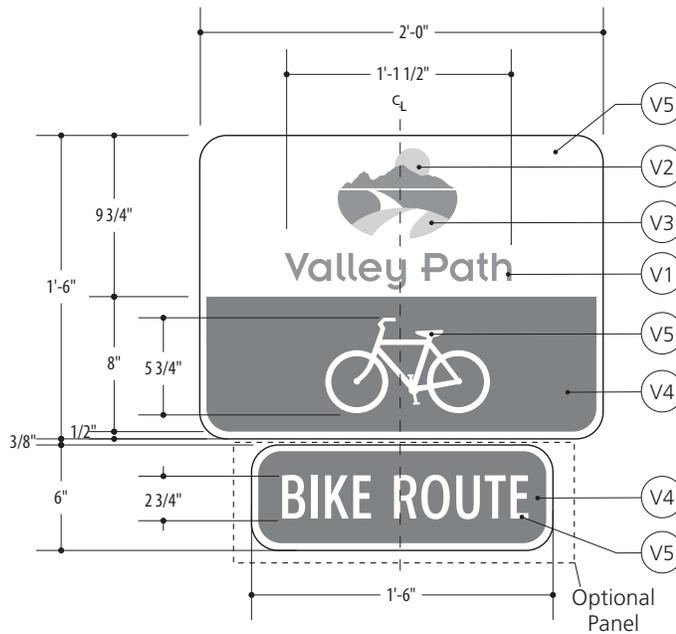
The top of the sign is a header panel with the Valley Path brand. The top sign panel is a standard size panel (size D-11). The bottom panel is also standard (size M7-1), and may be left-off the sign if the sign is not located on a road. Layouts are shown below for the graphic panels of this sign.

This a single-sided sign. The back of the sign panels are painted white.

Refer to page 2.4 for the paint and material callouts on this drawing.

Refer to the following page for an elevation drawing of this sign type.

1 Color Schedule - BIKE.3
Scale: 3/8"=1'



2 Typical Layout Guidelines - BIKE.3
Scale: 1"=1'

These drawings are meant for DESIGN INTENT ONLY and are not for construction. Contractor shall verify and be responsible for all dimensions and conditions of the job. Contractor shall be familiar with the site and conditions it presents. This office must be notified of any variations from the dimensions and conditions shown on this drawing. Shop drawings and details must be submitted to this office for approval prior to proceeding with fabrication. All copy shall be proofread by client and legal requirements checked by legal department.

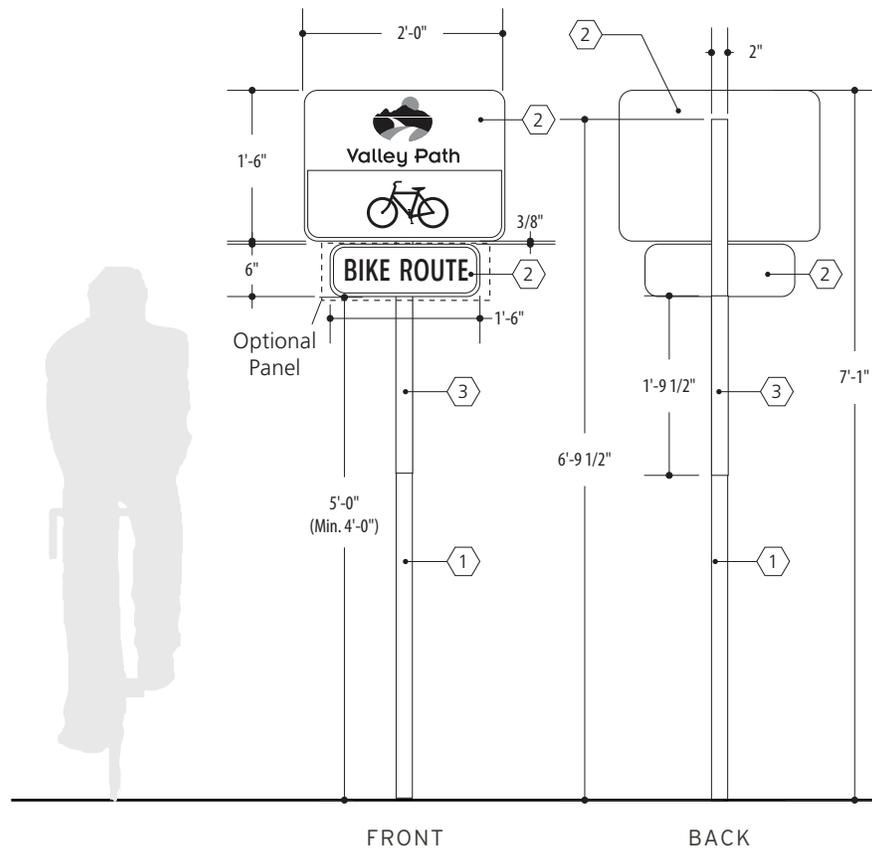
BIKE.3
PATH CONFIRMATION SIGN

The BIKE.3 Sign type is a path confirmation sign and should be located at points along the Valley Path to assure cyclists they are on the Valley Path.

This is a MUTCD-compliant sign type, using MUTCD approved typefaces, arrows and icons.

The top of the sign is a header panel with the Valley Path brand. The top sign panel is a standard size panel (size D-11). The bottom panel is also standard (size M7-1)

This a single-sided sign. The back of the sign panels are painted white.



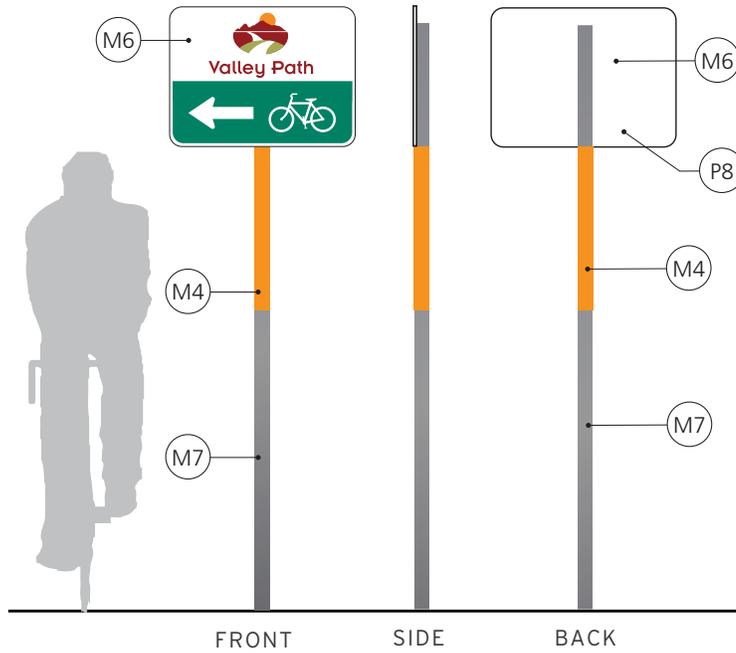
1 Elevations BIKE.3
scale: 1/2"=1'-0"

- 1** Unpainted aluminum 2" sq tube*
- 2** 0.80 aluminum panels (standard size D-11 & M7-1) with reflective vinyl graphics, mechanically fastened to 2" steel sq tube
- 3** 2" wide reflective tape to best match PMS 138

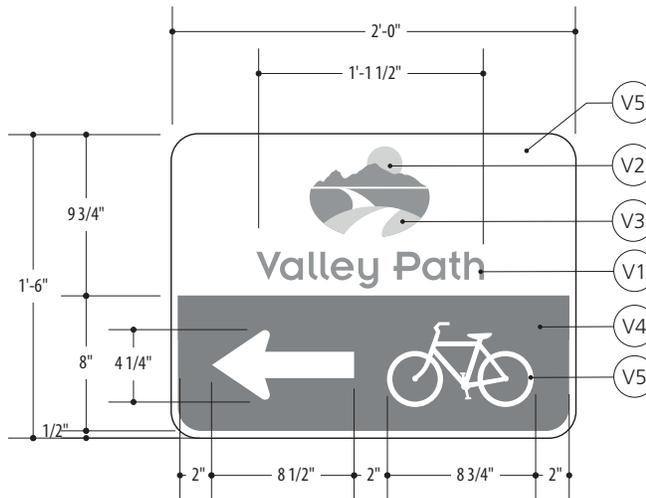
NOTES:
Direct bury at least 2 ft from edge of sign panel to trail edge.

* Or equal (2" sq aluminum tube)

These drawings are meant for DESIGN INTENT ONLY and are not for construction. Contractor shall verify and be responsible for all dimensions and conditions of the job. Contractor shall be familiar with the site and conditions it presents. This office must be notified of any variations from the dimensions and conditions shown on this drawing. Shop drawings and details must be submitted to this office for approval prior to proceeding with fabrication. All copy shall be proofread by client and legal requirements checked by legal department.



1 Color Schedule - BIKE.4
Scale: 3/8"=1'



2 Typical Layout Guidelines - BIKE.4
Scale: 1"=1'

**BIKE.4
TURN SIGN**

The BIKE.4 Sign type is a path turn sign and should be located at points along the Valley Path to inform cyclists they will need to turn to follow the Valley Path.

This is a MUTCD-compliant sign type, using MUTCD approved typefaces, arrows and icons.

The top of the sign is a header panel with the Valley Path brand. The sign panel is a standard size panel (size D-11). Layouts are shown below for the graphic panels of this sign.

This a single-sided sign. The back of the sign panel is painted white.

Refer to page 2.4 for the paint and material callouts on this drawing.

Refer to the following page for an elevation drawing of this sign type.

These drawings are meant for DESIGN INTENT ONLY and are not for construction. Contractor shall verify and be responsible for all dimensions and conditions of the job. Contractor shall be familiar with the site and conditions it presents. This office must be notified of any variations from the dimensions and conditions shown on this drawing. Shop drawings and details must be submitted to this office for approval prior to proceeding with fabrication. All copy shall be proofread by client and legal requirements checked by legal department.

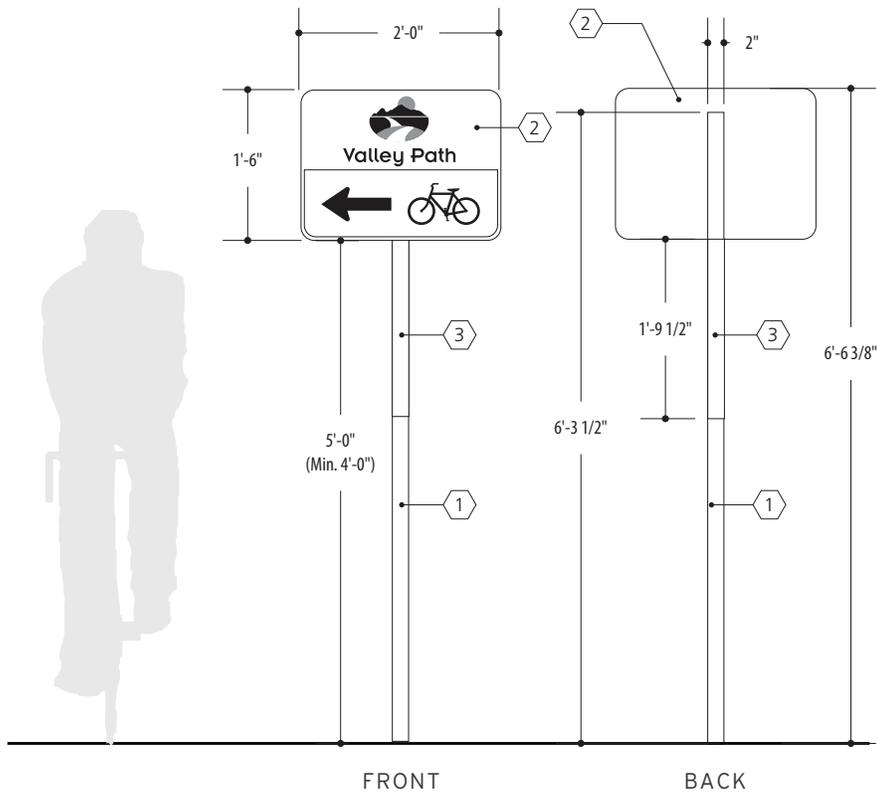
BIKE.4
TURN SIGN

The BIKE.4 Sign type is a path turn sign and should be located at points along the Valley Path to inform cyclists they will need to turn to follow the Valley Path.

This is a MUTCD-compliant sign type, using MUTCD approved typefaces, arrows and icons.

The top of the sign is a header panel with the Valley Path brand. The sign panel is a standard size panel (size D-11).

This a single-sided sign. The back of the sign panel is painted white.



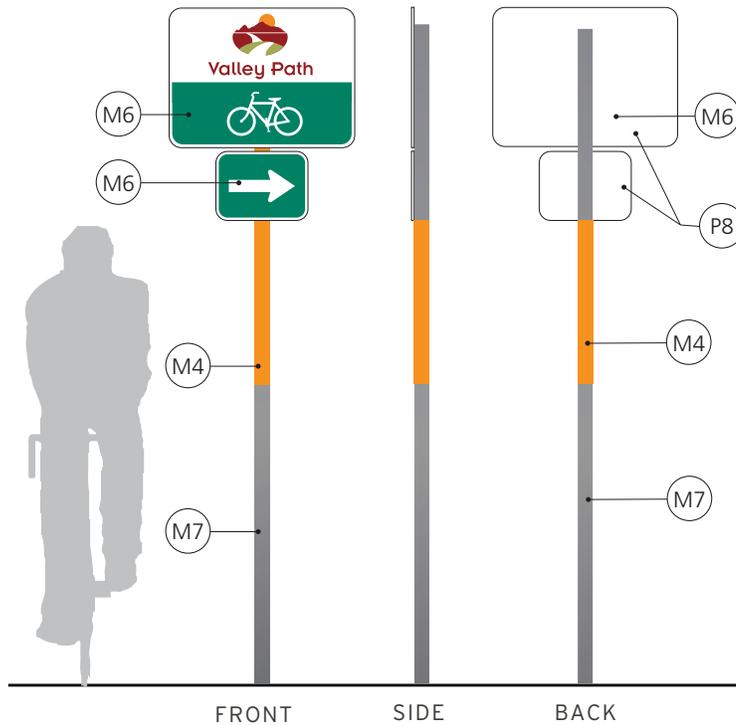
1 Elevations BIKE.4
scale: 1/2"=1'-0"

- 1 Unpainted aluminum 2" sq tube*
- 2 0.80 aluminum panel (standard size D-11) with reflective vinyl graphics, mechanically fastened to 2" steel sq tube
- 3 2" wide reflective tape to best match PMS 138

NOTES:
Direct bury at least 2 ft from edge of sign panel to trail edge.

* Or equal (2" sq aluminum tube)

These drawings are meant for DESIGN INTENT ONLY and are not for construction. Contractor shall verify and be responsible for all dimensions and conditions of the job. Contractor shall be familiar with the site and conditions it presents. This office must be notified of any variations from the dimensions and conditions shown on this drawing. Shop drawings and details must be submitted to this office for approval prior to proceeding with fabrication. All copy shall be proofread by client and legal requirements checked by legal department.



BIKE.5
TURN SIGN - ALTERNATE

The BIKE.5 Sign type is a path turn sign and should be located at points along the Valley Path to inform cyclists they will need to turn to follow the Valley Path. This is an alternate design for sign type BIKE.4

This is a MUTCD-compliant sign type, using MUTCD approved typefaces, arrows and icons.

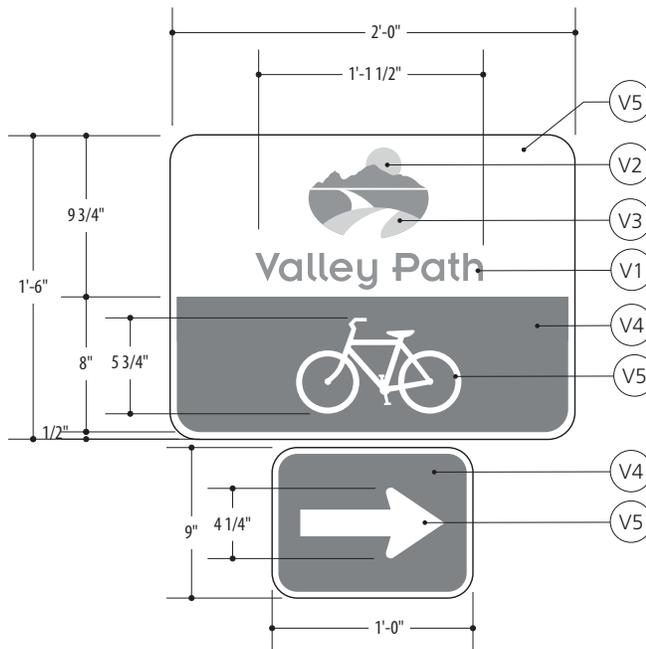
The top of the sign is a header panel with the Valley Path brand. The top sign panel is a standard size panel (size D-11). The bottom panel is also standard (size M6-1) Layouts are shown below for the graphic panels of this sign.

This a single-sided sign. The back of the sign panels are painted white.

Refer to page 2.4 for the paint and material callouts on this drawing.

Refer to the following page for an elevation drawing of this sign type.

1 Color Schedule - BIKE.5
Scale: 3/8"=1'



2 Typical Layout Guidelines - BIKE.5
Scale: 1"=1'

These drawings are meant for DESIGN INTENT ONLY and are not for construction. Contractor shall verify and be responsible for all dimensions and conditions of the job. Contractor shall be familiar with the site and conditions it presents. This office must be notified of any variations from the dimensions and conditions shown on this drawing. Shop drawings and details must be submitted to this office for approval prior to proceeding with fabrication. All copy shall be proofread by client and legal requirements checked by legal department.

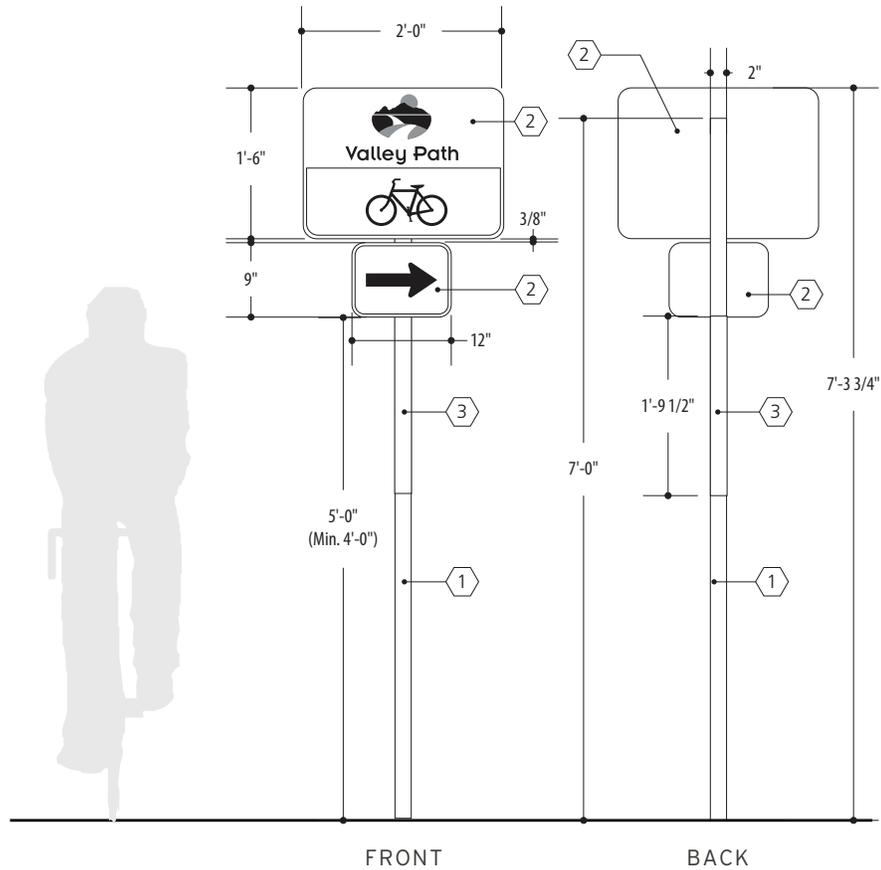
BIKE.5
TURN SIGN - ALTERNATE

The BIKE.5 Sign type is a path turn sign and should be located at points along the Valley Path to inform cyclists they will need to turn to follow the Valley Path. This is an alternate design for sign type BIKE.4

This is a MUTCD-compliant sign type, using MUTCD approved typefaces, arrows and icons.

The top of the sign is a header panel with the Valley Path brand. The top sign panel is a standard size panel (size D-11). The bottom panel is also standard (size M6-1)

This a single-sided sign. The back of the sign panels are painted white.



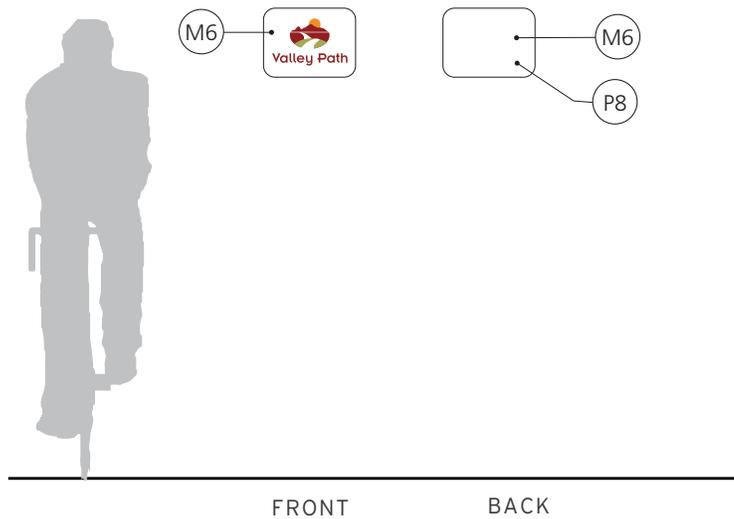
1 Elevations BIKE.5
scale: 1/2"=1'-0"

- 1 Unpainted aluminum 2" sq tube*
- 2 0.80 aluminum panels (standard size D-11 & M6-1) with reflective vinyl graphics, mechanically fastened to 2" steel sq tube
- 3 2" wide reflective tape to best match PMS 138

NOTES:
Direct bury at least 2 ft from edge of sign panel to trail edge.

* Or equal (2" sq aluminum tube)

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**BIKE.6
LOGO PANEL**

The BIKE.6 Sign type is a sign panel ONLY that can be used with an existing sign along the Valley Path. The panel may be attached to existing kiosk and map panels as well.

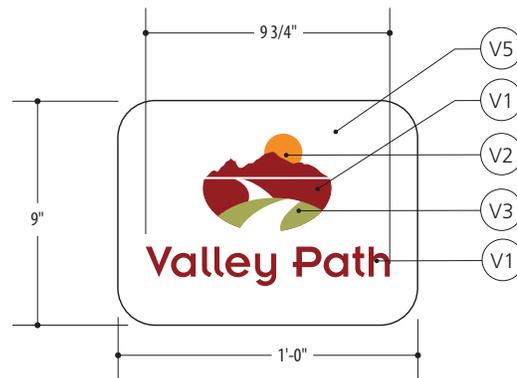
The sign panel is a standard size panel (size M6-1). It should be mechanically fastened to the post of an existing sign or wayfinding element. It could also be mounted to a wall. A Layout is shown below for the graphic sign panel.

This is a single-sided sign. The back of the sign panels are painted white.

Refer to page 2.4 for the paint and material callouts on this drawing.

Refer to the following page for an elevation drawing of this sign type.

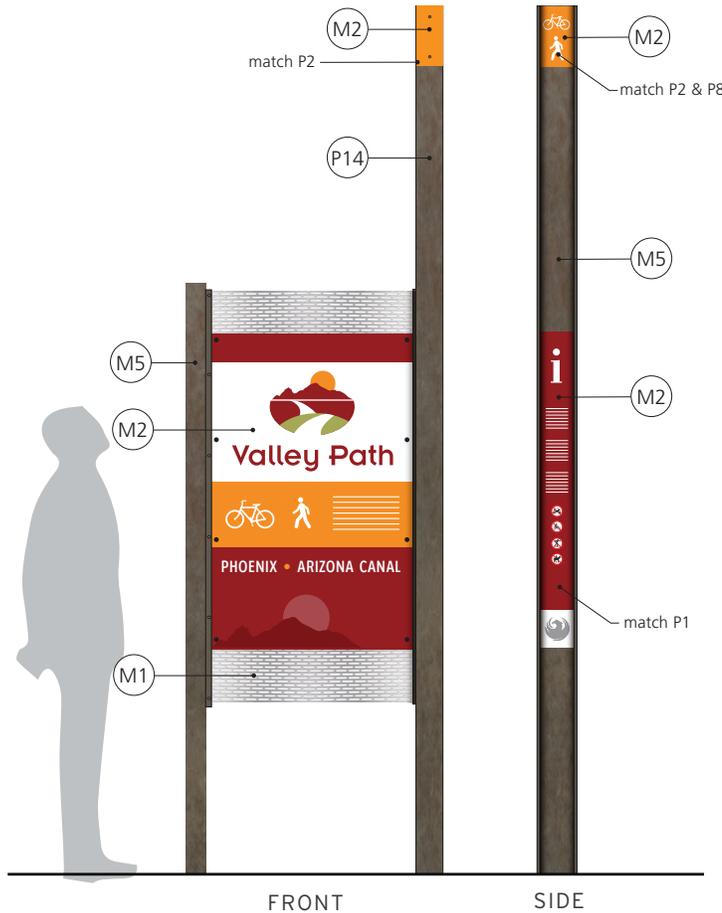
1 Color Schedule - BIKE.6
Scale: 3/8"=1'



2 Typical Layout Guidelines - BIKE.6
Scale: 1"=1'

These drawings are meant for DESIGN INTENT ONLY and are not for construction. Contractor shall verify and be responsible for all dimensions and conditions of the job. Contractor shall be familiar with the site and conditions it presents. This office must be notified of any variations from the dimensions and conditions shown on this drawing. Shop drawings and details must be submitted to this office for approval prior to proceeding with fabrication. All copy shall be proofread by client and legal requirements checked by legal department.

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**PATH.1
PRIMARY PATH ID**

The PATH.1 Sign type is a Primary Path ID sign and should be located at main entry points to the Valley Path, where there is public parking available. The municipality where the sign is located will be responsible for text on the graphic panels.

There is space for a municipality or city identity on the side of this sign element, and on the front under the yellow color block.

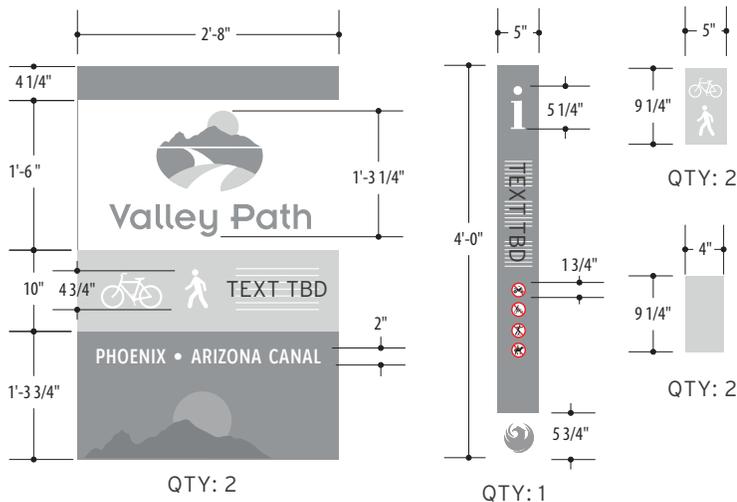
Layouts are shown below for the graphic panels on this sign.

This a double-sided sign. The large Valley Path panel is the same on the back.

Refer to page 2.4 for the paint and material callouts on this drawing.

Refer to the following page for an elevation drawing of this sign type.

1 Color Schedule - PATH.1
3/8"=1'



2 Typical Layout Guidelines - PATH.1
1/2"=1'

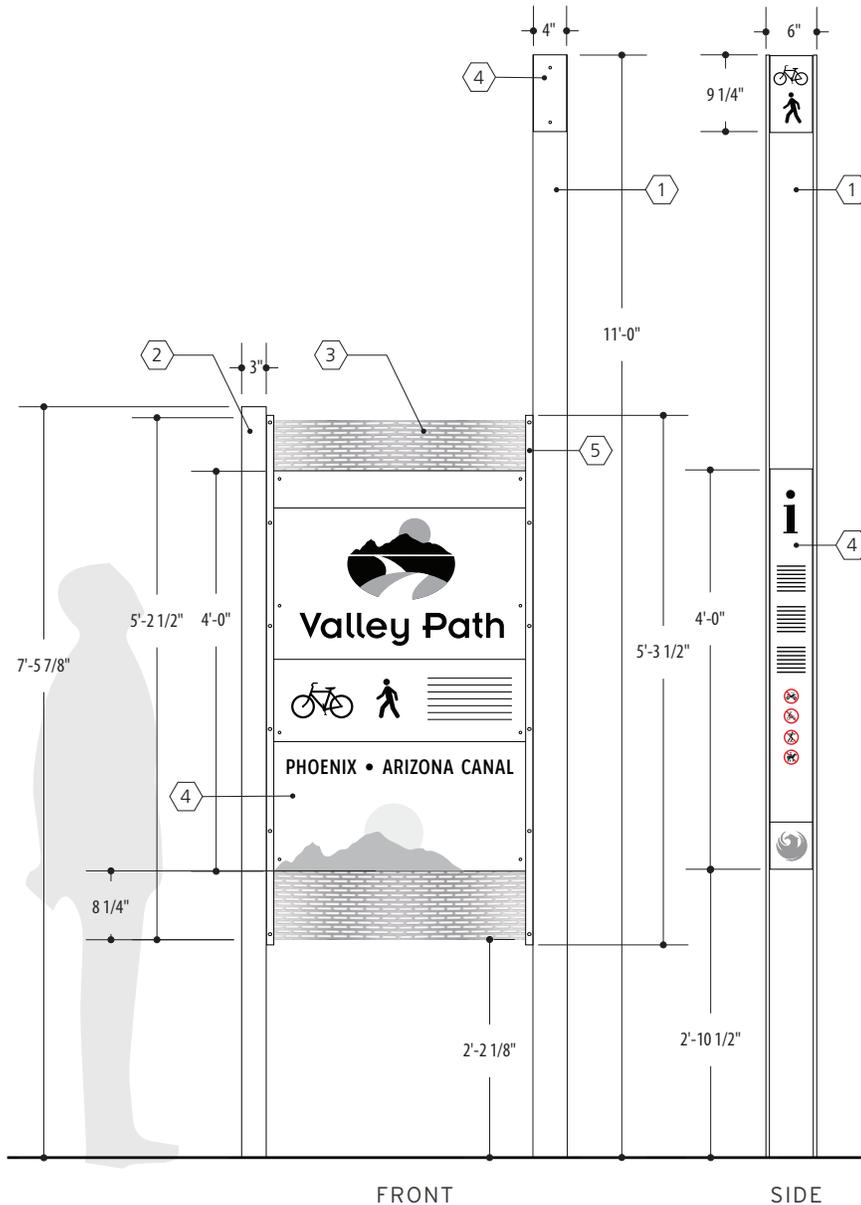
These drawings are meant for DESIGN INTENT ONLY and are not for construction. Contractor shall verify and be responsible for all dimensions and conditions of the job. Contractor shall be familiar with the site and conditions it presents. This office must be notified of any variations from the dimensions and conditions shown on this drawing. Shop drawings and details must be submitted to this office for approval prior to proceeding with fabrication. All copy shall be proofread by client and legal requirements checked by legal department.

PATH.1
PRIMARY PATH ID

The PATH.1 Sign type is a Primary Path ID sign and should be located at main entry points to the Valley Path, where there is public parking available. The municipality where the kiosk is located will be responsible for text on the graphic panels.

There is space for a municipality or city identity on the side of this sign element, and on the front under the yellow color block.

This a double-sided sign. The large Valley Path panel is the same on the back.



1 Elevations PATH.1
scale: 3/8"=1'-0"

1 Mill finish steel I-Beam - 6" x 4"

2 3" sq. mill finish steel tube, capped

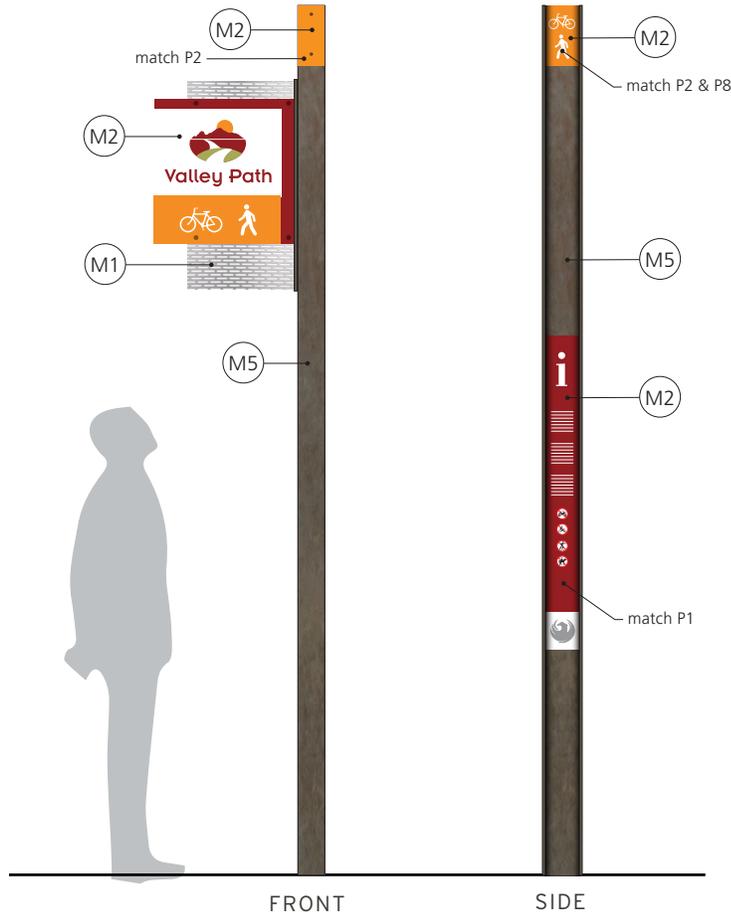
3 Raw aluminum, 20 gauge, side staggered slotted hole screen, mechanically fastened between steel architectural angles.

4 1/4" Graphic panels mechanically fastened through perforated screen with non-corrosive tamper-resistant hardware (panel on each side of screen)

5 Mill finish architectural angle mechanically fastened to either I-Beam or 3" sq. tube.

NOTES:

These drawings are meant for DESIGN INTENT ONLY and are not for construction. Contractor shall verify and be responsible for all dimensions and conditions of the job. Contractor shall be familiar with the site and conditions it presents. This office must be notified of any variations from the dimensions and conditions shown on this drawing. Shop drawings and details must be submitted to this office for approval prior to proceeding with fabrication. All copy shall be proofread by client and legal requirements checked by legal department.



PATH.2
SECONDARY PATH ID

The PATH.2 Sign type is a Secondary Path ID sign and should be located at smaller entry points to the Valley Path. Public parking does not need to be available at these entry points but may be. The municipality where the sign is located will be responsible for text on the graphic panels.

There is space for a municipality or city identity on the side of this sign element.

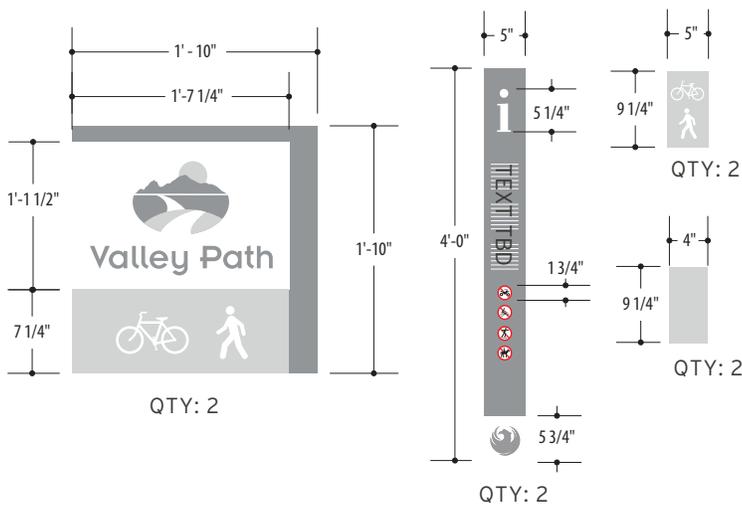
Layouts are shown below for the graphic panels on this sign.

This a double-sided sign. The square Valley Path panel is the same on the back.

Refer to page 2.4 for the paint and material callouts on this drawing.

Refer to the following page for an elevation drawing of this sign type.

1 Color Schedule - PATH.2
Scale: 3/8"=1'



2 Typical Layout Guidelines - PATH.2
Scale: 1 1/2"=1' Scale: 1/2"=1'

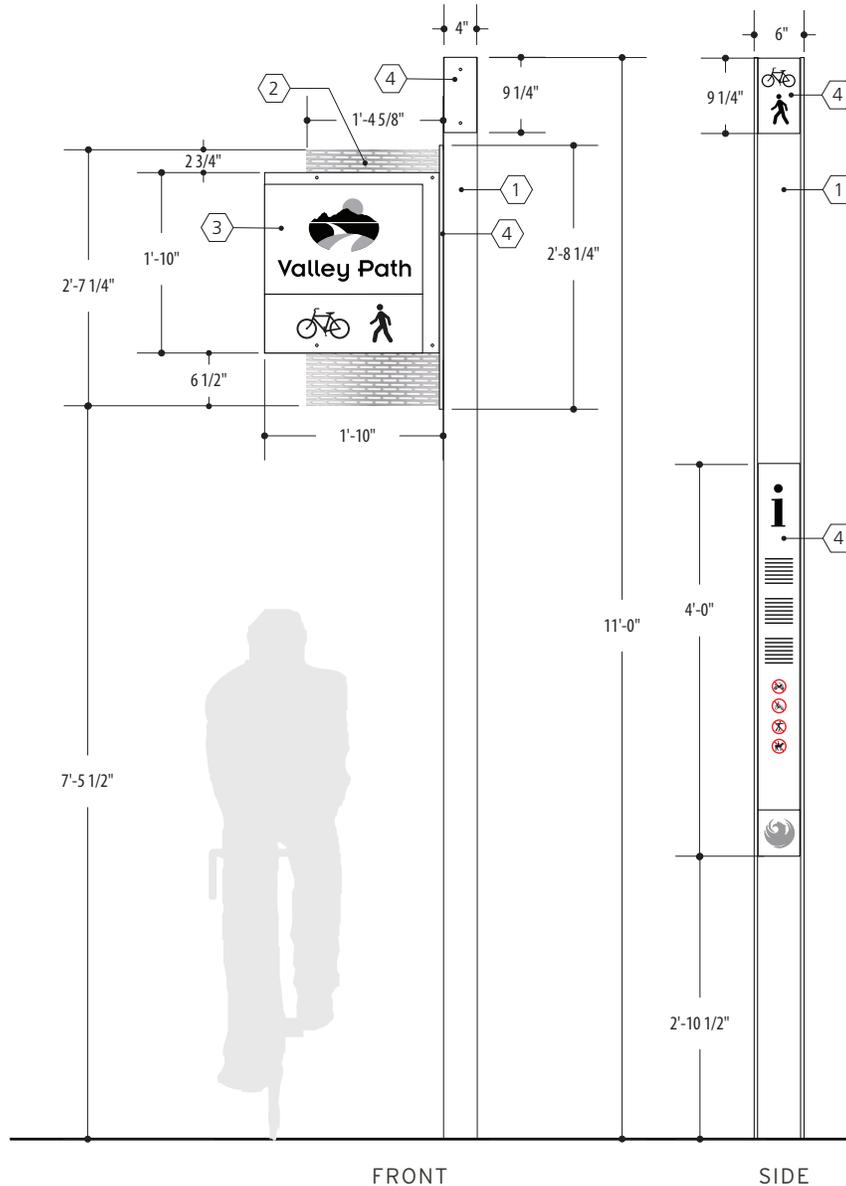
These drawings are meant for DESIGN INTENT ONLY and are not for construction. Contractor shall verify and be responsible for all dimensions and conditions of the job. Contractor shall be familiar with the site and conditions it presents. This office must be notified of any variations from the dimensions and conditions shown on this drawing. Shop drawings and details must be submitted to this office for approval prior to proceeding with fabrication. All copy shall be proofread by client and legal requirements checked by legal department.

PATH.2
SECONDARY PATH ID

The PATH.2 Sign type is a Secondary Path ID sign and should be located at smaller entry points to the Valley Path. Public parking does not need to be available at these entry points but may be. The municipality where the sign is located will be responsible for text on the graphic panels.

There is space for a municipality or city identity on the side of this sign element.

This a double-sided sign. The square Valley Path panel is the same on the back.



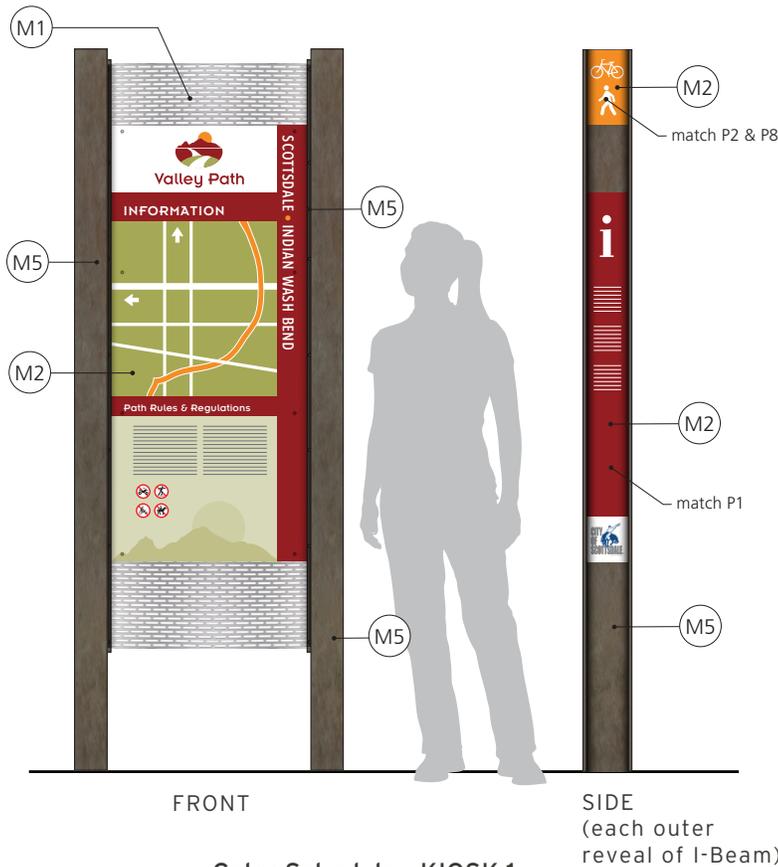
1 Elevations PATH.2
scale: 3/8"=1'-0"

- 1** Mill finish steel I-Beam - 6" x 4"
- 2** Raw aluminum, 20 gauge, side staggered slotted hole screen, mechanically fastened between steel architectural angles.
- 3** 1/4" Graphic panels mechanically fastened through perforated screen with non-corrosive tamper-resistant hardware (panel on each side of screen)

- 4** Mill finish architectural angle mechanically fastened to I-Beam.

NOTES:
Double-sided, Valley Path graphic panel layout is same on back. Red Information panel is the same on each side of the I-Beam.

These drawings are meant for DESIGN INTENT ONLY and are not for construction. Contractor shall verify and be responsible for all dimensions and conditions of the job. Contractor shall be familiar with the site and conditions it presents. This office must be notified of any variations from the dimensions and conditions shown on this drawing. Shop drawings and details must be submitted to this office for approval prior to proceeding with fabrication. All copy shall be proofread by client and legal requirements checked by legal department.



**KIOSK.1
TRAIL KIOSK**

The KIOSK.1 Sign type is an informational sign for all path users and may be located at Entry points to the Valley Path, or in parks where the path crosses through. The municipality where the sign is located will be responsible for text on the graphic panels.

There is space for a municipality or city identity on the side of this sign element, and on the front in the umbria red color bar on the side.

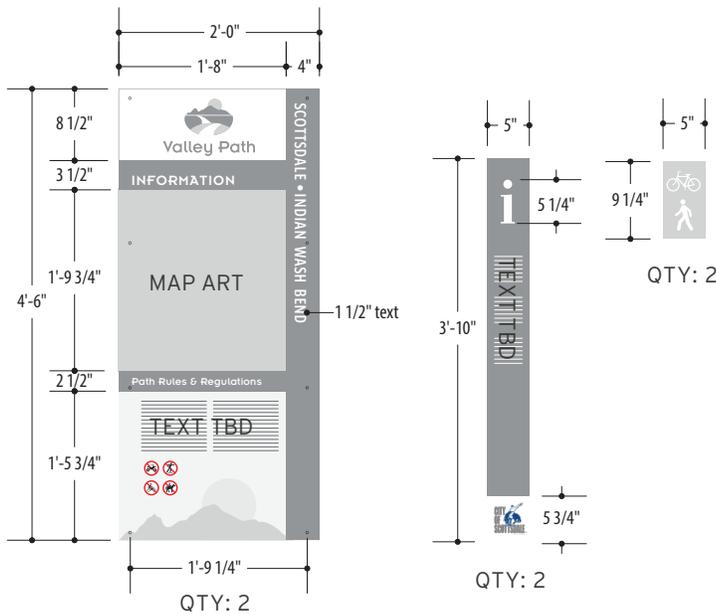
Layouts are shown below for the graphic panels on this sign.

This a double-sided sign. The rectangular Valley Path panel is the same on the back.

Refer to page 2.4 for the paint and material callouts on this drawing.

Refer to the following page for an elevation drawing of this sign type.

1 Color Schedule - KIOSK.1
Scale: 3/8"=1'



2 Typical Layout Guidelines - KIOSK.1
Scale: 1/2"=1'

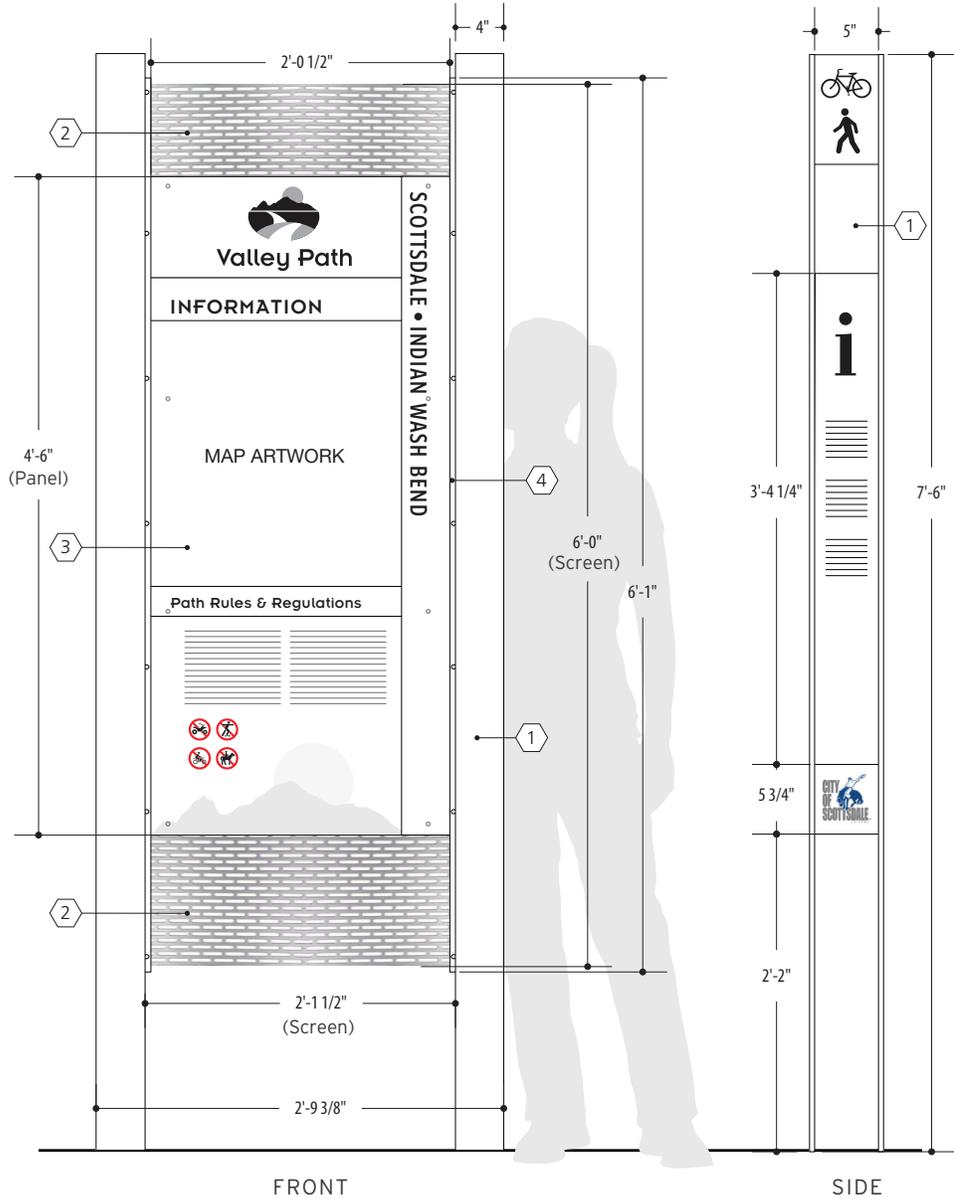
These drawings are meant for DESIGN INTENT ONLY and are not for construction. Contractor shall verify and be responsible for all dimensions and conditions of the job. Contractor shall be familiar with the site and conditions it presents. This office must be notified of any variations from the dimensions and conditions shown on this drawing. Shop drawings and details must be submitted to this office for approval prior to proceeding with fabrication. All copy shall be proofread by client and legal requirements checked by legal department.

KIOSK.1
TRAIL KIOSK

The KIOSK.1 Sign type is an informational sign for all path users and may be located at Entry points to the Valley Path, or in parks where the path crosses through. The municipality where the sign is located will be responsible for text on the graphic panels.

There is space for a municipality or city identity on the side of this sign element, and on the front in the umbria red color bar on the side.

This a double-sided sign. The rectangular Valley Path panel is the same on the back.



1 Elevations KIOSK.1
scale: 3/4"=1'-0"

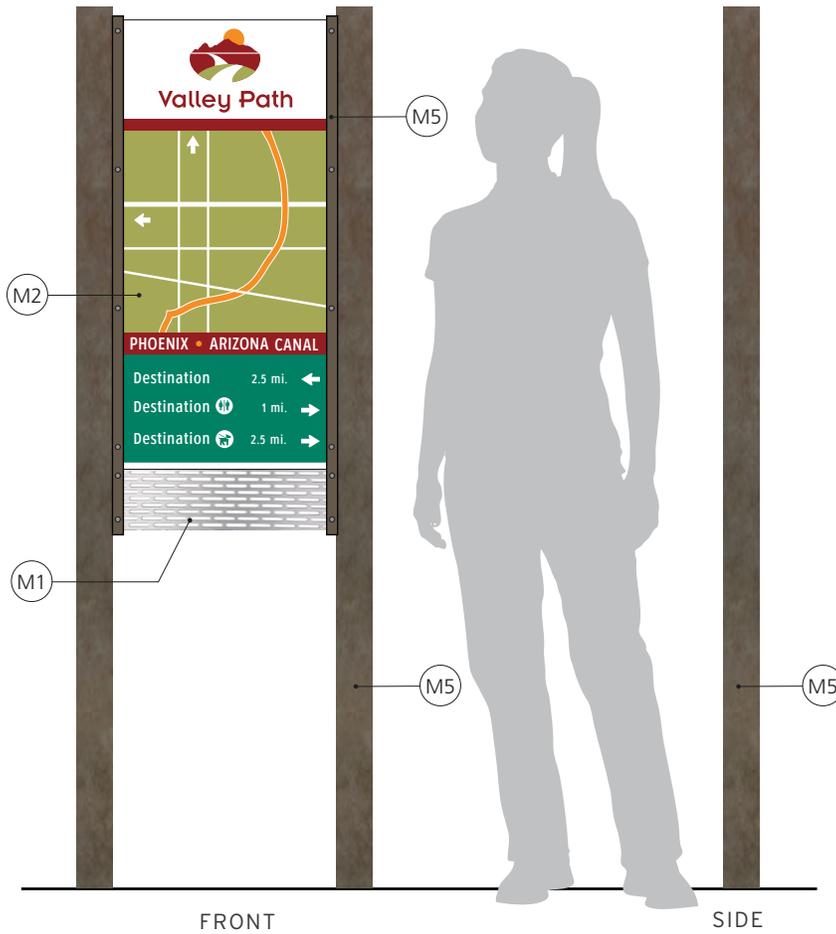
- 1 Mill finish steel I-Beam - 6" x 4"
- 2 Raw aluminum, 20 gauge, side staggered slotted hole screen, mechanically fastened between steel architectural angles.
- 3 1/4" Graphic panels mechanically fastened through perforated screen with non-corrosive tamper-resistant hardware (panel on each side of screen)

- 4 Mill finish architectural angle mechanically fastened to I-Beam.

NOTES:
Sign is double-sided. Panels are mechanically fastened to screen on each side.

Map artwork and informational text to be provided by municipality or MAG.

These drawings are meant for DESIGN INTENT ONLY and are not for construction. Contractor shall verify and be responsible for all dimensions and conditions of the job. Contractor shall be familiar with the site and conditions it presents. This office must be notified of any variations from the dimensions and conditions shown on this drawing. Shop drawings and details must be submitted to this office for approval prior to proceeding with fabrication. All copy shall be proofread by client and legal requirements checked by legal department.



**PED.1
PEDESTRIAN DIRECTIONAL**

The PED.1 Sign type is an informational sign for all pedestrian path users and may be located at decision points along the Valley Path, or in parks where the path crosses through. The municipality where the sign is located will be responsible for the 3 destinations directed to on these signs.

There is space for a municipality or city identity on the front in the umbria red color bar.

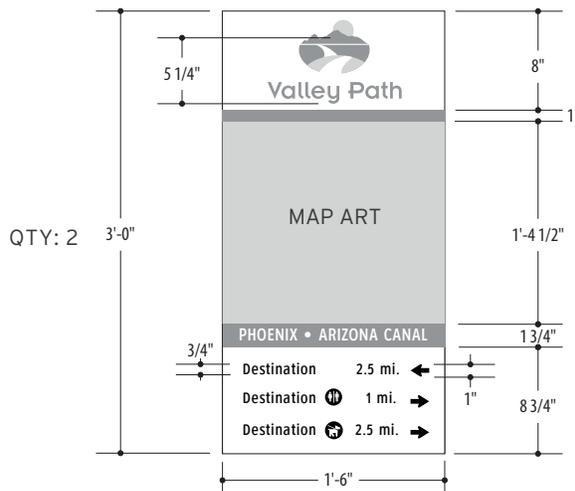
A Layout is shown below for the graphic panel on this sign.

This a double-sided sign. The destination directions will change on the back of the panel.

Refer to page 2.4 for the paint and material callouts on this drawing.

Refer to the following page for an elevation drawing of this sign type.

1 Color Schedule - PED.1
Scale: 1/4"=1'



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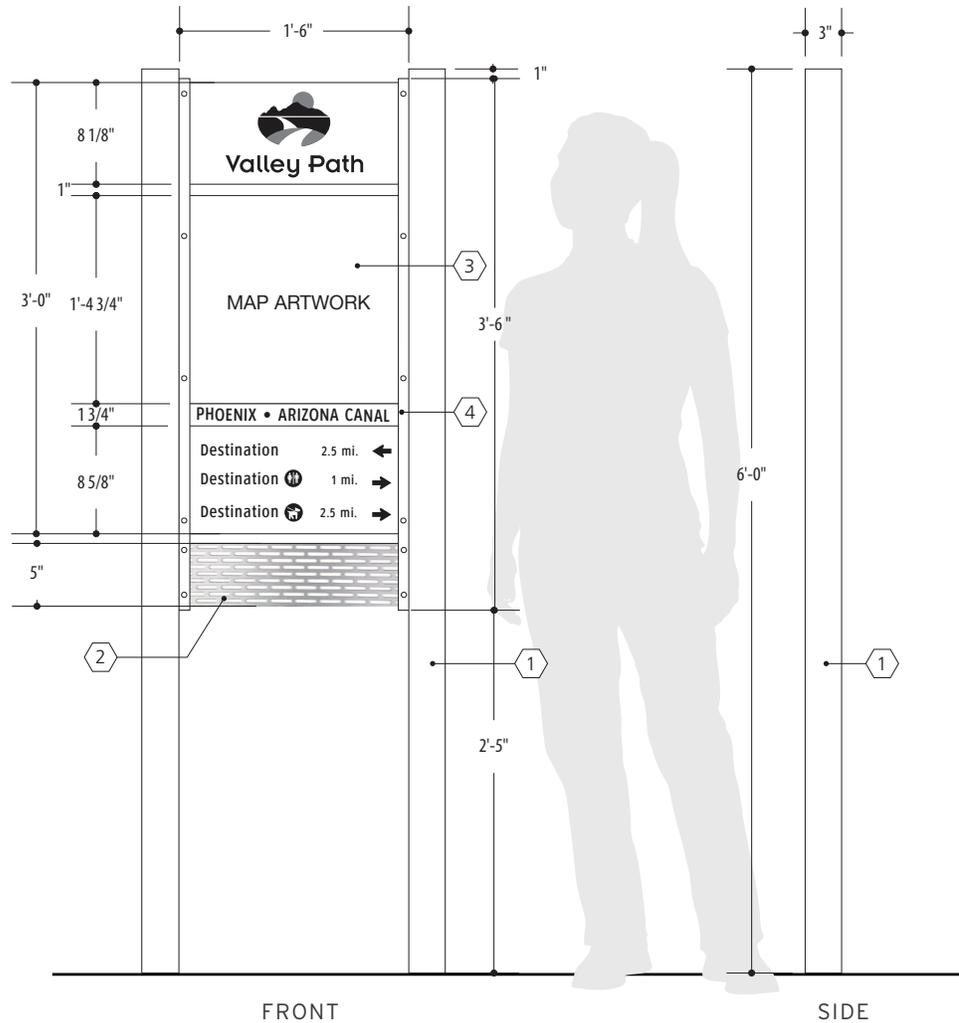
2 Typical Layout Guidelines - PED.1
Scale: 1/4"=1'

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There is space for a municipality or city identity on the front in the umbria red color bar.

This a double-sided sign. The destination directions will change on the back of the panel.

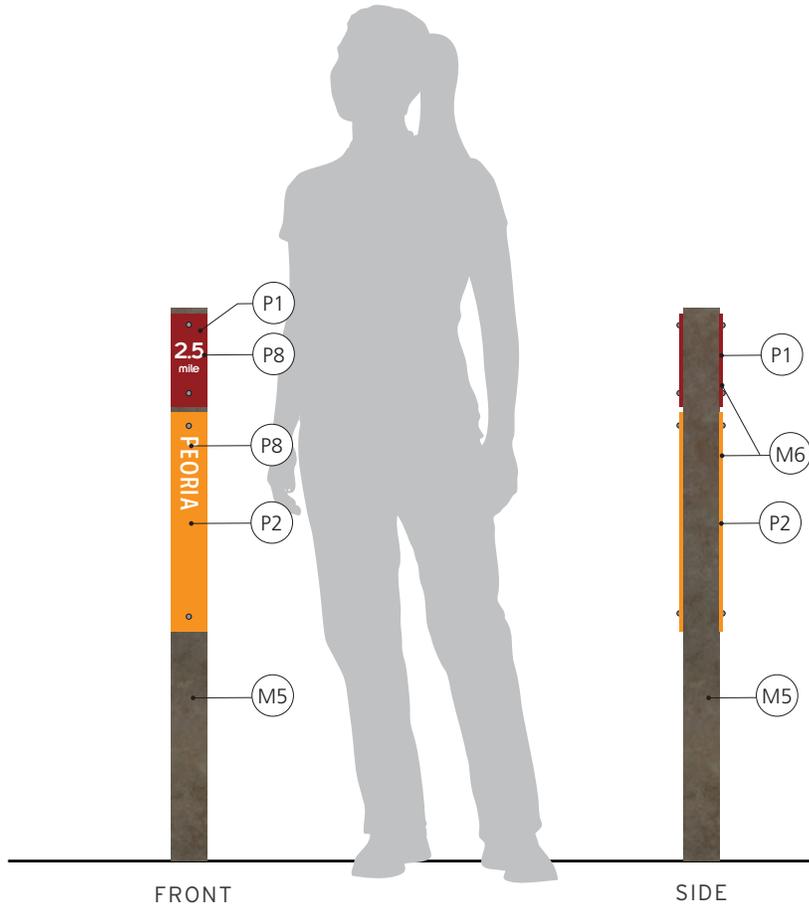


1 Elevations PED.1
scale: 3/4"=1'-0"

- ① Mill finish steel 3" sq. tube, capped
- ② Raw aluminum, 20 gauge, side staggered slotted hole screen, mechanically fastened between steel architectural angles.
- ③ Double-sided 1/4" graphic panel mechanically fastened between steel architectural angles.
- ④ Mill finish architectural angles mechanically fastened to steel 3" sq. tube

NOTES:
Sign is double-sided.
Map artwork and directional information to be provided by municipality or MAG.

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**MILE.1
MILE MARKER**

The MILE.1 Sign type is an informational sign for all pedestrian path users and may be located at 1/4 mile increments along the Valley Path.

There is space for a municipality or city identity on the front and back in the gold color bar.

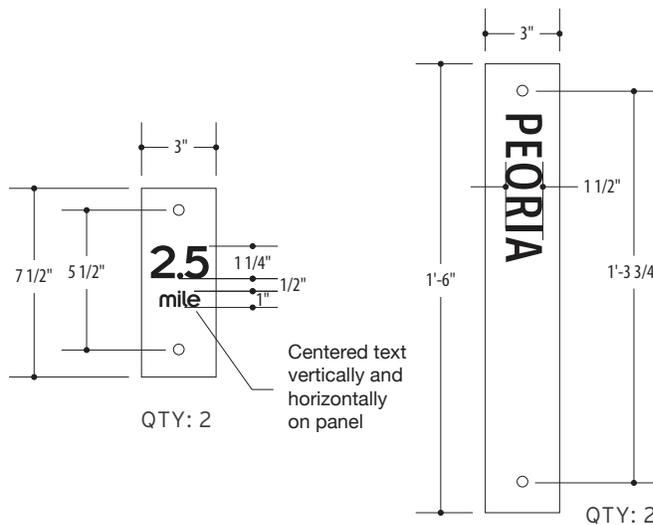
A Layout is shown below for the graphic panels on this sign.

This a double-sided sign. The information will change on the back of the sign.

Refer to page 2.4 for the paint and material callouts on this drawing.

Refer to the following page for an elevation drawing of this sign type.

1 Color Schedule - MILE.1
Scale: 3/4"=1"



2 Typical Layout Guidelines - MILE.1
Scale: 3"=1"

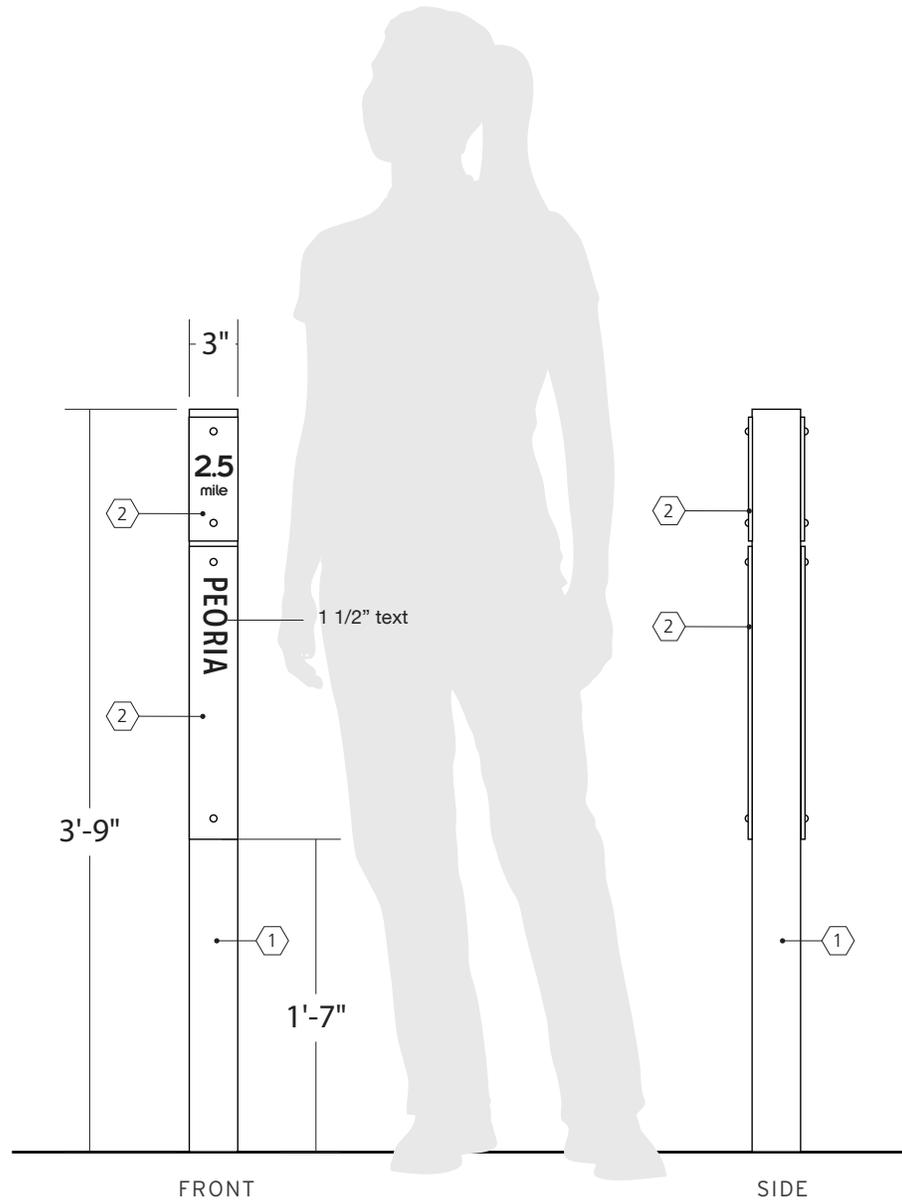
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This a double-sided sign. The information will change on the back of the sign.



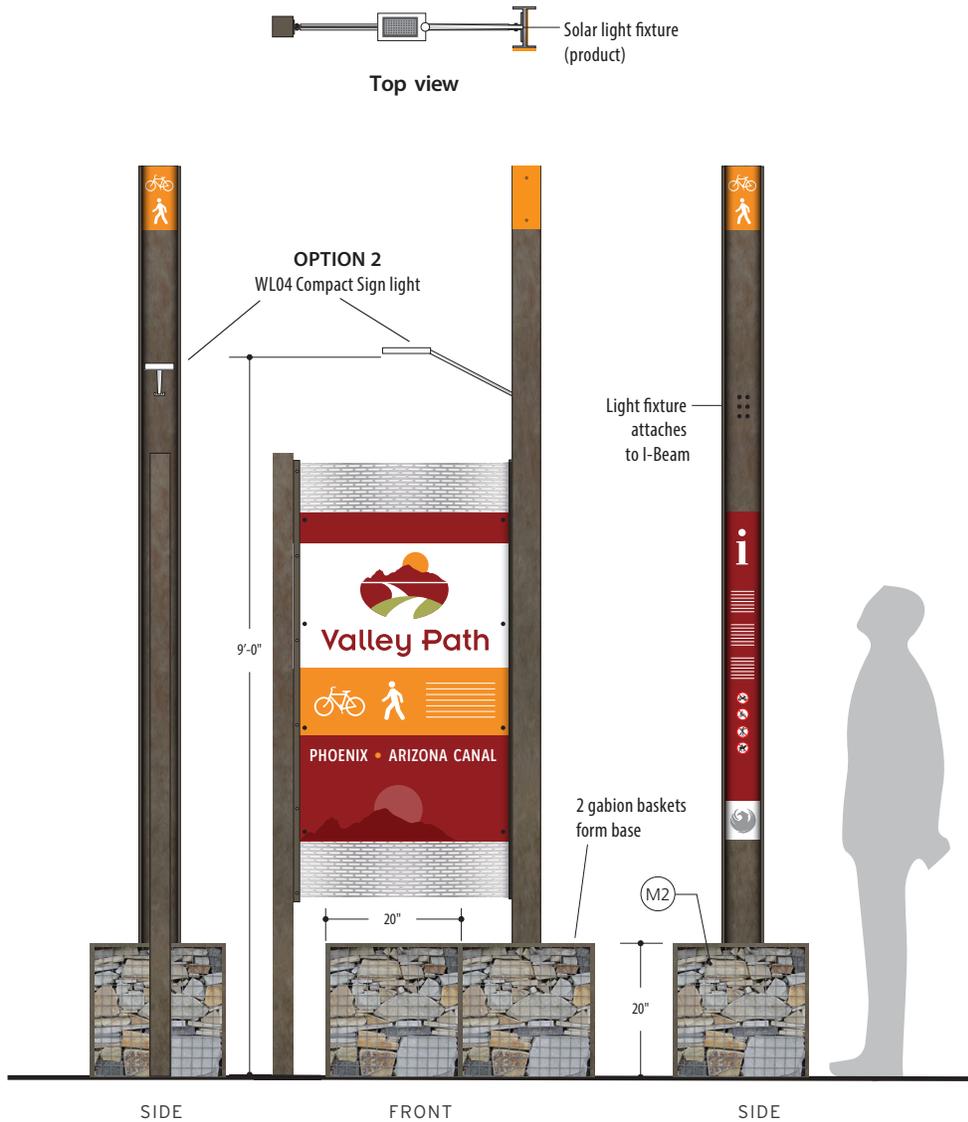
1 Elevations MILE.1
scale: 1"=1'-0"

- 1 Mill finish steel 3" sq. tube, capped
- 2 0.08" painted aluminum panel mechanically fastened to 3" sq. tube

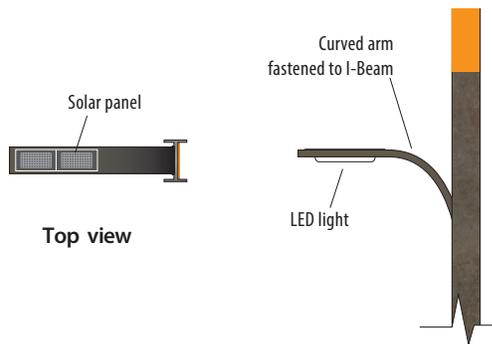
NOTES:
Sign is double-sided.

Different mileage on either side of sign.
Name of municipality changes as you travel the path

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1 Color Schedule - PATH.1A- Enhancements
NTS



2 Color Schedule - PATH.1A - Custom Lighting
NTS

**PATH.1A
PRIMARY PATH ID
WITH SIGN ENHANCEMENTS**

There are sign enhancements a municipality can choose to add to the PATH.1 sign type.

Available enhancements to sign PATH.1 are a gabion basket base (either one or two baskets) two options for solar lighting on the sign, and one option for solar lighting on the ground.

Municipalities can pick and choose which enhancements, if any, they would like to add to the PATH.1 sign type.

GABION BASKETS

Wire-framed rock-filled baskets can be used to enhance the base of the PATH.1 sign and provide a seat at the entry to the Path. One or two baskets may be used, an option for two baskets is shown at the left. If one basket were to be used it would be basket the I-Beam goes into. The baskets provide a more substantial and solid feel to base.

SOLAR LIGHTING

There are two options for lighting to be added to the sign structure. Option One is a solar light product on an arm that would attach to the reveal of the I-Beam. There are two options available at <http://www.solarilluminations.com>. (see pg. 2.36)

A second option would be for a custom arched arm to be attached to the reveal of the I-Beam with a LED light fixture mounted underneath the arch, and a solar panel mounted to the top of the arch.

There are also ground solar pillars that could be used at the Path Entry points available at <http://www.solarilluminations.com>.

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PRODUCT LINKS

• **Welded Wire Gabions**

There are many options for gabion basket materials. Local warm colored stone can be used to fill the baskets. The below link is a national retailer for gabion baskets, but cities may use another supplier.

http://www.gabionbaskets.net/midwest_welded_wire_gabions.php



Gabion Basket

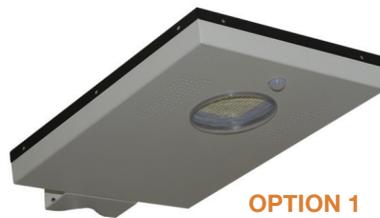
• **Overhead Solar Light**

These two lights would be mechanically fastened to the reveal of the steel I-Beam. A "bump out" base may be need for Option 1 to clear the sides of the I-Beam.

OPTION 1: Recommended

<http://www.solarilluminations.com/solar-street-parking-lot-lights/SL28-Solar-Street-Parking-Lot-Area-Light>

Small size - mount at 9ft from ground.



Overhead Solar Light

OPTION 2:

<http://www.solarilluminations.com/solar-sign-lights/WL04-Compact-Sign-Light>

• **Freestanding Solar Light**

<http://www.solarilluminations.com/solar-outdoor-accent-lights/SS03-Solar-Stainless-Light>



Freestanding Solar Light

Solar Lighting Disclaimer

These products are recommendations only. Because conditions at locations where lighting elements may be placed vary, contacting a lighting specialist to discuss lighting options is strongly suggested.

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the 1990s, the number of people in the world who are poor has increased from 1.2 billion to 1.6 billion.

There are a number of reasons why the number of people in the world who are poor has increased. One reason is that the world's population has grown rapidly.

Another reason is that the world's resources are being used up. This means that there is less food, water, and energy available for everyone.

A third reason is that the world's economy is not growing fast enough. This means that there are not enough jobs available for everyone.

There are a number of things that we can do to help reduce the number of people in the world who are poor. One thing is to stop the world's population from growing so rapidly.

Another thing is to use the world's resources more wisely. This means that we should not waste food, water, and energy.

A third thing is to help the world's economy grow faster. This means that we should create more jobs for everyone.

There are a number of other things that we can do to help reduce the number of people in the world who are poor. We should all do our part to make the world a better place for everyone.

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section 3

Wayfinding Guidelines

- 3.2 Destination Selection and Prioritization
- 3.7 Function and Placement of Wayfinding Elements
- 3.10 Placement Strategies

3.1 Destination Selection and Prioritization

Following the first principle, “connect places,” these guidelines describe an approach for selecting and prioritizing the potential destinations to which cyclists may want to travel. Bicycle signs only allow for three slots of information or destinations per sign. Thus a consistent approach to selecting destinations to be included on wayfinding elements, is necessary given the multitude of potential destinations possible. Signs should follow the same approach throughout the region so that the system is clear and predictable. Destinations and their names should be referred to consistently until they are reached. Potential destinations to be included on wayfinding elements were generated from the Maricopa Association of Governments March, 2014 Landmark Inventory and the August, 2014 wayfinding public input survey, with input from MAG Bicycle and Pedestrian Committee members.

Potential destinations for inclusion on signs were categorized within a range of four levels. Level 1 destinations should receive first priority on wayfinding signs on regional pathways, followed by level 2 and then 3. Level 4 destinations should only be included when other destinations are not present to fill available slots on a sign. For the purpose of the MAG Off-Street Bicycle Network Wayfinding Guide, these levels have been broadly organized as follows:

- Level 1 – Cities, Native American Communities**
- Level 2 – Districts and Neighborhoods**
- Level 3 – Landmarks**
- Level 4 – Local Destinations**

Community and local pathways typically serve shorter trips within their immediate community. Signs on such facilities may prioritize level 2-4 destinations recognizing that longer, regional trips are more likely to occur via the regional pathway network. Also, destinations that are smaller in scale and regional significance are less likely to have direct connections from the off-street bicycle network than higher level destinations. The off-street bicycle wayfinding system will typically need to work in conjunction with the on-street bicycle navigational information to provide direction over the last mile of one’s journey in order to reach the front door of destinations.

The table at right categorizes destinations within the Phoenix metro area.

LEVEL 1 - Cities and Communities
Level 1 destinations include cities, major communities, and Native American Communities found within the Phoenix metro area. Highlighting cities and communities provides large scale geographic orientation for regional cycling. Level 1 destinations provide “pull through” destinations for cyclists who are travelling significant distances as well as a full range of attractions and services. Pathway facilities that extend beyond the boundaries of the MAG region may include prominent destination cities outside of the Phoenix metro region. If a town does not include an activity center and services, it may be excluded from signs. Level 1 destinations should be included on directional signs and orientation maps.
LEVEL 2 – Districts and Neighborhoods
Level 2 destinations provide a finer grain of navigational information than Level 1 destinations by directing users to comprehensible districts and neighborhoods. These may be city centers, historic, commercial, cultural, or educational districts, or neighborhoods with a distinct name and character. Emphasis should be placed on districts providing a mix of services. Neighborhoods not offering services or attractions, need not be included.
LEVEL 3 - Landmarks
Level 3 destinations are specific landmarks or major attractions which generate a high amount of bicycle travel. Landmarks include transit stations, major tourist venues, regional parks, and post-secondary educational institutions.
LEVEL 4 – Local Destinations
Level 4 destinations are local destinations such as local parks, high schools, shopping centers, and healthcare facilities. They typically occur on signs in low density areas where few other destinations are present or along pathways not connecting higher priority Level 1-3 destinations.

Signing Distances

Signing distances suggest the maximum distance that destinations should appear on directional signs. This process ensures that information is spread along the journey in manageable amounts according to a cyclist's immediate needs.

Level 1 destinations provide navigational guidance to the widest spectrum of system users and thus should be prioritized on signs. As a priority, level 1 destinations should appear on signs up to 3 miles away. Level 2 destinations appeal to a broad spectrum of users and should be included on signs up to two miles away. Level 3 and 4 destinations are places of either regional or local interest and should be signed up to one mile away.

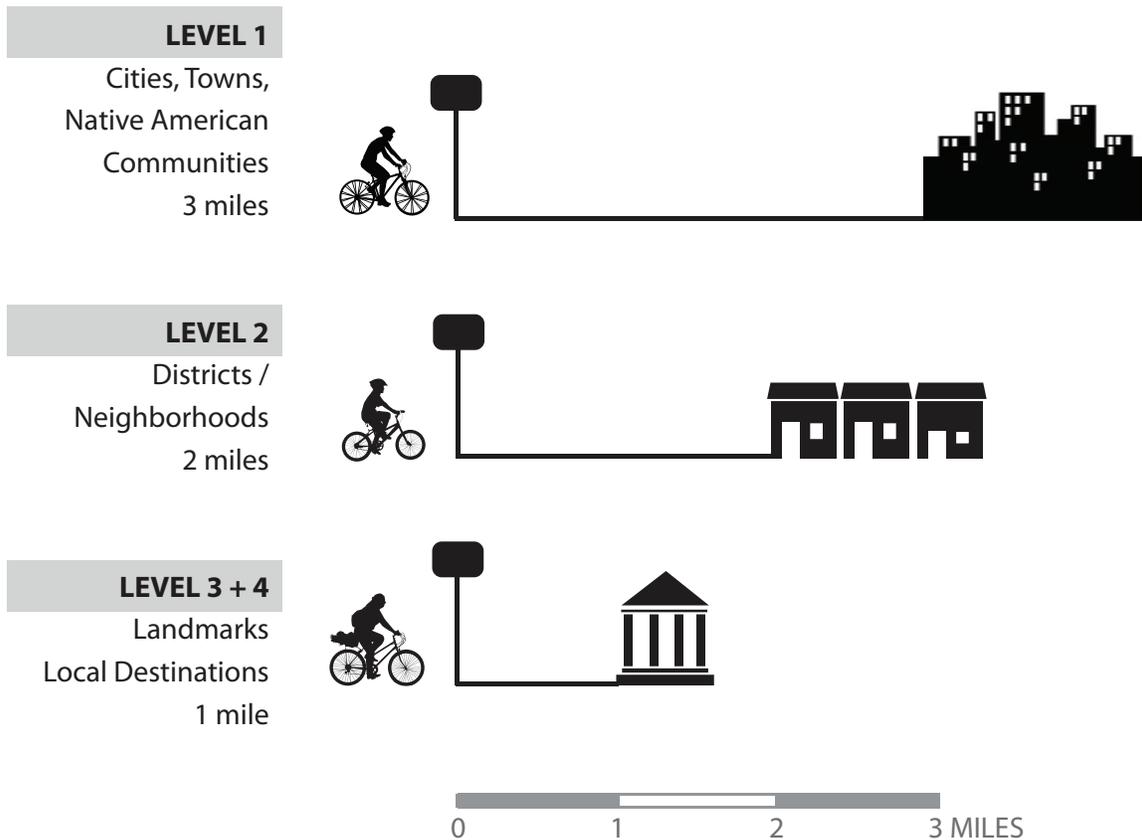
Distances may be measured either to a destination boundary or center, as long as the approach is consistent throughout the region. Cities (level 1 destinations) typically have a well-defined edge and thus should be measured to boundary lines. Districts (level 2 destinations) are less defined in terms of their boundaries

and thus should be measured to their centers. Level 3 and 4 destinations are typically specific addresses and thus distances should be measured to the main entrance of their specific location. If a level 3 or 4 destination is large or has several access points, distance should be measured to the point at which the cyclist will arrive at the destination.

Destination Order

The closest destination lying straight ahead should be at the top of the sign or assembly, and below it the closest destinations to the left and to the right, in that order. If more than one destination is displayed in the same direction, the name of a nearer destination shall be displayed above the name of a destination that is further away.

In situations where two destinations of equal significance and distance may be properly designated and the two destinations cannot appear on the same sign, the two names may be alternated on successive signs.



Destination Selection Criteria

Listed below are the inclusion criteria for determining where a specific destination may fall in the destination hierarchy and the destination will be considered for inclusion on wayfinding elements within the Phoenix metro area. All destinations to be signed should be open and accessible to the public.

LEVEL 1 – CITIES AND COMMUNITIES

Cities and Communities which are members of the Maricopa Association of Governments shall be included as level 1 priority destinations. Prominent communities are also included. Currently, this includes:

Apache Junction
 Avondale
 Buckeye
 Carefree
 Cave Creek
 Chandler
 El Mirage
 Florence
 Fort McDowell Yavapai Nation
 Fountain Hills
 Gila Bend
 Gila River Indian Community
 Gilbert
 Glendale
 Goodyear
 Guadalupe
 Litchfield Park
 Maricopa
 Mesa
 Paradise Valley
 Peoria
 Phoenix
 Queen Creek
 Salt River Pima-Maricopa Indian Community
 Scottsdale
 Sun City
 Sun City West
 Sun Lakes
 Surprise
 Tempe
 Tolleson
 Wickenburg
 Youngtown

Significant pathways that extend beyond the MAG region should include prominent destination cities such as Prescott, Flagstaff, and Tucson. These destinations should be included on signs at the boundaries of the MAG region, despite being more than three miles away.

LEVEL 2 – DISTRICTS AND NEIGHBORHOODS

Districts and neighborhoods may be included on signs if the area has been formally established by resolution or ordinance of the appropriate local agency or if the district has developed and implemented its own internal wayfinding sign plan. Examples of districts include: city centers, university districts, arts districts. Neighborhoods having historic character or otherwise significantly contributing to the culture and vibrancy of a city may also be signed.

LEVEL 3 - LANDMARKS

Through the Maricopa Association of Governments March, 2014 Landmark Inventory project, each MAG associated city has outlined specific and important landmarks. Landmarks included within the inventory have been sorted according to priority. Level 3 landmarks have regional importance and can reasonably be expected to be in operation for years to come. Level 3 destinations include:

Businesses and Services

Medical facility - Hospitals, veterans services providers, and clinics may be considered if the facilities meet all of the following criteria:

- Service is provided 24 hours a day, 7 days a week
- Emergency department facilities and services are provided.
- The facility is licensed or approved for definitive medical care by an appropriate State authority.

Shopping Center - A group of thirty or more shops, retail stores, and/or restaurants with at least one major department store functioning as an anchor.

Visitor Center - A facility having the primary purpose of providing information and tourist support services. Must be approved by the State Department of Community and Economic Development.

Education

College/University - An educational institution that is nationally accredited and grants degrees.

2-Year College - An educational institution that is nationally accredited and grants degrees.

Entertainment and Culture

Historic Site - A structure or place of historical, archaeological, or architectural significance listed on the National Register of Historic Places.

Museum – A facility of national or regional significance exhibiting works of artistic, historic, or scientific value.

Performing Arts Venue – A facility focused on the enjoyment of the performing arts and providing a minimum capacity of two hundred seats.

Botanical Garden or Zoo – Accredited institution, where plants and/or animals are kept and cared for, while also offering public education.

Public Facilities

Airport – A facility licensed for landing and takeoff of aircraft.

Civic Building - City hall, court house, fire or police station.

Recreation or Community Center – Publicly owned buildings offering places to recreate, learn, and/or gather.

Library - A repository for literary and multi-media materials, such as books, periodicals, newspapers, recordings, films, and electronic media, kept and systemically arranged for use and reference.

Park – Publicly owned National, State, and Regional parks.

Pathway – Named regional facilities built for transportation and recreation purposes and used by both cyclists and pedestrians.

Transit Center – Passenger terminals facilitating access to light rail, passenger train, or multiple bus lines. Park and Ride facilities also qualify.

Sports Facilities

Golf Course - Golf facilities hosting major national events and offering at least eighteen holes of play. Miniature golf courses and driving ranges are not considered a level 3 landmark.

Stadium or Arena – A permanent facility used for the primary purpose of presenting organized sporting events. Includes county and state fairgrounds.

LEVEL 4 - LOCAL DESTINATIONS

A city may wish to extend its wayfinding system to include local destinations. This may be useful in lower density areas or on more rural routes where Level 1-3 destinations are not present. Each city is unique but generally larger civic institutions such as libraries, museums, or community centers will take precedent over specific local services and visitor accommodations.

Businesses and Services

Medical Facility - Licensed facilities that provide emergency or urgent care services. Need not be open 24 hours per day, seven days per week.

Shopping Center - A group of at least five, but less than thirty shops, retail stores, and/or restaurants.

Visitor Accommodation – Resorts or hotels having a satisfactory or three star rating or better and having a minimum of seventy-five guest rooms.

Community Facilities

Cemetery - A large public park or ground laid out expressly for the interment of the dead.

Education

Secondary School – Public schools providing high school level education to students generally aged eleven through eighteen.

Entertainment and Culture

Movie Theater - A permanent indoor entertainment facility with capacity for at least two hundred seats which is focused on entertainment through film for visitors of all ages.

Museum – A facility of local recognition exhibiting works of artistic, historic, or scientific value to the general public.

Performing Arts Venue - A facility focused on the public's enjoyment of the performing arts and having a capacity of less than two hundred seats.

Amusement Park - A permanent facility having multiple devices for entertainment, including rides, booths for the conduct of games, or sale of items, buildings for shows and entertainment, and restaurants and souvenir sales.

Public Facility

Local Park - Publicly owned local parks.

Post Office – Official federal postal service center.

Sports Facility

Golf Course - A facility open to the public and offering fewer than eighteen holes of play. Miniature golf courses and driving ranges may be considered.

Sports Field – A permanent facility used for the primary purpose of presenting and practicing local organized sports.

Abbreviations

In general, when placing destination names on signs, the use of abbreviations should be kept to a minimum whenever possible. When insufficient space is available for full wording, abbreviations may be used. A list of accepted abbreviations per the MUTCD is included in the table at the right. Unless necessary to avoid confusion, periods, commas, apostrophes, question marks, ampersands, and other punctuation marks or characters that are not letters or numerals should not be used in any abbreviation.

WORD MESSAGE	ABBREVIATION
Alternate	ALT
Avenue	AVE
Bicycle	BIKE
Boulevard	BLVD
Bridge	BR
Center (as part of a place name)	CTR
Circle	CIR
Court	CT
Crossing (other than highway)	X-ING
Drive	DR
East	E
Hospital	HOSP
Information	INFO
International	INTL
Junction/Intersection	JCT
Mile(s)	MI
Miles Per Hour	MPH
Minute(s)	MIN
Mount	MT
Mountain	MTN
National	NATL
North	N
Parkway	PKWY
Pedestrian	PED
Place	PL
Road	RD
Saint	ST
South	S
Street	ST
Telephone	PHONE
Terrace	TER
Trail	TR
West	W

3.2 Function and Placement of Wayfinding Elements

Based on field reconnaissance, best practices review, public input, and discussions with committee members regarding wayfinding needs in the Phoenix Metro area, the following sign typologies are recommended for the MAG off-street bicycle network family. All wayfinding elements are oriented and scaled towards the bicycle user unless noted otherwise.

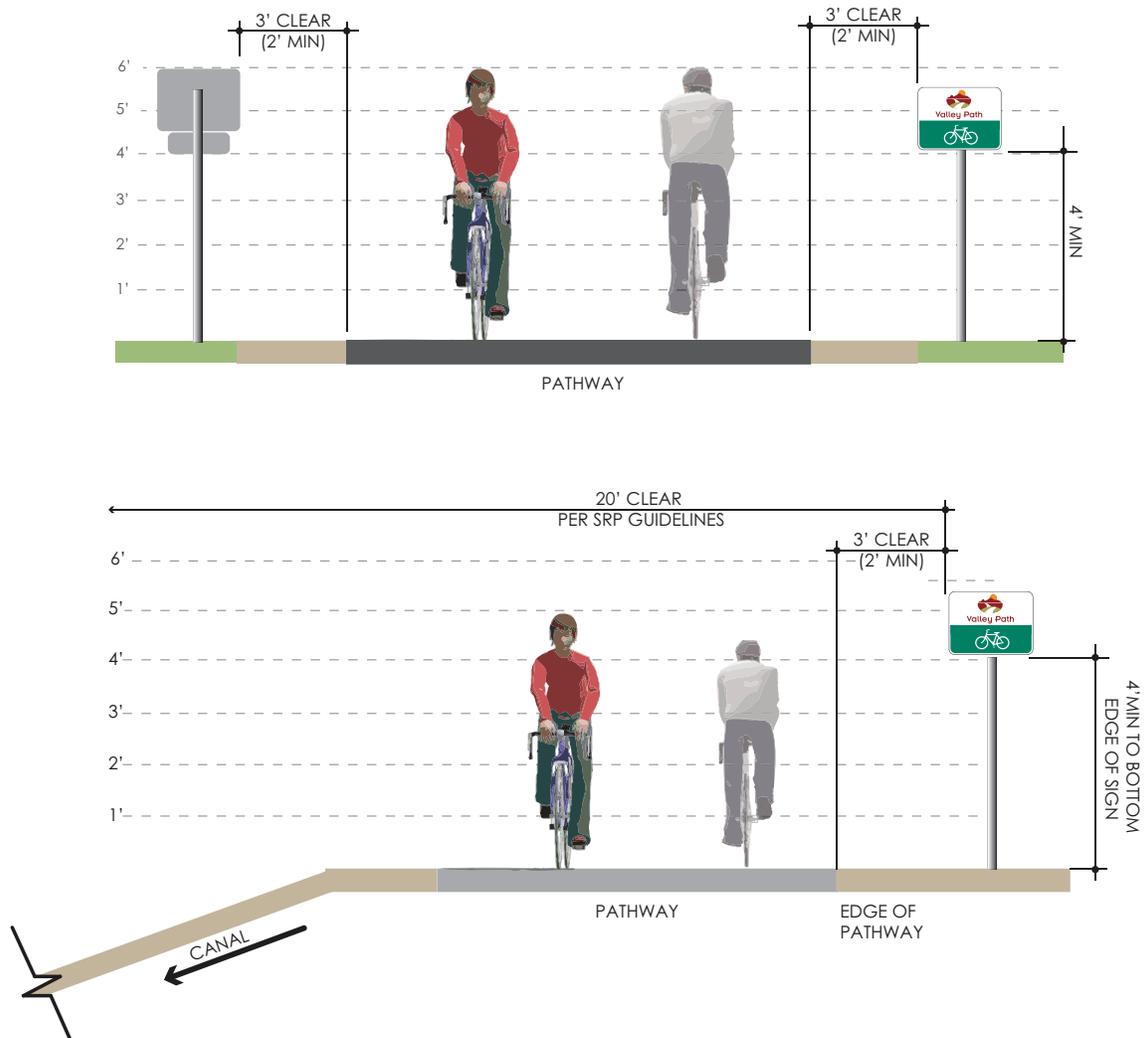
Fundamental Bicycle Elements

Bicycle oriented wayfinding elements include decision, confirmation, and turn signs as well as mile markers. Each element is designed to be legible by the cyclist while in motion. The design of off-street bicycle facilities or shared use paths is typically based on a cyclist speed of 18 mph. The design speed of a path should not be confused with the assumed travel speed used to project distance based on travel time on wayfinding

signs. When adding travel time to signs, a no sweat pace of 10 mph or six minutes per mile should be used.

Per both the MUTCD and AASHTO, the nearest edge of any potential obstruction including signs and mile markers should be a minimum of two feet from the edge of the pathway. The lowest edge of post mounted signs should be no less than four feet above finish grade. The lowest sign edge of on-street bicycle signs should be seven feet.

In general, regulatory and warning signs are a higher priority than wayfinding signs. Care should be taken to not obscure priority information. This includes providing a typical spacing of no less than 75 feet between signs along off-street pathways. This distance is based on travel speeds and thus is generally greater for on-street systems.





Decision Sign

Function and Content: Decision signs clarify route options when more than one potential route is available. System brand mark, space for up to three destinations, distance in miles and time (based on 10 mph or 6 minute per mile travel speed). May include specific path name or roadway name as appropriate.

Placement: Placed prior to decision making points or intersections with routes having bicycle facilities. Sufficient distance prior to the intersection should be provided to allow for safe recognition and response to information provided. Care should be taken so that the turn or options the sign refers to are obvious. Decision signs should not be placed near side or access paths that could be confused with the primary route.

Confirmation Sign

Function and Content: Placed after a turn movement or intersection to reassure cyclists that they are on the correct route. System brand mark, pathway name.

Placement: Signs should be placed 50 – 100 feet after turns. Confirmation signs need not occur after every intersection. They should be prioritized at locations where a designated route is not linear as well as after complex intersections. Complex intersections include those having more than four approaches, non-right angle turns, roundabouts, or in-direct routing.

Turn Sign

Function and Content: Used to clarify a specific route at changes in direction when only one route option is available. System brand mark, pathway name, directional arrow.

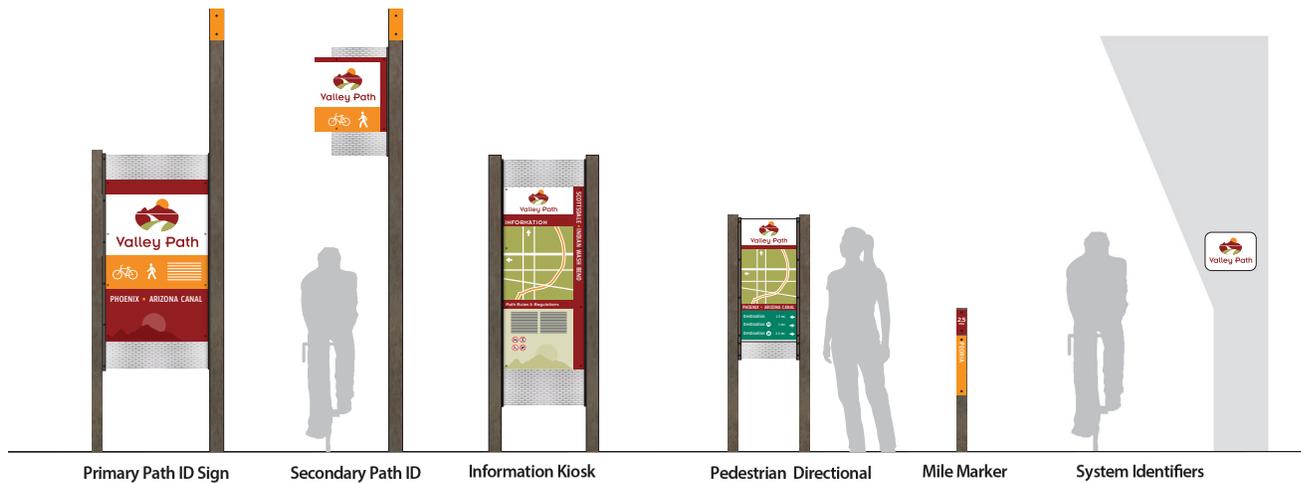
Placement: Placed at turns prior to the turning action to provide cyclists advance notice of a change in direction. Also may be used in conjunction with a decision sign at complex intersections warranting additional information.

Mile Markers

Function and Content: Aids pathway users with measuring distance travelled. Also provides pathway managers and emergency response personnel points of reference to identify field issues such as maintenance needs or locations of emergency events. System brand mark, distance in whole number miles or decimal miles. Path name and jurisdiction may be included.

Placement: To be placed every ¼ to ½ mile along the pathway network. Point zero should begin at the southern and western-most terminus points of a pathway. Mile numbering should be reset at zero as a pathway crosses a jurisdictional boundary.

Distances along on-street routes should be included within mile measurements. Mile markers may be installed on one side of a pathway, back-to-back.



Supplemental Elements

Primary Pathway Identity Sign

Function and Content: Serves as the initial welcome and identification of primary pathway access points for vehicle drivers. System brand mark, pathway name, and local jurisdiction identity/logo.

Placement: Vehicle oriented and scaled identity signs should be located at trailheads or regional pathway access points. Care should be taken to maintain site triangles so as to not obstruct site lines between roadways and entries at trailhead locations.

Secondary Pathway Identity Sign

Function and Content: Serves as the initial welcome and identification of secondary pathway access points. Oriented and scaled towards pedestrian and bicycle network users. System brand mark, pathway name, local jurisdiction identity/logo.

Placement: Pedestrian and bicycle oriented and scaled monument sign located at pathway access points. Should be visible from adjacent bicycle facilities.

Information Kiosk

Function and Content: A clearing house of information for pathway users at a more detailed level than other elements. Includes space for orientation map graphics indicating the off-street route, on-street connections, major geographic features and area destinations. Space shall be available for network rules and responsibilities as well as emergency and pathway manager contact information and jurisdiction logo.

Placement: Located at trailheads and major pathway system access points. Should be set back from the edge of the path

travel way in order to provide areas to dwell and consider the information. Not locating the signs within the first three feet of a pathway edge removes a potential physical obstacle from the bicycle travel way as well as provide clear circulation area per accessibility guidelines.

System Identifiers

Function and Content: System identifiers include opportunities to add the system brand mark or logo to existing features to expand visibility at an affordable rate. Identifiers may include vinyl wraps, adhesive graphics, sign toppers, and pavement markings with system name or brand mark.

Placement: May be placed at each jurisdiction's discretion based on need for augmented system visibility.

On-street Support Elements

Function and Content: Support elements to facilitate connections via the on-street bicycle network. Includes brand toppers or directional plaques.

Placement: May be mounted to existing or new on-street wayfinding sign posts.

3.3 Placement Strategies

Elements of the wayfinding family should be located in a consistent and logical manner across all participating MAG member agency jurisdictions.

The following typical placement scenarios were identified by project stakeholders as navigational issues that most need clarification in relation to the off-street bicycle network:

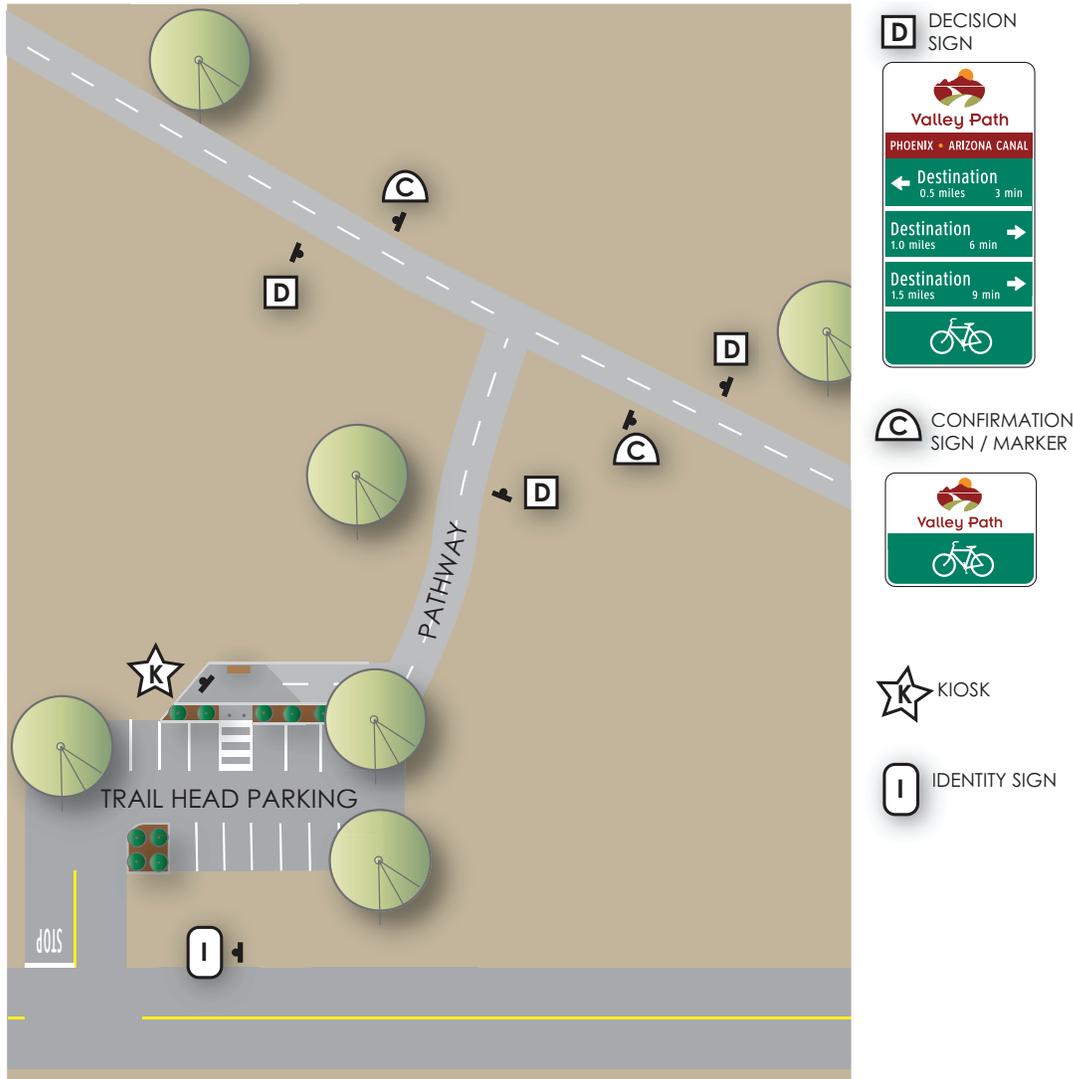
- Pathway access points,
- Path-path intersections,
- Pathway bifurcations,
- Gaps in path network,
- Off-street and on-street transitions,
- Path-roadway intersections.

Pathway Access Points

Major pathway access points or trailheads should be identified via primary identity signs. Primary identity signs should be placed oriented towards the approaching vehicle. Care should be taken to not obstruct site lines between the roadway and entry points or driveways.

Pathway system access points not providing vehicle parking should utilize the secondary bicycle and pedestrian scaled identity sign.

As an option, kiosk signs with orientation maps may be placed at developed trailheads or access points.



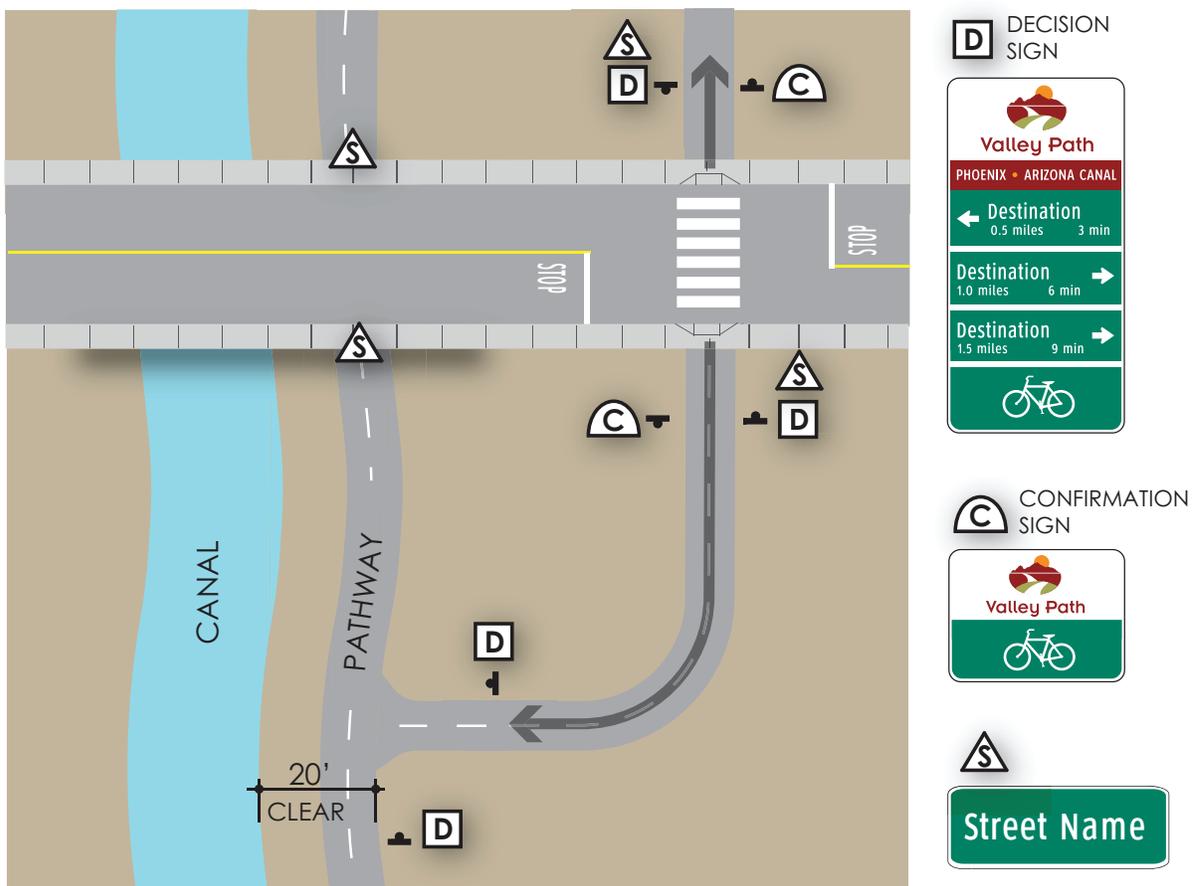
Path-Path Intersections

When pathways intersect each other, multiple destinations are likely. Thus, decision signs should be placed prior to the intersection. As an option, confirmation signs may be placed after intersections to reinforce that the user did indeed make the correct movement. The practice of using decision signs followed by confirmation sign introduces redundancy into the system. Redundancy assures that if one sign is damaged or vandalized, the navigational system doesn't break down.

Pathway Bifurcations

Connections and access points between the off-street and on-street network may result in path bifurcations. At such junctions, it is important to inform cyclists of where the alternative route option goes. This may be done via decision signs located at junctions. Salt River Project and other flood control facilities may limit the opportunity to place signs on both sides of the pathway, due to the required 20' clear area adjacent to SRP facilities. Although not ideal, decision signs may be placed on the opposite side of the pathway than the direction of travel.

Grade separated roadway crossings would benefit from applying street name sign blades above pathways on crossing improvements such as bridge infrastructure. Similarly, street names should be added to signs when paths meet roadways at grade. If a stop sign is located at these facility intersections, a standard street name sign blade may be added to the top.



Gap in Path Network

Where gaps in the off-street bicycle network exist, pathway users are often routed to on-street bicycle facilities to provide improved connectivity. The typical pattern for wayfinding signs includes a decision sign prior to the intersection of route options, followed by an optional confirmation sign. Turn signs should be placed to reinforce the route in locations where only one route option exists, as well as at complicated intersections where additional guidance is necessary.

Cyclists should only be directed along on-street routes only when sufficient infrastructure is in place to provide for a safe travel experience as based on engineering judgement.



Off-street / On-street Transition

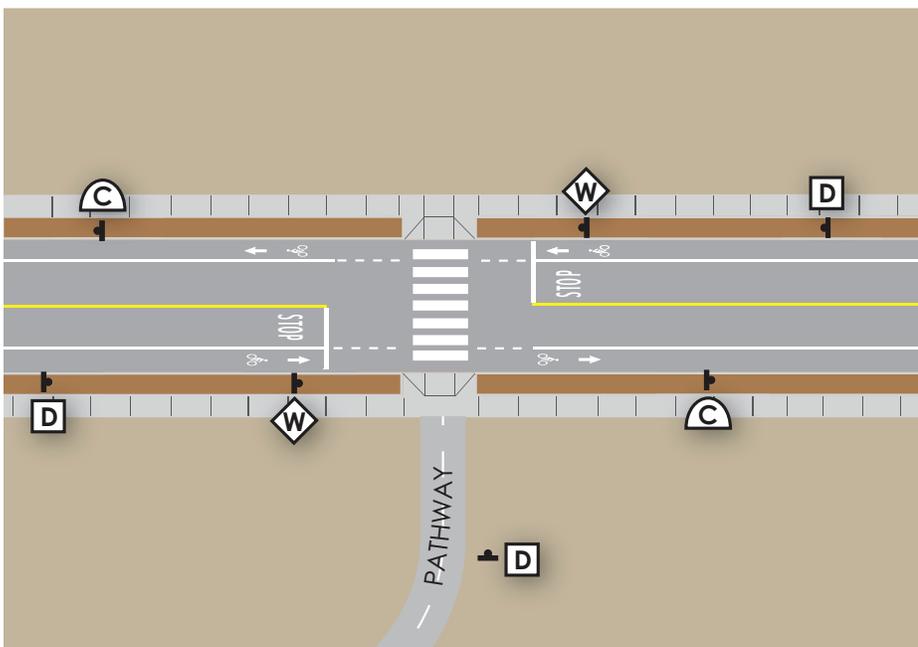
When transitioning between an off-street facility and an on-street facility, it is important to advise travelers of their route options. In this scenario, decision signs direct cyclists to their destination choices while confirmation signs reinforce that the user is on a designated facility after they have left the pathway network.

Decision signs should also be placed prior to the entry to the off-street bicycle network. Once on the off-street bicycle network, confirmation signs provide a welcome to the pathway user.

Vehicle oriented bicycle and pedestrian crossing warning signs should be placed in advance of crossings. In urban areas, signs should not be placed within four feet of a crosswalk in order to maintain visibility of those intending to cross the roadway.

Advance warning signs are optional per the MUTCD. If they are used, their placement should provide needed time for detection, recognition, decision, and reaction. Table 2C-4 within the MUTCD provides guidance for advance warning sign placement based on vehicle speeds.

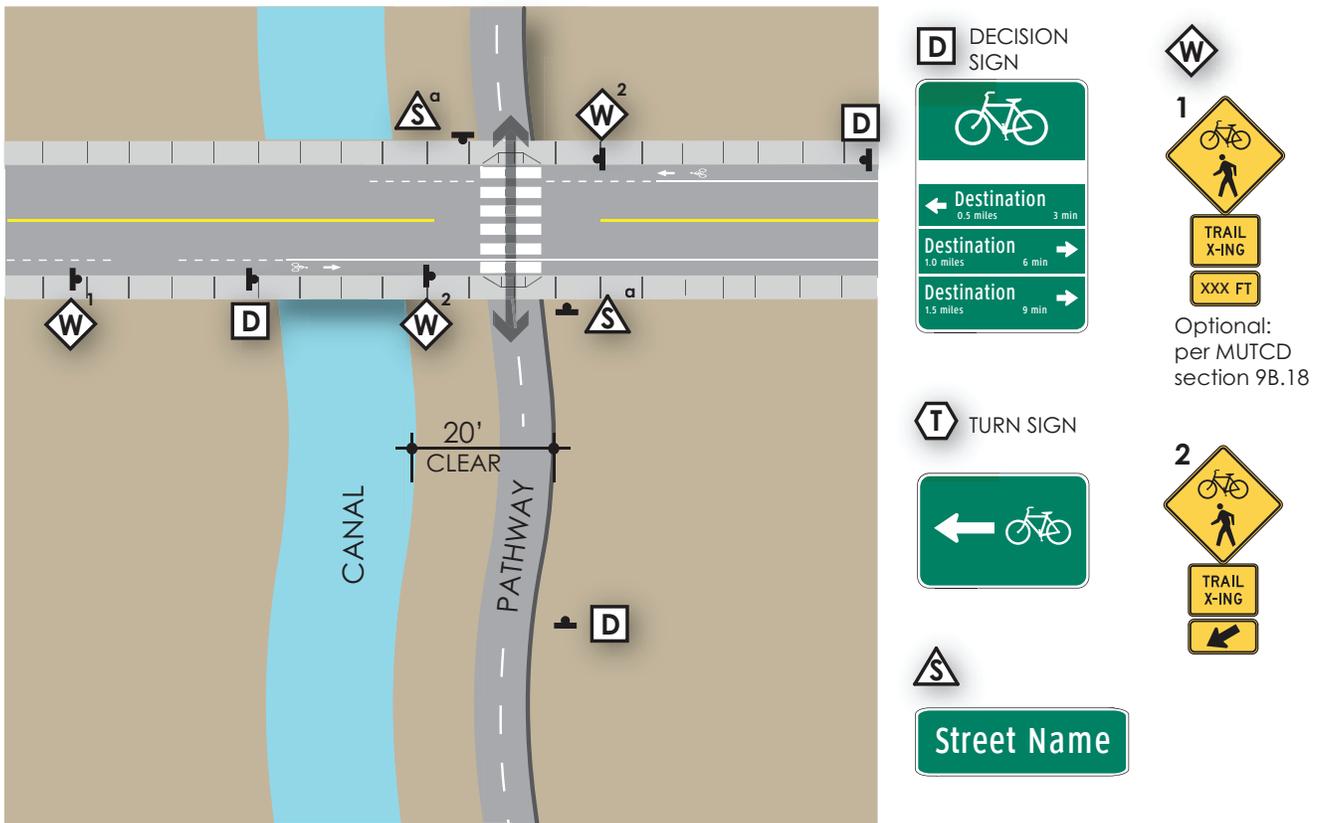
On-street directional signs leading to the pathway network should not obscure other roadway signs including warning signs. They should be spaced according to roadway travel speeds with faster roadways warranting wider spacing. Guidelines for the placement of advance warning signs based on perception-response time may be found within Table 2C-4 of the MUTCD.



Path-Roadway Intersection

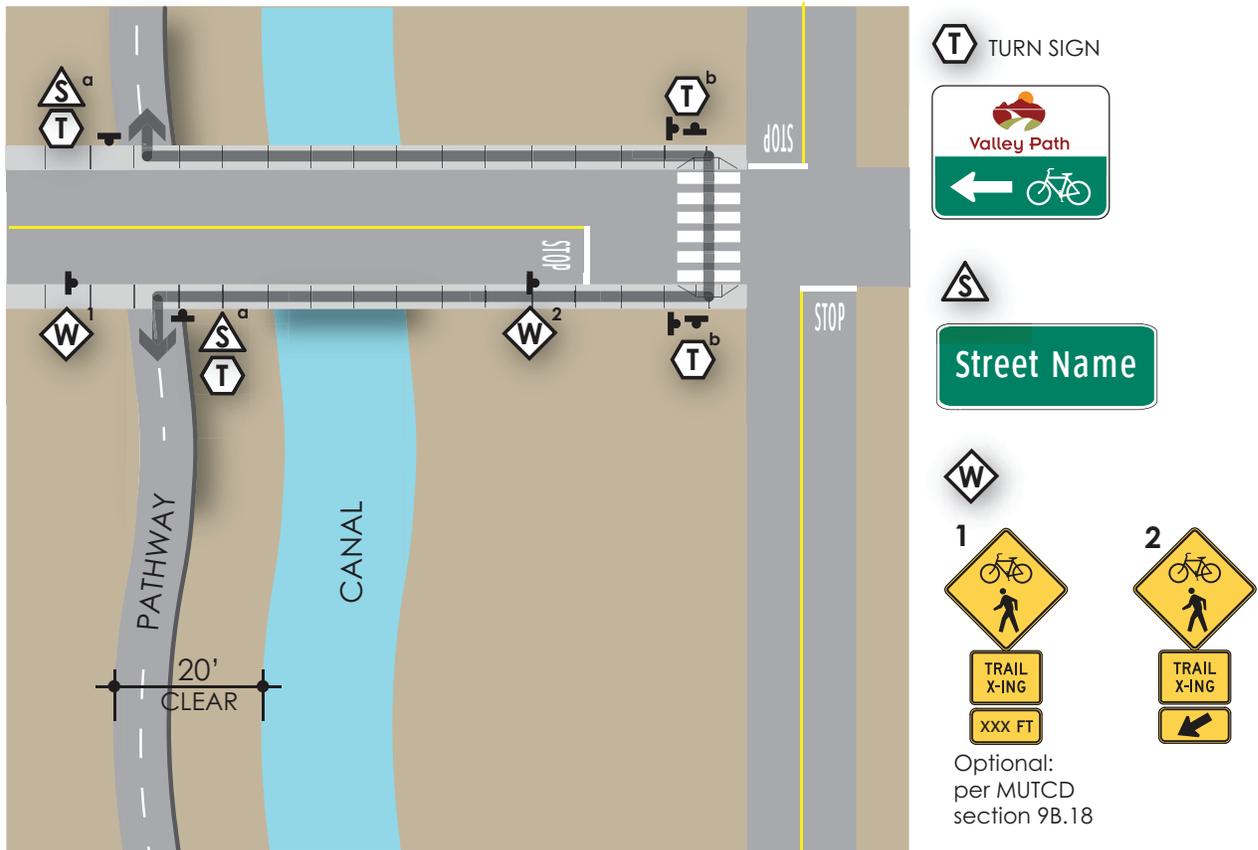
Pathway users should be directed to cross roadways only where infrastructure improvements provide a safe environment. If the cross street has bicycle facilities such as bike lanes, a bicycle boulevard, or cycletrack, a decision sign should be placed prior to the intersection to inform cyclists of their route options. If a cyclist-oriented stop sign is present, it should not be obscured by the wayfinding sign. Decision or stop signs may be topped with street name sign blades to enhance one's awareness of their location. The name of the street may also be integrated into the decision sign. As an option, confirmation signs may be placed at pathway entries to assure cyclists that they are on a bicycle facility.

Along Salt River Project (SRP) facilities, a twenty foot wide clear area should be maintained from the top of canals. Signs should not be placed in this area. Opportunities to mount wayfinding signs within the road right-of-way or to existing features within SRP right-of-way such as sign posts and bridge railings, should be sought prior to the installation of signs on new posts.



NOTES:
 a. SEEK OPPORTUNITIES TO MOUNT SIGNS TO EXISTING INFRASTRUCTURE WHEREVER POSSIBLE.

Oftentimes, direct travel via mid-block roadway crossings is not provided for. Instead pathway users are expected to divert to the nearest improved or signalized intersection. In this scenario, turn signs should be used to direct cyclists to the intersection. Again, street name blades may be included on decision signs to reinforce location.



NOTES:

- a. SEEK OPPORTUNITIES TO MOUNT SIGNS TO EXISTING INFRASTRUCTURE WHEREVER POSSIBLE.
- b. OK TO MOUNT TWO SIGNS PER POLE. SIGNS TO BE PLACED PERPENDICULAR TO DIRECTION OF TRAVEL.

...the first of these is the fact that the ...

...the second of these is the fact that the ...

...the third of these is the fact that the ...

...the fourth of these is the fact that the ...

...the fifth of these is the fact that the ...

...the sixth of these is the fact that the ...

...the seventh of these is the fact that the ...

...the eighth of these is the fact that the ...

...the ninth of these is the fact that the ...

...the tenth of these is the fact that the ...

...the eleventh of these is the fact that the ...

...the twelfth of these is the fact that the ...

...the thirteenth of these is the fact that the ...

...the fourteenth of these is the fact that the ...

...the fifteenth of these is the fact that the ...

...the sixteenth of these is the fact that the ...

...the seventeenth of these is the fact that the ...

...the eighteenth of these is the fact that the ...

section 4

Implementation Approach

- 4.2 Next Steps
- 4.3 Estimate of Unit Costs
- 4.4 Funding Opportunities
- 4.8 Acknowledgements

Next Steps

While a variety of bicycling facilities are found throughout the valley, this document focuses on the off-street bicycle network. The off-street network includes both paved and unpaved multi-use paths which extend through a variety of settings. Wayfinding improvements following these guidelines should be installed as routine accommodation when pathway facilities are initially built. Wayfinding elements should also be integrated into existing segments of the off-street bicycle network. Wayfinding master plans should be completed at the jurisdictional level to assess and prioritize existing routes for wayfinding readiness. Master plans may also be done at the pathway level.

Master Plan

Wayfinding master plans completed at the jurisdictional level are an effective means of achieving cohesive wayfinding networks. Master planning should consider both on and off-street bicycle facilities in order to achieve a seamless network for cyclists. Master plans should include the following steps:

- Inventory of non-motorized transportation network
- Opportunities and constraints analysis
- List of destinations – with agreed name and priority ranking
- Placement recommendations
- Opinion of probable costs
- Phasing plan

Criteria to be considered when prioritizing pathways for wayfinding improvements should include:

- Does the existing infrastructure safely support bicycle travel?
- Do navigational challenges commonly occur on the route?
- Does the segment connect high priority destinations?
- Are wayfinding improvements being distributed equitably, with consideration of social justice goals?

MAG member agencies should share their plans including lists of agreed to destination names and abbreviations with other agencies so that naming conventions are consistent across boundaries.

Final Design and Fabrication

Based on the content of the wayfinding master plan, wayfinding sign designs within this document may be used as templates for in-house fabrication or for bidding the work to independent contractors.

A sign schedule describing each wayfinding element in relation to placement, orientation, messaging, directional arrows, and

distance measurements to be placed on each individual sign should be produced for the first phase of implementation as described within the master plan. Note that placement recommendations generated through the master plan process should be refined during final design. Final sign placement should be field verified to ensure that conflicts are not present and that each location is in compliance with applicable laws and authorities. Verification of placement within the public right-of-way or negotiated easement need also occur.

For more complicated elements such as branded path identity signs and kiosks may require that fabricators produce shop drawings indicating methods of assembly as well as electrical and structural engineering, if needed. Shop drawings should be routed through the appropriate agency departments for approvals. The production of full scale mock-ups of sign elements may be required as part of the fabrication contract.

As part of the contractor selection process, requirements may be outlined to assure a quality product. For more complex elements, fabricators should have at least five years of experience in the field completing projects of similar scope. References should be contacted to verify quality of products during the fabrication and installation phase, as well as in terms of on-going maintenance support.

Pilot Projects

If cities are lacking funds to implement wayfinding, temporary installations may be conducted to generate public and political support. Directional signs may be economically printed on corrugated plastic board and readily adhered to existing posts within the public right-of-way using zip ties.

Temporary pilot projects are an effective way to ground truth the recommendations within these

guidelines. Ideally, pathway projects representing a wide range of scenarios from different regions of the valley should be selected for the implementation trials. Locally important bikeways may be considered for pilot installations as well as regional facilities which extend across jurisdictions. Representatives of the pilot projects should report back findings from the installations including public response, placement challenges, destination selection issues, and fabrication lessons learned.



Two miles of a temporary wayfinding system were installed along a bicycle boulevard in New York in one day. Total project cost including materials and labor: \$2,500.

VALLEY PATH - ESTIMATE OF UNIT COSTS

MUTCD BIKE SIGNS

Sign Type	Unit Cost Range (includes installation)
BIKE.1 - Bike Decision Sign	\$800.00 - \$1,200.00
BIKE.2 - Bike Decision Sign in Park	\$1,200.00 - \$1,400.00
BIKE.3 - Path Confirmation Sign	\$800.00 - \$1,200.00
BIKE.4 - Turn Sign	\$850.00 - \$1,150.00
BIKE.5 - Turn Sign Alternate	\$800.00 - \$1,200.00
BIKE.6 - Logo Panel	\$200.00 - \$400.00

BRAND PATH SIGNS

Sign Type	Unit Cost Range (includes installation)
PATH.1 - Primary Path ID (no enhancements)	\$7,500.00 - \$9,500.00
PATH.2 - Secondary Path ID	\$2,000.00 - \$3,500.00
KIOSK.1 - Trail Kiosk	\$4,000.00 - \$6,000.00
PDIR.1 - Pedestrian Directional	\$3,750.00 - \$5,500.00
MILE.1 - Mile Marker	\$800.00 - \$1,000.00

If sign fabrication is to occur via independent fabricators, MAG member agencies may consider coordinating efforts in order to realize cost savings inherent with economies in scale.

Funding Opportunities

Funding for bicycle projects may come from a variety of sources including matching grants, sales tax or other taxes, bond measures, or public/private partnerships. This section identifies sources of funding for planning, design, implementation and maintenance of bicycle projects, including wayfinding improvements in Arizona. The descriptions are intended to provide an overview of available options and do not represent a comprehensive list. It should be noted that this section reflects the funding available at the time of writing. The funding amounts, fund cycles, and even the programs themselves are susceptible to change without notice.

Federal Funding

Federal transportation funding is typically directed through state agencies to local governments either in the form of grants or direct appropriations, independent from state budgets. Federal funding typically requires a local match of 20 percent, although there are sometimes exceptions, such as the 2009 American Recovery and Reinvestment Act stimulus funds, which did not require a match.

The Arizona Department of Transportation (ADOT) and Maricopa Association of Governments (MAG), administer most federal monies. Federal funding is intended for capital improvements and projects must relate to the surface transportation system. Most, but not all, of these programs are oriented toward transportation, (as opposed to recreation), with an emphasis on reducing auto trips and providing inter-modal connections.

The following is a list of Federal funding sources that could be used to support the implementation of pathway wayfinding improvements. Most of these are competitive, and involve the completion of extensive applications with clear documentation of the project need, costs, and benefits. However, it should be noted that, in addition to stand alone projects, the Federal Highway Administration (FHWA) encourages the construction of bicycle improvements as an incidental element of larger ongoing projects, consistent with its 2010 policy statement on bicycle and pedestrian accommodation.¹

¹ http://www.fhwa.dot.gov/environment/bicycle_pedestrian/overview/policy_accom.cfm

DOT encourages transportation agencies to go beyond the minimum requirements, and proactively provide convenient, safe, and context-sensitive facilities that foster increased use by bicyclists and pedestrians of all ages and abilities, and utilize universal design characteristics when appropriate.

Federal Aid Highway Program: MAP-21

The largest source of federal funding for bicycle projects is the United States Department of Transportation's (US DOT) Federal-Aid Highway Program, which Congress has reauthorized roughly every six years since the passage of the Federal-Aid Road Act of 1916. The latest act, Moving Ahead for Progress in the Twenty-First Century (MAP-21) was enacted in July 2012 as Public Law 112-141. The Act replaces the Safe, Accountable, Flexible, Efficient Transportation Equity Act – a Legacy for Users (SAFETEA-LU), which was valid from August 2005 - June 2012. In October 2014, congress approved a short-term extension of MAP-21 through May 31, 2015.

MAP-21 authorizes funding for federal surface transportation programs including highways and transit. There are a number of programs identified within MAP-21 that are applicable to bicycle projects. MAG member agencies should track the next reauthorization of this program and seek to allocate future funds to bicycle projects.

For More information:

<http://www.fhwa.dot.gov/map21/and> <http://www.fhwa.dot.gov/map21/summaryinfo.cfm>

Transportation Alternatives (TAP)

Transportation Alternatives (TAP) is a funding source under MAP-21 that consolidates three former SAFETEA-LU programs: Transportation Enhancements (TE), Safe Routes to School (SRTS), and the Recreational Trails Program (RTP). These funds may be used for a variety of projects including sidewalks, multi-use paths, school safety, and rail-trails. The MAG region receives about \$4.4 million per year for this program.

Transportation Alternatives as defined by Section 1103 (a) (29). This category includes the construction, planning, and design of a bicycle infrastructure including “on-road and off-road trail facilities for pedestrians, bicyclists, and other non-

motorized forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety-related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990.” Infrastructure projects and systems that provide “Safe Routes for Non-Drivers” is a new eligible activity. For the complete list of eligible activities, visit:

http://www.fhwa.dot.gov/environment/transportation_enhancements/legislation/map21.cfm

Unless the Governor of a given state chooses to opt out of Recreational Trails Program funds, \$85 million in dedicated funds for recreational trails continues to be provided nationally as a subset of TAP. The types of projects that are eligible for TAP funding include:

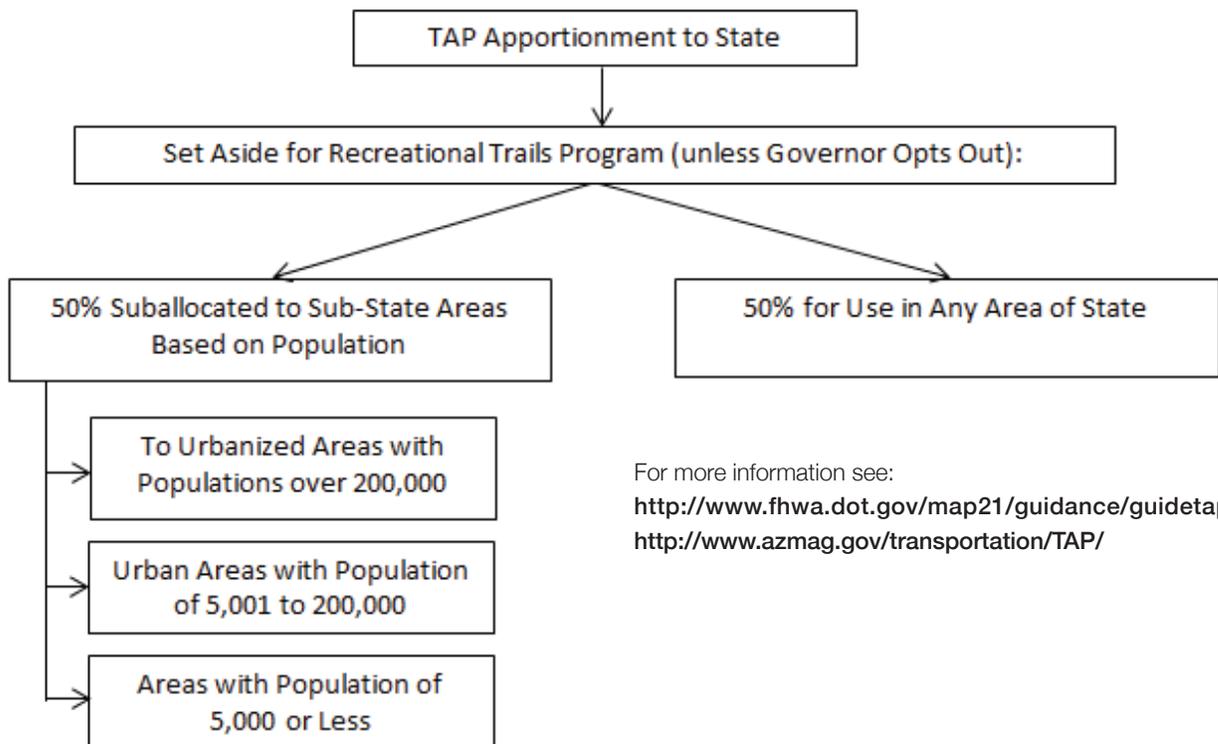
- Recreational Trails. TAP funds may be used to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. Examples of trail uses include hiking, bicycling, in-line skating, equestrian use, and other non-motorized and motorized uses. These funds are available for both paved and unpaved trails, but may not be used to improve roads for general passenger vehicle use

or to provide shoulders or sidewalks along roads.

- Safe Routes to School. Safe Routes to School activities are eligible for the Transportation Alternatives Program. Both infrastructure and non-infrastructure projects are eligible, and the program elements described in SAFETEA-LU are still in effect. The purpose of the Safe Routes to Schools eligibility is to promote safe, healthy alternatives to riding the bus or being driven to school. All projects must be within two miles of primary or middle schools (K-8).
- Planning, designing, or constructing roadways within the right-of-way of former Interstate routes or divided highways.

Funds available through TAP are based on a two percent set-aside of total MAP-21 authorizations. However, because MAP-21 allows state DOTs to transfer up to fifty percent of a given highway program’s funds to other highway programs, the final amount of TAP funding available in Arizona may be more or less than the projected apportionments developed by FHWA.

The diagram below, based on information from FHWA’s Final TAP Guidance document, provides an overview of how TAP funds flow from the federal government to states and local communities.



For more information see:
<http://www.fhwa.dot.gov/map21/guidance/guidetap.cfm>
<http://www.azmag.gov/transportation/TAP/>

Surface Transportation Program (STP)

The Surface Transportation Program (STP) provides states with flexible funds which may be used for a variety of highway, road, bridge, and transit projects. Bicycle improvements are eligible, including off-street trails, sidewalks, crosswalks, and pedestrian signals and beacons. Fifty percent of each state's STP funds are sub-allocated geographically by population; the remaining fifty percent may be spent in any area of the state.

Highway Safety Improvement Program (HSIP)

HSIP provides \$2.4 billion nationally for projects and programs that help communities achieve significant reductions in traffic fatalities and serious injuries on all public roads, bikeways, and walkways. MAP-21 requires each state to formulate a state safety plan, produced in consultation with non-motorized transportation representatives, in order to receive HSIP funds. Eligible projects will be evaluated on anticipated cost-effectiveness of reducing serious injuries and fatalities.

Bicycle and pedestrian safety improvements, enforcement activities, traffic calming projects, and crossing treatments for non-motorized users are eligible for these funds.

Federal Transit Administration Urbanized Area Formula Grants (5307)

Bicycling and walking projects and programs are eligible under this MAP-21 program as "associated transit improvements" (ATIs). Recipients must spend at least 1% of received funds on ATIs. According to the statute, ATIs are projects "designed to enhance public transportation service or use and that are physically or functionally related to transit facilities." Projects eligible as ATIs, include:

- Bus shelters
- Landscaping and streetscaping
- Pedestrian access and walkways
- Signage
- Enhanced access for persons with disabilities.

Wayfinding projects that support access to transit and bus shelter locations are potential candidates for such funding.

Congestion Mitigation and Air Quality Improvement Program (CMAQ)

The CMAQ program, at an average annual funding level of \$3.3 billion, provides a flexible funding source to State and local governments for transportation projects and programs

to help meet the requirements of the Clean Air Act. Funding is available to reduce congestion and improve air quality for areas that do not meet the National Ambient Air Quality Standards for ozone, carbon monoxide, or particulate matter (non-attainment areas) as well as former non-attainment areas that are now in compliance (maintenance areas). States with no non-attainment or maintenance areas may use their CMAQ funds for any CMAQ- or STP-eligible project.

MAG provides Congestion Mitigation and Air Quality (CMAQ) funds for the preliminary design of bicycle and/or pedestrian facilities. The MAG Bicycle and Pedestrian Committee makes its recommendation based on applications submitted by MAG member agencies. The committee has previously indicated that they will give preference to those applicants that may have resources available for construction of the project. The projects to receive preliminary design assistance will be approved by the Regional Council. For more information see:

http://bikeleague.org/sites/default/files/lab_cmaq.pdf

Federal Lands and Tribal Transportation Program

MAP-21 acknowledges the importance of access to federal and tribal lands. Recognizing the need for all public Federal and tribal transportation facilities to be treated under uniform policies similar to the policies that apply to Federal-aid highways and other public transportation facilities, MAP-21 creates a unified program for Federal lands transportation facilities, Federal lands access transportation facilities, and tribal transportation facilities.

The Tribal Transportation Program provides \$450 million annually for projects that improve access to and within Tribal lands. This program generally continues the existing Indian Reservation Roads program, while adding new set asides for tribal bridge projects (in lieu of the existing Indian Reservation Road Bridge program) and tribal safety projects. It continues to provide set asides for program management and oversight and tribal transportation planning. A new statutory formula for distributing funds among tribes, based on tribal population, road mileage, and average funding under SAFETEA-LU, plus an equity provision, is to be phased in over a 4 year period.

MAP-21 also authorizes the Tribal High Priority Projects Program, a discretionary program modeled on an earlier program that was funded by set aside from the Indian Reservation Roads Program. MAP-21 provides \$30 million per year from the General fund (subject to appropriation) for this new program.

Partnership for Sustainable Communities

Founded in 2009, the Partnership for Sustainable Communities is a joint project of the EPA, U.S. Department of Housing and Urban Development (HUD), and USDOT. The partnership aims to “improve access to affordable housing, more transportation options, and lower transportation costs while protecting the environment in communities nationwide.” The Partnership is based on five Livability Principles, one of which explicitly addresses the need for bicycle and pedestrian infrastructure:

“Provide more transportation choices: Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation’s dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.”

The Partnership is not a formal agency with a regular annual grant program. MAG member agencies should track Partnership communications and be prepared to respond proactively to announcements of new grant programs. Initiatives that speak to multiple livability goals are more likely to score well than initiatives that are narrowly limited in scope to cycling goals. For more information see:

<http://www.sustainablecommunities.gov/partnership-resources>

Community Transformation Grants

Community Transformation Grants administered through the Centers for Disease Control and Prevention support community-level efforts to reduce chronic diseases such as heart disease, cancer, stroke, and diabetes. Active transportation infrastructure projects and programs that promote healthy lifestyles are a good fit for this program, particularly if the benefits of such improvements accrue to population groups experiencing the greatest burden of chronic disease. For more information see:

<http://www.cdc.gov/communitytransformation/>

Land and Water Conservation Fund

The Land and Water Conservation Fund (LWCF) provides grants for planning and acquiring outdoor recreation areas and facilities, including trails. Funds may be used for right-of-way acquisition and construction. Any projects located in future parks could benefit from planning and land acquisition funding through the LWCF. For more information see:

<http://www.nps.gov/lwcf/>

<http://azstateparks.com/grants/index.html>

Additional Federal Funding

The landscape of federal funding opportunities for bicycling programs and projects is always changing. A number of Federal agencies, including the Bureau of Land Management, the Department of Health and Human Services, the Department of Energy, and the Environmental Protection Agency have offered grant programs amenable to bicycle planning and implementation, and may do so again in the future. For up-to-date information about grant programs through all federal agencies, see <http://www.grants.gov/>.

Local Funding

Salt River Project Municipal Aesthetics Program

The Salt River Project (SRP) Municipal Aesthetics Program provides funding from SRP to offer municipalities the opportunity to have aesthetic improvements made to new or existing SRP water and power distribution, transmission, and substation facilities.

Funding is based on 0.8% of annual gross revenues or \$12 million (whichever is less). Qualifying uses include:

- Undergrounding 12KV/69KV
- Replacing Wood Poles with Steel Poles
- Installing walls, landscaping, sidewalk, and driveway improvements to substations
- Upgrading SRP water canals and well sites

SRP Aesthetic Funds have also been used by valley cities to implement pathways.

Private Foundations

Private foundations are an increasingly important source of funds for bicycle and pedestrian planning and implementation.

For more information on private foundations, including an extensive list of national foundations visit:

<http://www.foundationcenter.org/>

Acknowledgements

The team would like to thank a number of people and organizations that have contributed to the creation of this document, including:

MAG Bicycle and Pedestrian Committee:

Purab Adabala	Sr. Transportation Analyst	City of Glendale
Grant Anderson PE	Town of Youngtown Engineer	Town of Youngtown
Bob Beane	President	Coalition of Arizona Bicyclists
Stacey Bridge-Denzak	Town Planner	Town of Carefree
Robert Carmona	Parks, Recreation & Facilities Director	Town of Wickenburg
Stephen Chang AICP	Senior Transportation Planner	City of Surprise
Katherine J. Coles	Chair	City of Phoenix
Susan Conklu	Transportation Planner	City of Scottsdale
Ian Cordwell	Director of Planning	Town of Cave Creek
Jason Crampton	Transit Services Coordinator	City of Chandler
Brandon Forrey	Transportation Planning Engineer	City of Peoria
Tiffany Halperin	Arizona Society of Landscape Architects	
Jim Hash	Vice Chair	City of Mesa
Eric Iwersen	Transportation Planner	City of Tempe
Denise Lacey	Senior Planner Systems Planning Division	Maricopa County Department of Transportation
Kelly LaRosa PE	Transportation Specialist	Federal Highway Administration Arizona Division
Amanda Luecker	Project Manager	Valley Metro
Jose A. Macias	GIS/Development Services Coordinator	City of El Mirage
Kristin Myers	Transportation Coordinator	Town of Gilbert
Phil Reimer	Survey Engineer	City of Buckeye
Michael N. Sanders	Sr Transportation Planner Bicycle & Ped. Coordinator	Arizona Department of Transportation
Raquel C. Schatz EIT	Project Engineer	City of Apache Junction
Joe Schmitz	Long Range Planner	City of Goodyear
Christina Underhill	Recreation Manager	City of Avondale
Sidney Urias	Planner	Town of Queen Creek
Ryan Wozniak	Transportation Planner	City of Maricopa

Special thanks to:

Jim Duncan	Principal Engineering Analyst	Salt River Project
Richard Moeur	Traffic Standards Engineer	Arizona Department of Transportation
Maureen DeCindis	Transportation Planner	

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We also thank the members of the community for their interest in making the valley a better place for bicycling!

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