

Signage Guidelines



S A S A K I
Sasaki Associates, Inc.
64 Pleasant Street / Watertown, MA 02472 USA
t 617.923.3300 / f 617.924.2748



Graphic Standards

Color Palette

The colors shown are for visual reference only and are not to be used for color matching. Due to the limitations of the printing process, colors on this page may not be accurate. Specifications are provided as guidelines only; vendors may propose alternates for approval by BPRW.



C1 - BPRW Lt. Green
Print: PMS 368c
Paint: MAP13525
Oracal: 751-063



C4 - BPRW Dk. Brown
Print: PMS 462c
Paint: MAP
Avery: SC92950
Powder: RAL 8028



C7 - Black
Print: PMS Black 6
Paint: MAP 33260
3M: 7725-12



C10 - Brushed Aluminum
Print: PMS 877c
Paint: MAP 18091
Avery: SC90600



C13 - BPRW Dk. Blue
Print: PMS 534c
Paint: MAP 02306
Oracal: 951-050

Sign Paints:

Paints specified are from the Matthews Acrylic Polyurethane line of sign paint, and are available from:

Matthews Acrylic Polyurethane
LakeView Corporate Park
8201 100th Street
Pleasant Prairie, WI 53158-2201
1-800-323-6593
www.matthewspaint.com

Asphalt Paint:

California Sports Surfaces
(see www.decoturf.com for colors)
Tom Magner
T.Magner@cssurfaces.com
O: 978-623-9980 ext. *233
C: 781-820-3012

Powdercoats:

Powder coatings specified are from Prismatic Powders, and Prismatic Powders texture line of powder coats products are available from:

Prismatic Powders
7050 6th Street
White City, OR 97503
866.774.7628
www.prismaticpowders.com

Vinyl Films:

Vinyl colors from 3M, Avery and Oracal were selected to ensure the closest color matches in the BPRW brand. The vinyl options are available from:

3M Graphics Market Center
3M Center, Building 0220-12-E-04
St. Paul, MN 55144 USA
1-800-328-3908
www.3M.com/graphics

Oracal USA
1100 Oracal Parkway
Black Creek, GA 31308

Avery Dennison Graphics Solutions
8080 North Parkway
Mentor, OH 44060
graphics.averydennison.com



C2 - BPRW Lt. Orange
Print: PMS 716c
Paint: MAP 00170
Avery: SC91600



C5 - BPRW Lt. Brown
Print: PMS 465c
Paint: MAP
Oracal: 951-811



C8 - Parking Blue
Print: PMS 301c
Paint: MAP 035 47
3M: 7725-47



C11 - BPRW Dk. Green
Print: PMS 357c
Paint: MAP 09000
Oracal: 951-622



C3 - BPRW Lt. Blue
Print: PMS 631c
Paint: MAP
Avery: SC95450



C6 - White
Print: N/A
Paint: MAP 27368
3M: 7725-10
3M: 3920 Reflective



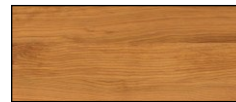
C9 - Regulatory Red
Print: PMS 187c
Paint: MAP 10252
3M: 7725-53



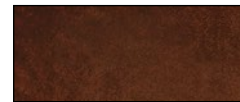
C12 - BPRW Dk. Orange
Print: PMS 173c
Paint: MAP 07237
Oracal: 751-033

Material Palette

The materials represented here are for visual reference only. Actual materials may vary based on application, and value engineering efforts with selected vendors. All cedar posts, T&G, shiplap siding, or rainscreen must be classified as D & Better Clear Grade with minimal knots and imperfections.



M1 - Wood
Western Red Cedar
weathered finish



M2 - Oxidized Steel
Powder: PTS62960
Solid: Zahner
Solanum
Steel

Woods:

Wood specified is western red cedar grade D & Better Clear with minimal imperfections and knotting, available from various sources. While a local lumber supplier is preferred, vendors may source cedar lumber and timbers from various trusted sources.

Specialty Metals:

Specialty Metals specified are Zahner Solanium Steel and are available from:

Zahner Headquarters
1400 East 9th Street
Kansas City, MO 64106 USA
1 (816) 474-8882
www.azahner.com

Typography

The fonts used throughout this program are commercially available and must be purchased by the vendor once awarded any scope of the project. BPRW will not provide any digital resources for vendor use. Typical layouts are shown throughout this package for vendor reference.

The BPRW Signage Guidelines primarily uses Ideal Sans Medium and Book. Additional weights and styles may be used within interpretive elements. Each weight is identified in the main rendered elevations and details. The program's secondary typeface is Calibri which is reserved for body text of interpretive signs. Care should be taken when selecting individual fonts to achieve maximum legibility, and avoiding using heavier weights for body text.

Characters in each font are shown here for visual reference. As mentioned above the primary fonts are Ideal Sans Medium and Book, vendors are responsible for securing all necessary typeface licenses are from the sources noted here. It is the vendors responsibility for matching font size, weight, tracking and leading.

Ideal Sans:
Hoefler & Co.
611 Broadway, Room 725
New York, NY 10012-2608
Tel. 212 777 6640
www.typography.com
info@typography.com

Calibri:
Monotype
600 Unicorn Park Drive
Woburn, MA 01801
Tel. 800 424 8973
www.fonts.com
info@fonts.com

Ideal Sans Bold

**ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
123456789@!#\$%^&*()**

Ideal Sans Bold Italic

***ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
123456789@!#\$%^&*()***

Ideal Sans Semibold

**ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
123456789@!#\$%^&*()**

Ideal Sans Semibold Italic

***ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
123456789@!#\$%^&*()***

Ideal Sans Medium

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
123456789@!#\$%^&*()

Ideal Sans Medium Italic

*ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
123456789@!#\$%^&*()*

Ideal Sans Book

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
123456789@!#\$%^&*()

Ideal Sans Book Italic

*ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
123456789@!#\$%^&*()*

Calibri Bold

**ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
123456789@!#\$%^&*()**

Calibri Bold Italic

***ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
123456789@!#\$%^&*()***

Calibri Regular

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
123456789@!#\$%^&*()

Calibri Italic

*ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
123456789@!#\$%^&*()*



Park Name Line Breaks

When there's ample space, the park name should always be composed on a single line. If the entire park name does not fit onto one line, the word "Park" should be brought down to the second line.

Appletree Park

Little Park

Schmanska
Park

Champlain
Street Park

Leddy Park

Smalley Park

Pomeroy Park

McKenzie Park

Baird Park

City Hall Park

Oakledge Park

Starr Farm Park

Andy A_Dog Williams
Skatepark

Potvin Park

Battery Park

Ethan Allen
Park

Roosevelt Park

Waterfront
Park

Dewey Park

Roundhouse
Park

Calahan Park

Lakeside Park

Schifilliti Park



Symbols and Icons

The symbols used for the BPRW park sign program are used to identify recreational activities, amenities, and regulations. All symbol and icon artwork can be provided as vector encapsulated post script (.eps) or Adobe Illustrator (.ai) files to approved vendors by requesting them from BPRW.

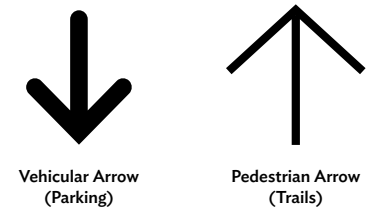
Recreation



Regulation



Identification





Sign Types

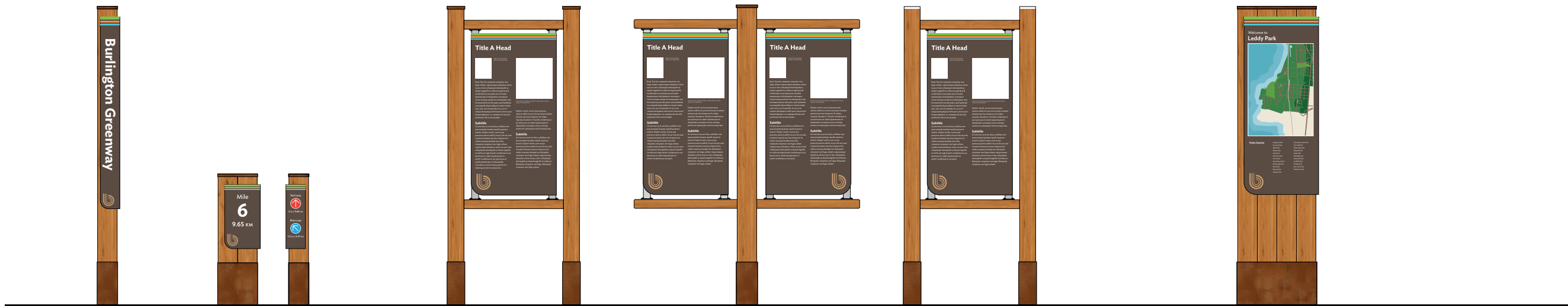


Gateway Identification
Page 9

Park Identification: Large
Page 11

Park Identification: Medium
Page 13

Park Identification: Small
Page 15



Bike Path Identification
Page 17

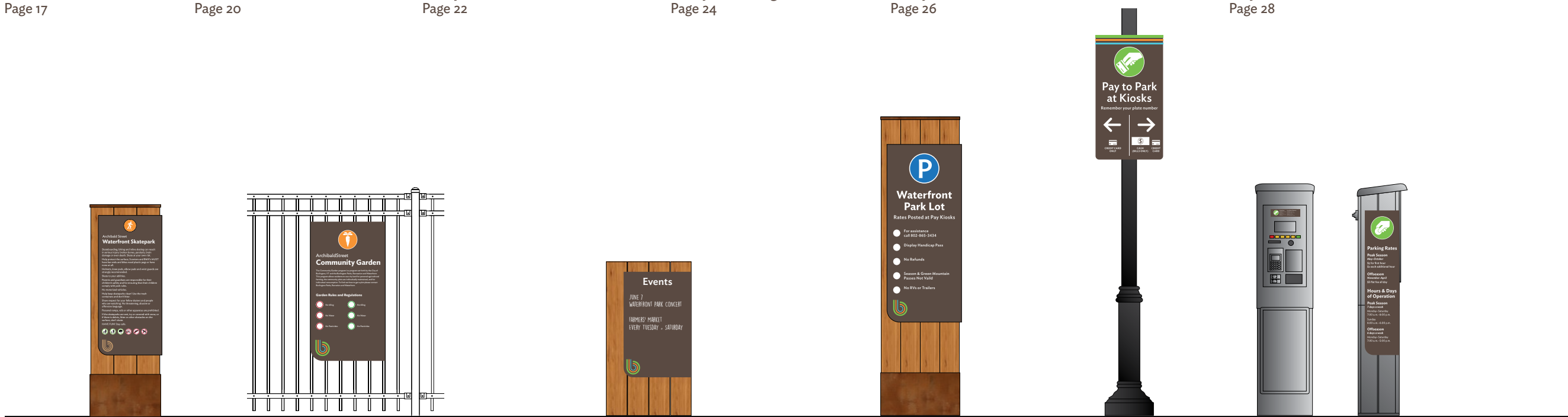
Mike Marker
Page 20

Interpretive Kiosk
Page 22

Interpretive Single Post
Page 24

Interpretive Dual Post
Page 26

Map Kiosk
Page 28



Rules and Regulations: Post
Page 30

Rules and Regulations: Fence Mounted
Page 32

Sandwich Board Sign
Page 34

Parking: Lot Identification
Page 35

Parking: Pay Kiosk Directional
Page 37

Parking: Pay Kiosk
Page 39

SIGNAGE FAMILY



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Sign Description

Gateway Identification Signage are the largest and most substantial of all park identification. Gateway signage is reserved for major destination parks, with the intent of having these located at regional park facilities. The Gateways should be sited perpendicular to the path of travel at the entry to the park, however at some instances BPRW may find it advantageous to install a single sided gateway perpendicular to the park entry drive. When single sided locations are identified, the panel should always be located closest to the drive, where located on the right side of the drive the panel should be on the right, and conversely on the left. A distance of 2' from the curb in all directions should be maintained at a minimum and are should be taken when siting signs, as not to impede right of way, or visibility of oncoming traffic. Specific site surveys should be taken before implementing signs to verify, size location and any requirements specified by VTrans.

Messaging should be limited to the park's name only, and where possible limited to a single line of text, set in title case.

Material Specifications

Panel
1 5/8" pan formed, or fabricated channel aluminum panel mounted to rail with angle and tamper resistant mechanical fasteners. Panel powdercoated M2. Cut through logo, and C1, C2, C3 logo returns. For applications where only one side is messaged, single panel may be used.

Message
1/2" thick cut letters painted C6, mounted to panel with full coverage VHB tape, and mechanical fasteners from behind. Remove panel to service letters. Park name set in Ideal Sans Medium.

Sign Wall
Constructed cedar wall, using T&G or ship lap siding. Alternate solid laminated beam stock mechanically fastened together.

Sleeve
1/8" thick M2 fabricated sleeve is mechanically fastened to concrete base, above grade. Gap between concrete and sleeve should be grouted.

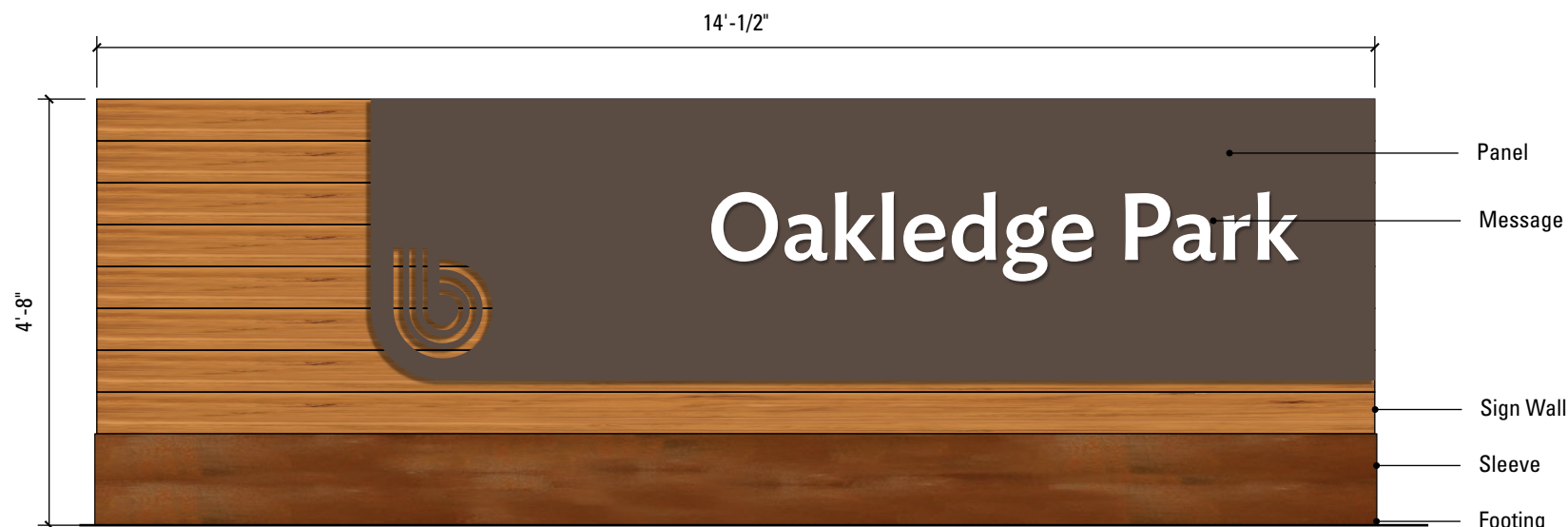
Footing
To be engineered per local code by fabricator. Fabricator to submit engineered shop drawings and graphic submission prior to fabrication.



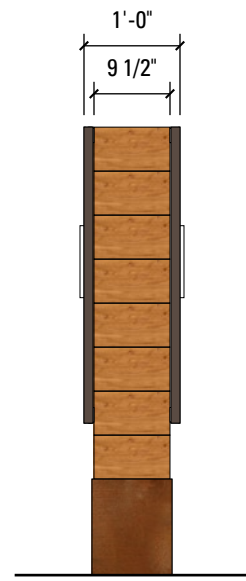
1 **Top**
Scale: 1/2" = 1' - 0"



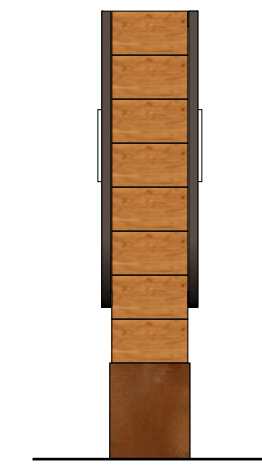
2 **Detail (Logo Return)**
Scale: NTS



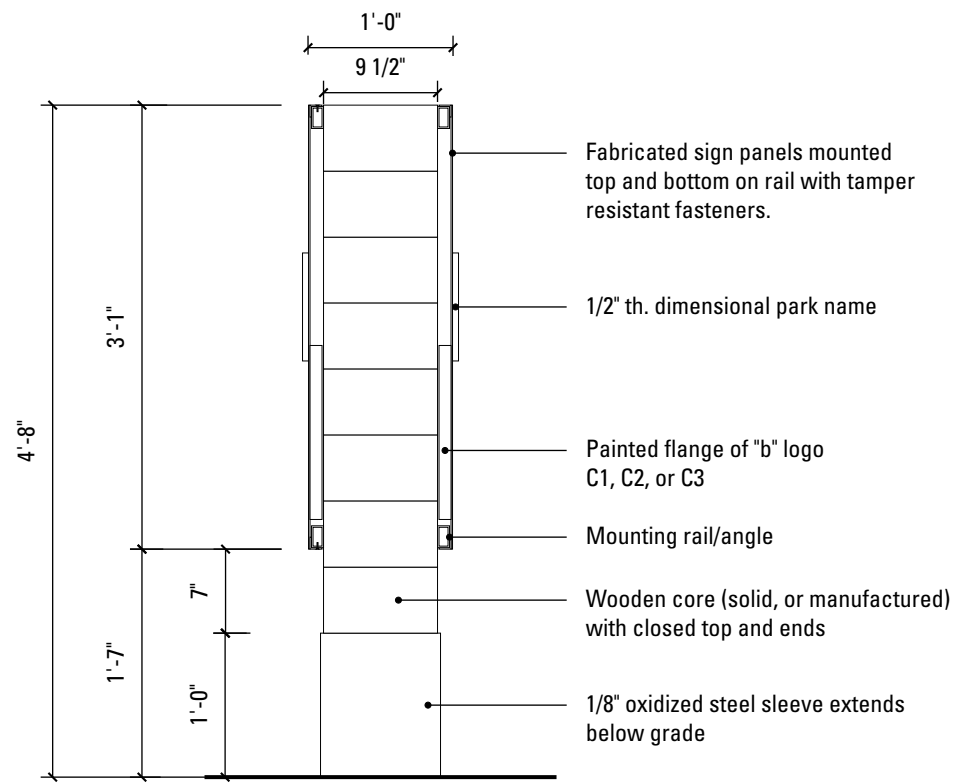
3 **Front**
Scale: 1/2" = 1' - 0"



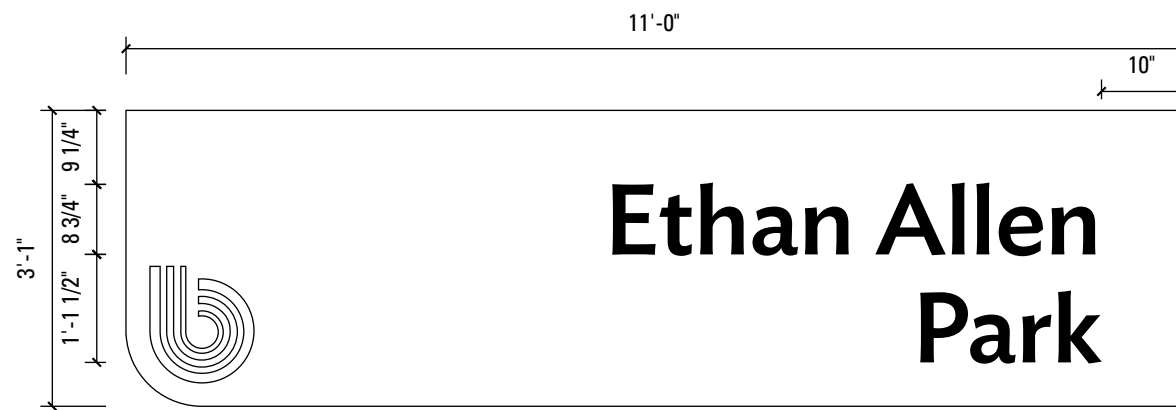
4 **End View (Right)**
Scale: 1/2" = 1' - 0"



5 **End View (Left)**
Scale: 1/2" = 1' - 0"



1 Section
Scale: 3/4" = 1' - 0"



2 Detail 2 Line Text
Scale: 1/2" = 1' - 0"



3 Detail Side 2
Scale: 1/2" = 1' - 0"



4 Detail (Side 1)
Scale: 3/4" = 1' - 0"

GATEWAY IDENTIFICATION



**BURLINGTON
PARKS
RECREATION
WATERFRONT**

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Sign Description

Large Park Identification Signage are used to identify larger regional parks where Gateway Signage placement is not achievable, feasible, or desired. As with all identification signage these signs should be sited perpendicular to the path of travel at the entry to the park, parallel to the access road. Where possible they should be sited in a driveway median, a minimum of 2' from the curb. If desired setback is not attainable the signs should be located within park property with the most visibility to oncoming traffic. Care should be taken when siting signs, as not to impede right of way, or visibility of oncoming traffic. Specific site surveys should be taken before implementing these signs to verify, size location and any breakaway requirements specified by VTrans.

Messaging should be limited to the park's name only, and where possible limited to a single line of text, set in title case.

Material Specifications

Cap

Formed 1/8" thick aluminum cap mechanically fastened to post, powder-coated M2

Rail

Aluminum rail and plates mechanically fastened to posts powder-coated C10

Panel

1" pan formed, or fabricated aluminum panel mounted to rail with angle and tamper resistant mechanical fasteners. Panel painted or powdercoated C4, with C5 Logo, and C1, C2, C3 Rules. For applications where only one side is messaged, single panel may be used with backer so panel appears solid.

Message

1/2" thick flat cut out letters painted C6, mounted to panel with full coverage VHB tape, and mechanical fasteners from behind. Remove panel to service letters. Park name set in Ideal Sans Medium.

Post

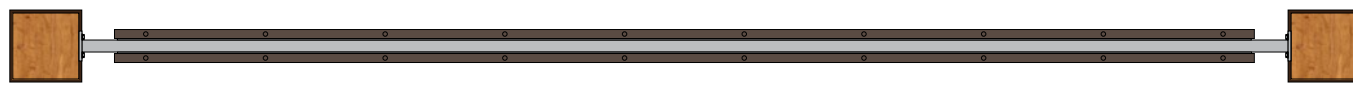
Cedar 6x6 post

Sleeve

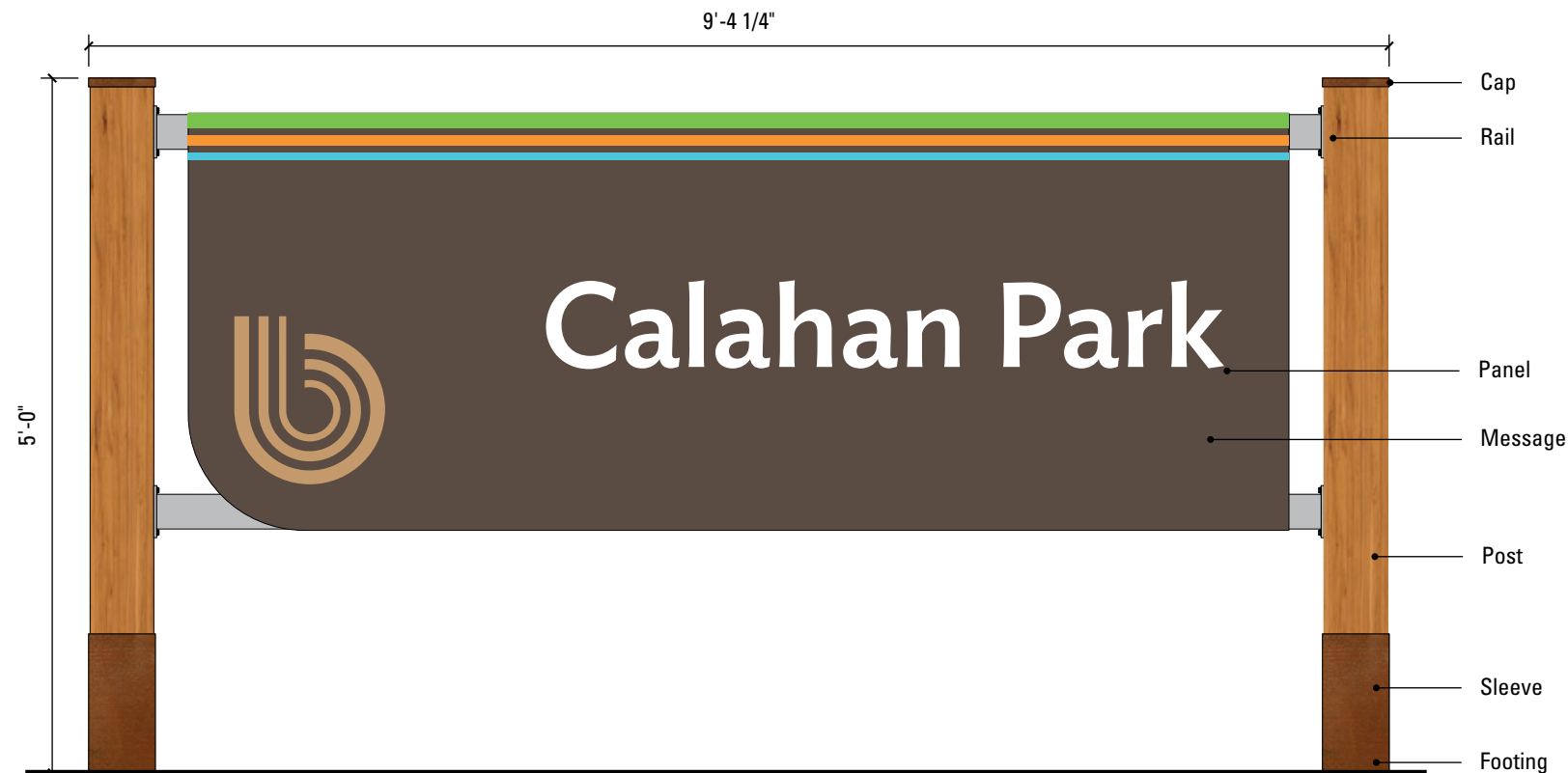
1/8" thick M2 fabricated sleeve is mechanically fastened to concrete base, above grade. Gap between concrete and sleeve should be grouted.

Footing

To be engineered per local code by fabricator. Fabricator to submit engineered shop drawings and graphic submission prior to fabrication.



1 Top (Caps Removed)
Scale: 3/4" = 1' - 0"

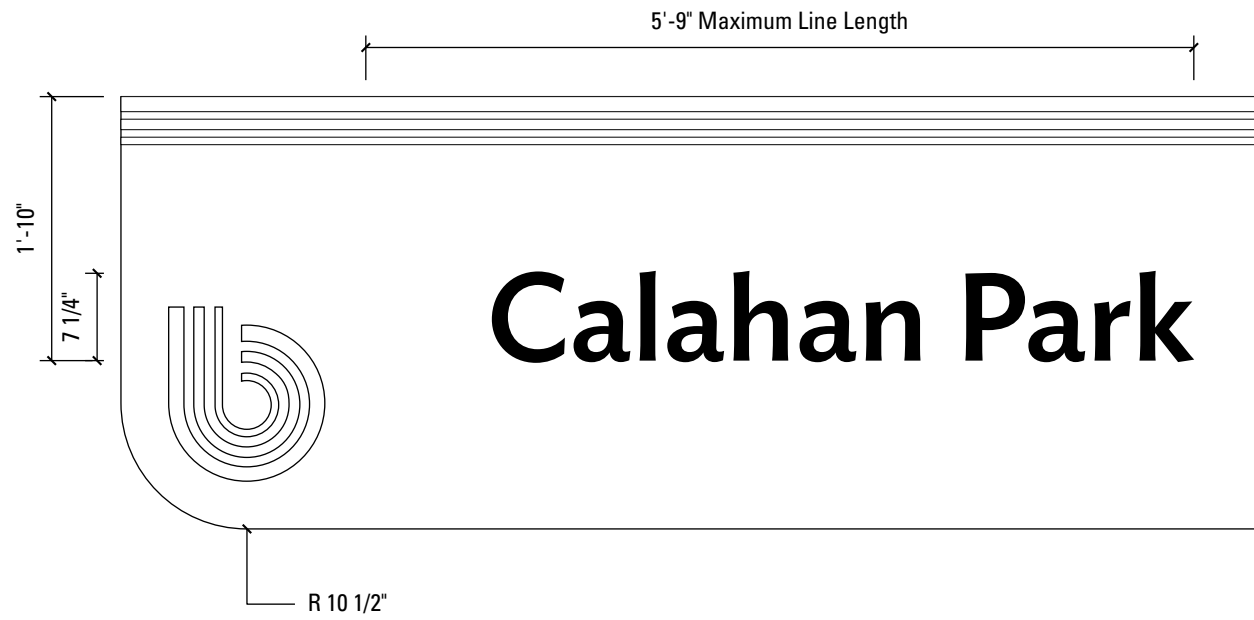


2 Front
Scale: 3/4" = 1' - 0"



3 Side (Left & Right)
Scale: 3/4" = 1' - 0"

PARK IDENTIFICATION: LARGE



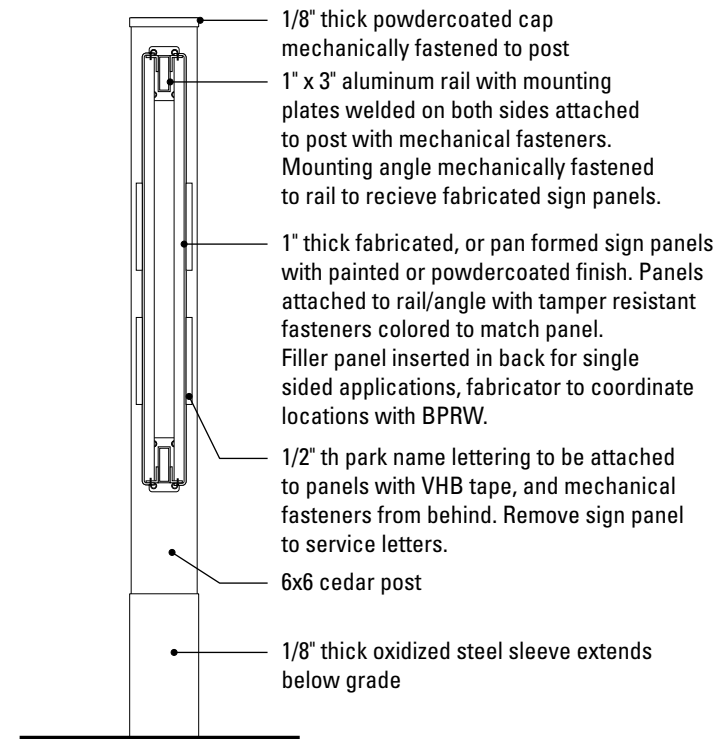
1 Detail (Single Line)
Scale: 3/4" = 1' - 0"



2 Detail (Double Line Side B)
Scale: 3/4" = 1' - 0"



3 Detail
Scale: 3/4" = 1' - 0"



4 Section
Scale: 3/4" = 1' - 0"

PARK IDENTIFICATION: LARGE



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DESIGN INTENT ONLY - NOT FOR CONSTRUCTION



Sign Description

Medium Park Identification Signage are used to identify medium and smaller sized parks where Large Park Identification placement is not achievable, feasible, or desired. As with all identification signage these signs should be sited perpendicular to the path of travel at the entry to the park, parallel to the access road. Where possible they should be sited in a driveway median, a minimum of 2' from the curb. If desired setback is not attainable the signs should be located within park property with the most visibility to oncoming traffic. Care should be taken when siting signs, as not to impede right of way, or visibility of oncoming traffic. Specific site surveys should be taken before implementing these signs to verify, size location and any breakaway requirements specified by VTrans.

Messaging should be limited to the park's name only, and if possible limited to a single line of text, and set in title case. Medium Park Identification Panels may be used in a not freestanding application for building identification.

Material Specifications

Cap

Formed 1/8" thick aluminum cap mechanically fastened to post, powder-coated M2

Rail

Aluminum rail and plates mechanically fastened to posts powder-coated C10

Panel

1" pan formed, or fabricated aluminum panel mounted to rail with angle and tamper resistant mechanical fasteners. Panel painted or powdercoated C4, with C5 Logo, and C1, C2, C3 Rules. For applications where only one side is messaged, single panel may be used with backer so panel appears solid.

Message

Applied C6 Vinyl Set in Ideal Sans Medium

Post

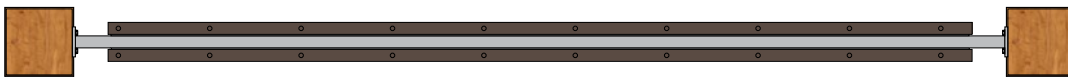
Cedar 6x6 post

Sleeve

1/8" thick M2 fabricated sleeve is mechanically fastened to concrete base, above grade. Gap between concrete and sleeve should be grouted.

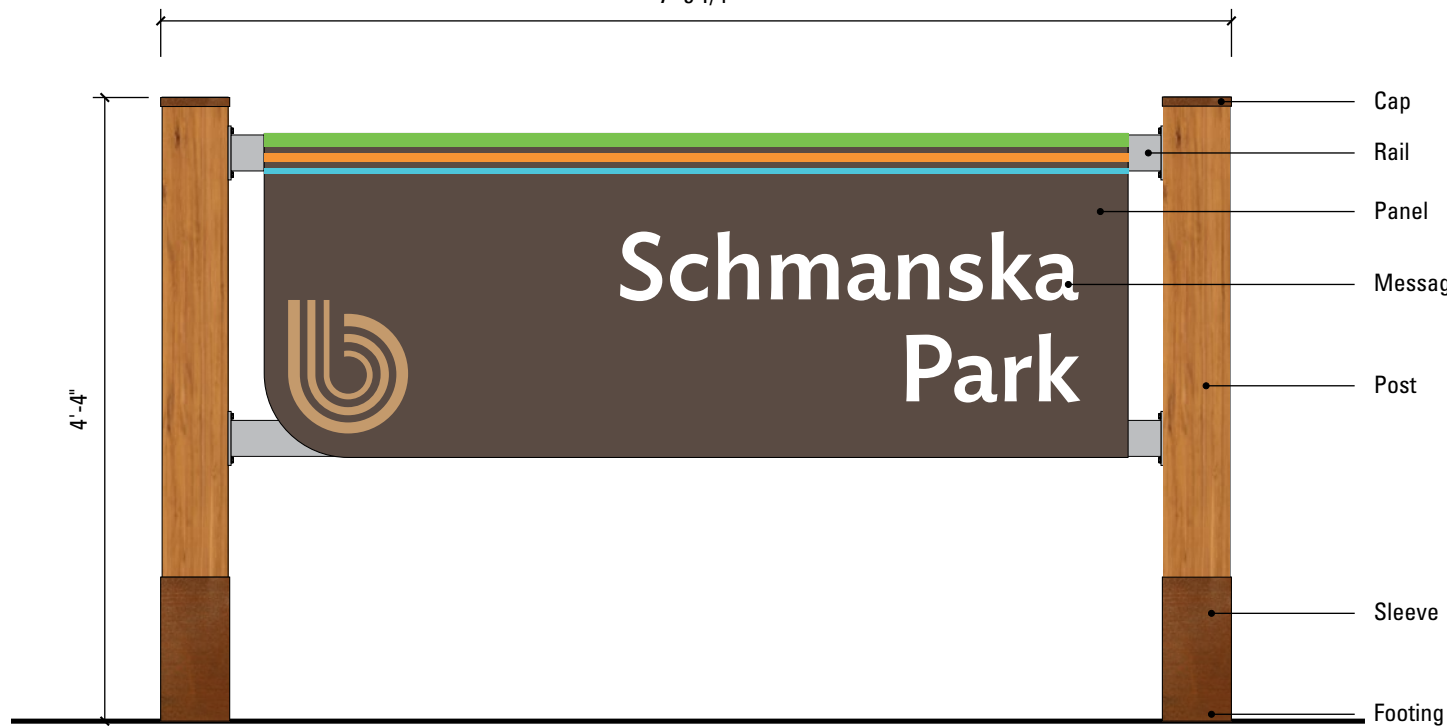
Footing

To be engineered per local code by fabricator. Fabricator to submit engineered shop drawings and graphic submission prior to fabrication.



1 Top (Caps Removed)
Scale: 3/4" = 1' - 0"

7'-5 1/4"



4'-4"

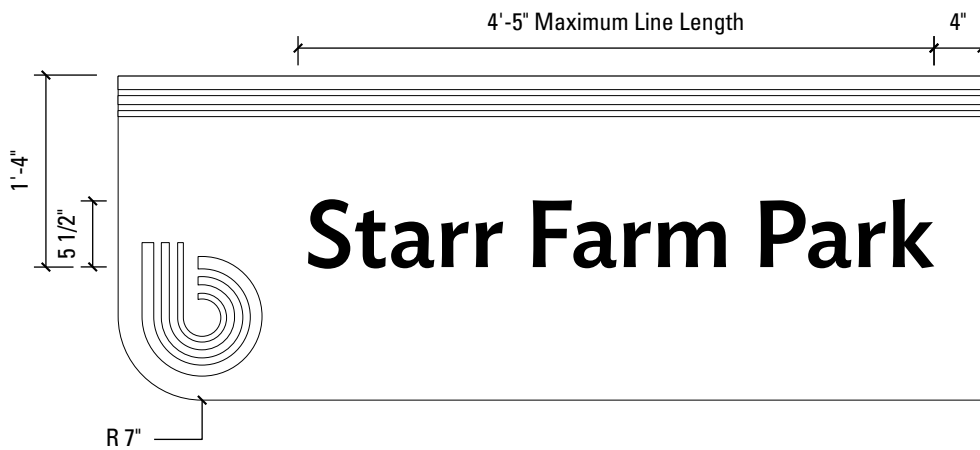
2 Front
Scale: 3/4" = 1' - 0"



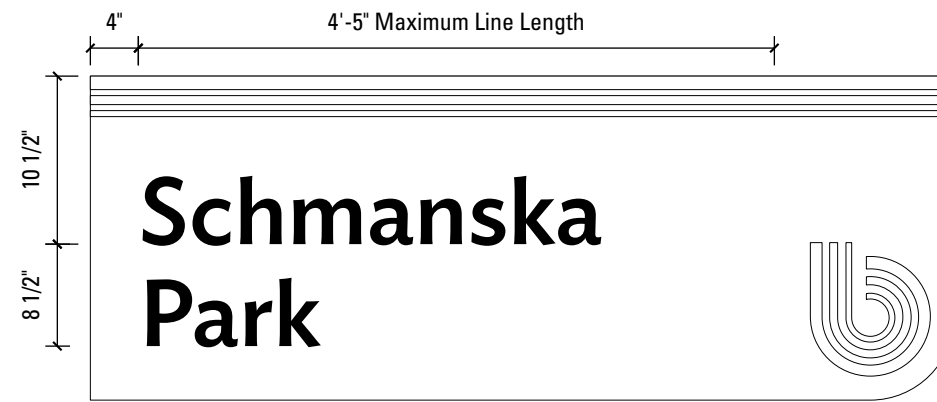
3 Side (Left & Right)
Scale: 3/4" = 1' - 0"

PARK IDENTIFICATION: MEDIUM

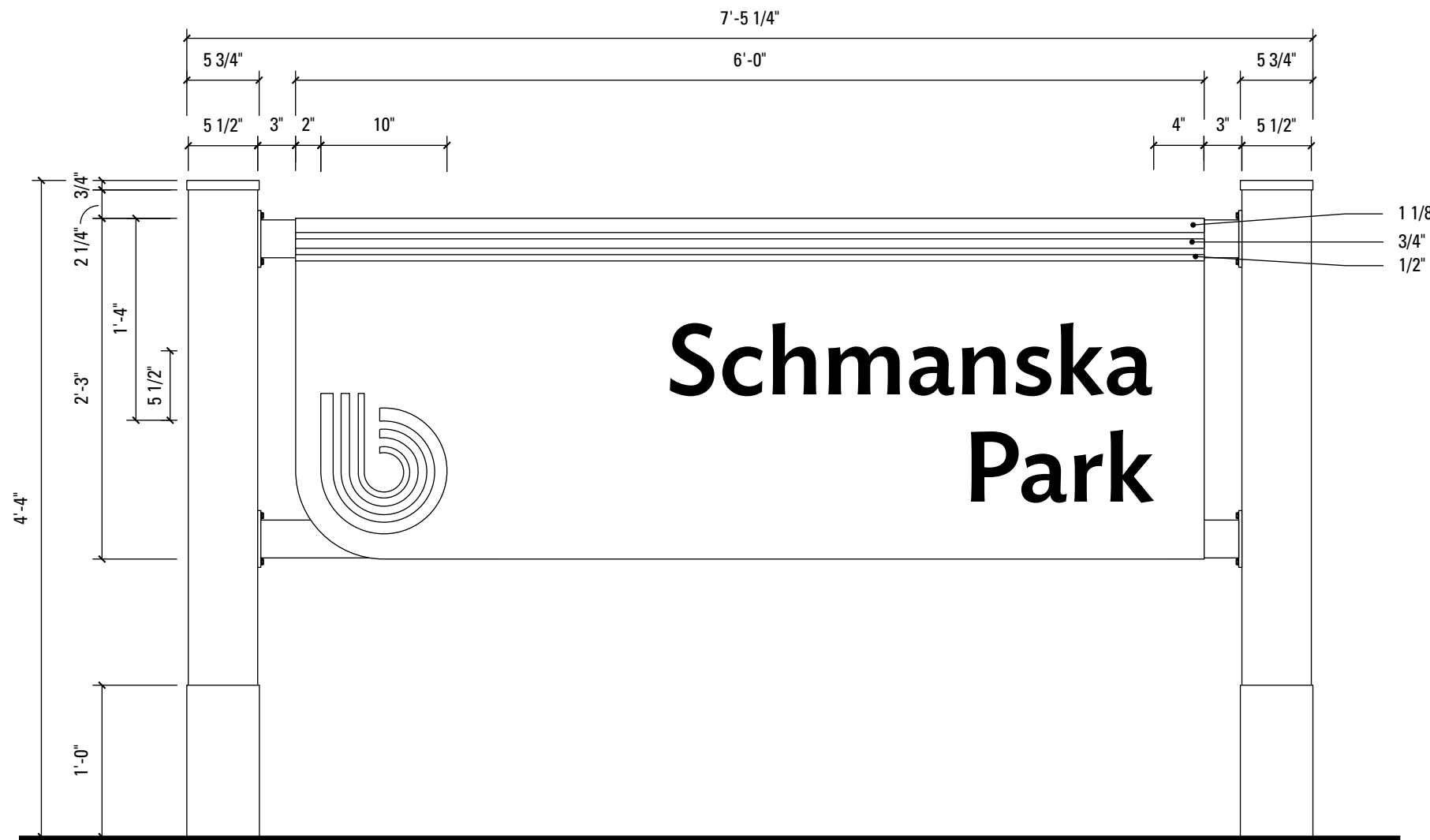
PARK IDENTIFICATION: MEDIUM



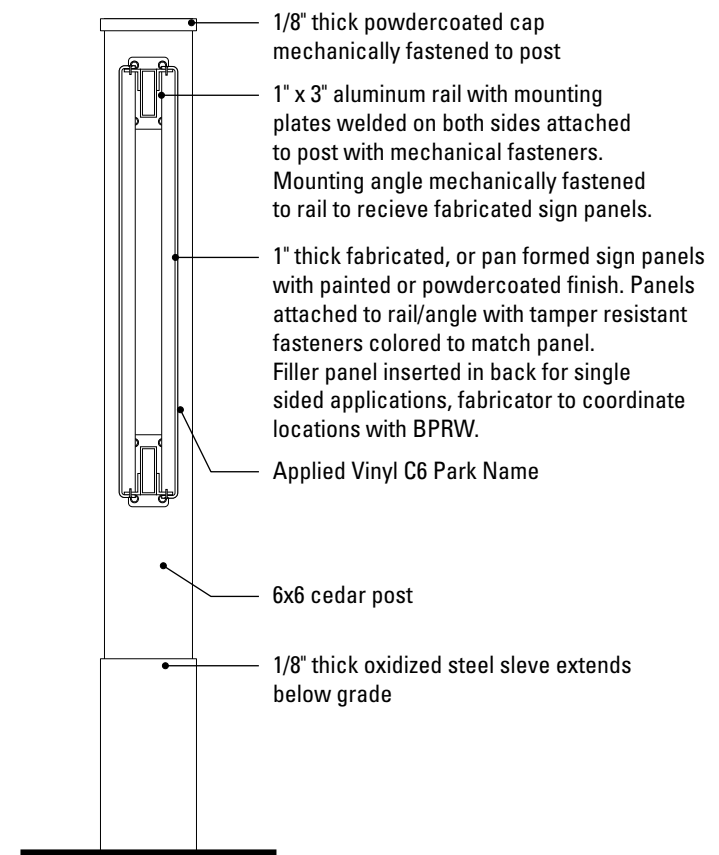
1 Detail (Single Line)
Scale: 3/4" = 1' - 0"



2 Detail (Double Line Side B)
Scale: 3/4" = 1' - 0"



3 Detail (Single Line)
Scale: 1" = 1' - 0"



4 Section
Scale: 1" = 1' - 0"

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Sign Description

Small Park Identification Signage are used to identify inner city parks where the medium park identification signage can not be sited, or is determined to not visually fit the environment. This size identification panel should be located at the major entries to the parks, and were possible mounted to the left of the entry, in cases where the mounting conditions can not. Various conditions may exist for implementation of these signs, fabricators must complete survey for locations and provide recommendations for mounting based on existing conditions.

Messaging should be limited to the park's name only, and if possible limited to a single line of text, and set in title case.

Material Specifications

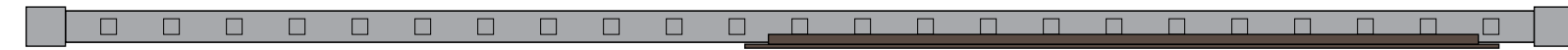
Panel

1/2" pan formed, or fabricated aluminum panel mounted to rail with angle and tamper resistant mechanical fasteners. Panel painted or powdercoated C4, with C5 Logo, and C1, C2, C3 Rules.

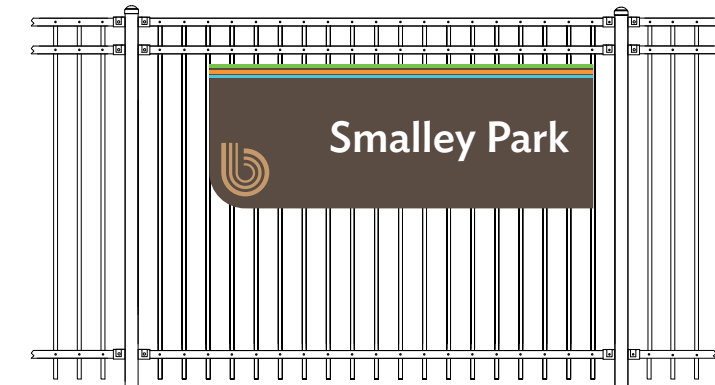
Alternate a 1/4" thick solid aluminum panel may be implemented for this sign type. Mechanical fasteners must be tamper resistant, and not penetrate the sign face. All hardware must be painted to match sign base color C1.

Message

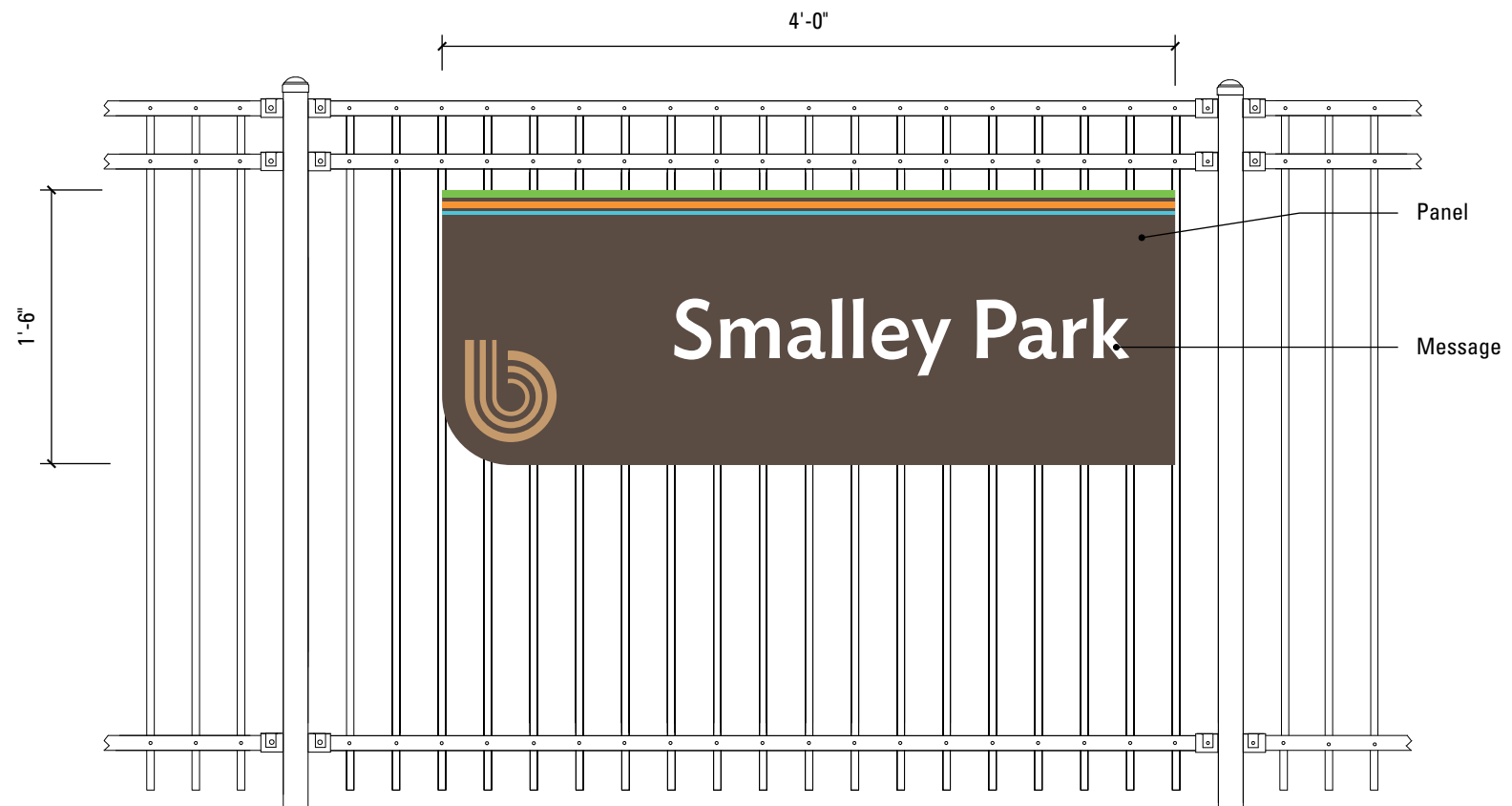
Applied C6 Vinyl set in Ideal Sans Medium



1 Top
Scale: 1" = 1' - 0"

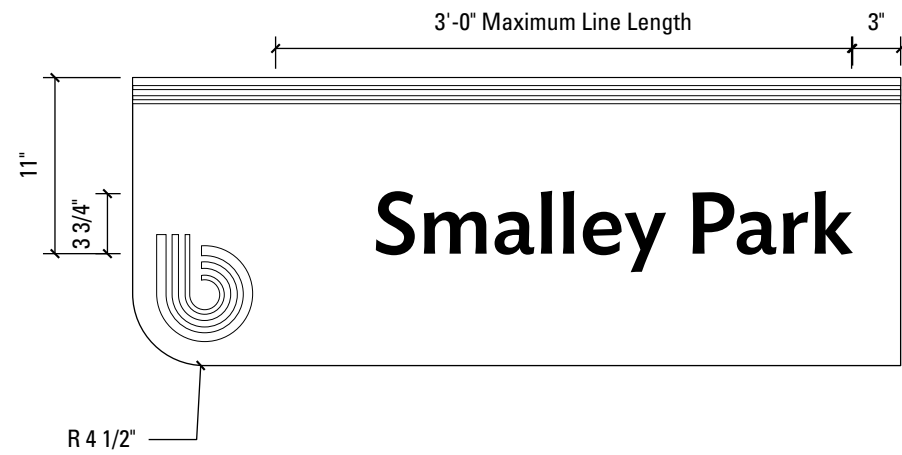


2 Front
Scale: 1/2" = 1' - 0"

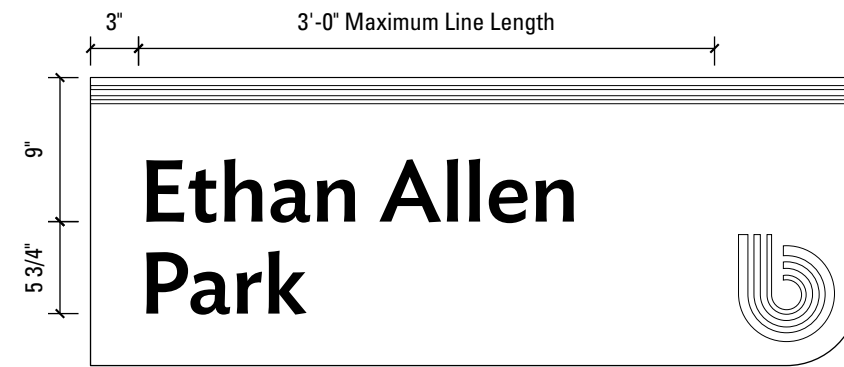


3 Front Detail
Scale: 1" = 1' - 0"

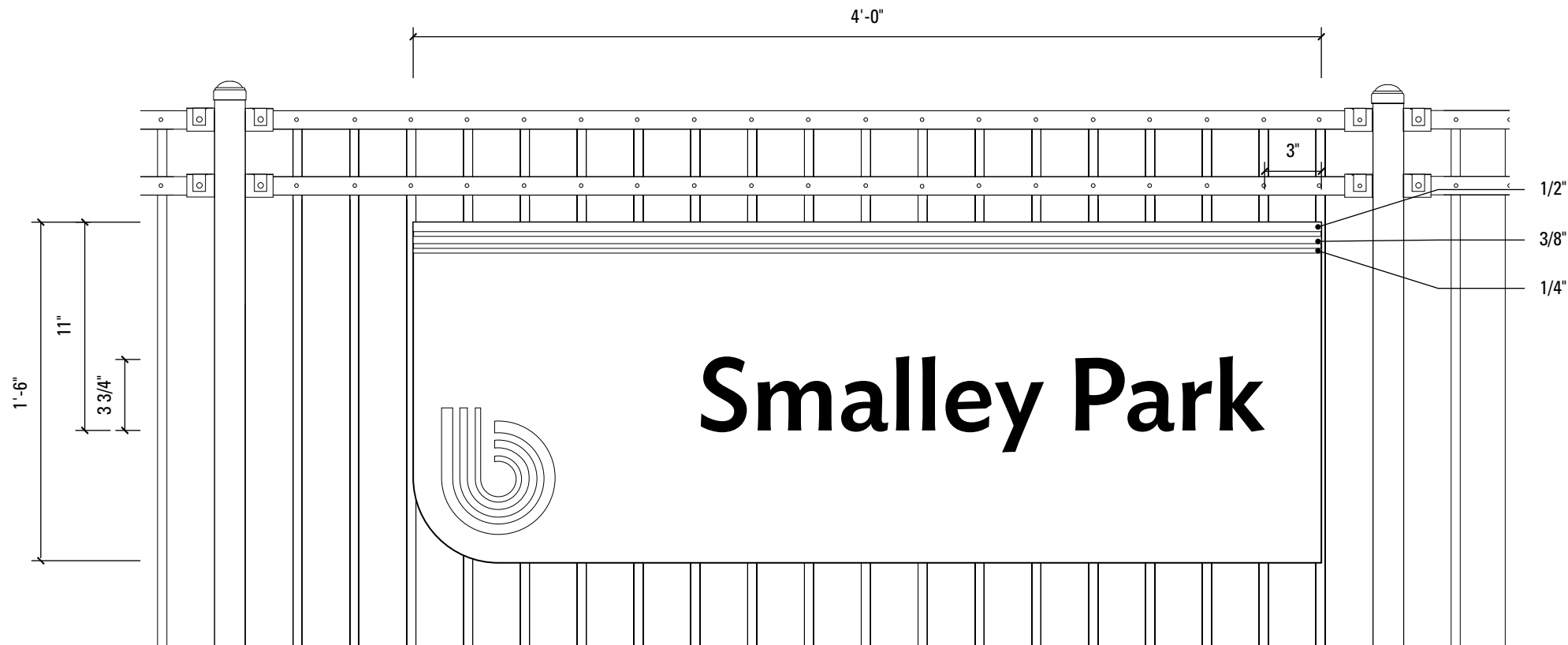
PARK IDENTIFICATION: SMALL



1 Detail (Single Line)
Scale: 1" = 1' - 0"



2 Detail (2 lines right orientation)
Scale: 1" = 1' - 0"



3 Detail
Scale: 1 1/2" = 1' - 0"

PARK IDENTIFICATION: SMALL



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DESIGN INTENT ONLY - NOT FOR CONSTRUCTION



Sign Description

Trail Identification Signage can be used at the entries to Bike or Hiking Trails. These signs can be messaged with the parks name, or Trail Name or a combination of the two. At entries to trails from the park it is the intent of these signs to have the park name facing the oncoming trail/path travelers and the trail/path name facing the park visitor. Where applied at crossings, there should be 2 signs installed on the right side of the trail in the direction of travel.

Material Specifications

Cap

Formed 1/8" thick aluminum cap mechanically fastened to post, powder-coated M2

Panel

1/4" thick break-formed aluminum panel painted or powdercoated C4, with C5 Logo, and C1, C2, C3 Rules. Attached to mounting hardware with tamper resistant mechanical fasteners.

Message

Applied C6 Vinyl Set in Title Case Ideal Sans Medium. Alignment to always read from top to bottom.

Post

Cedar 6x6 post

Sleeve

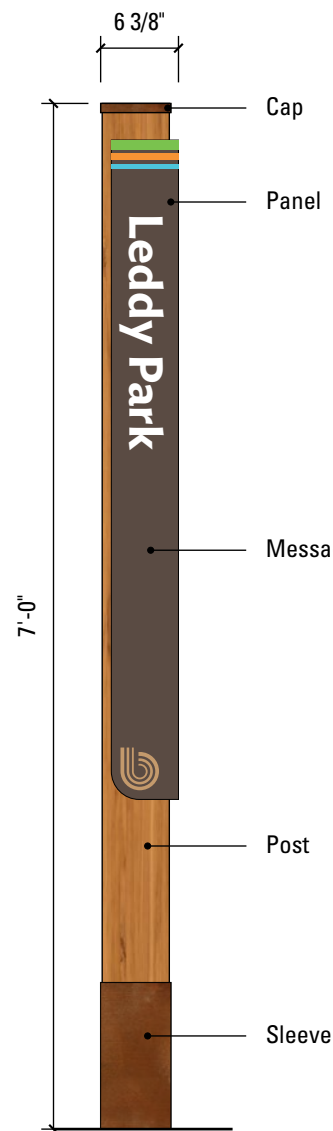
1/8" thick M2 fabricated sleeve is mechanically fastened to concrete base, above grade. Gap between concrete and sleeve should be grouted.

Mounting Hardware

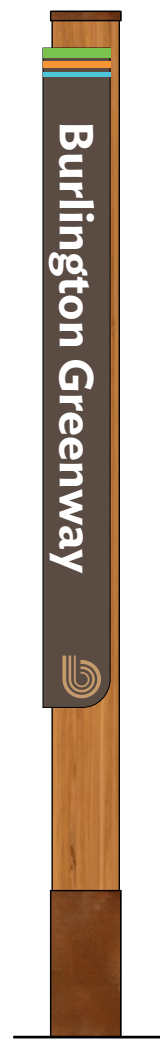
3/4" x 1/8" aluminum angle welded, bonded, or mechanically fastened to back of panel. Mechanical fasteners through angle into aluminum tube screwed to post. All fasteners to be tamper resistant.

Footing

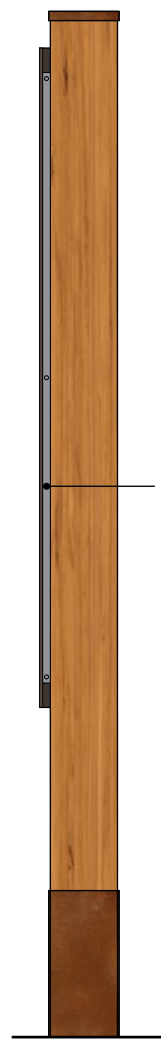
To be engineered per local code by fabricator. Fabricator to submit engineered shop drawings and graphic submission prior to fabrication.



1 Side A
Scale: 3/4" = 1' - 0"



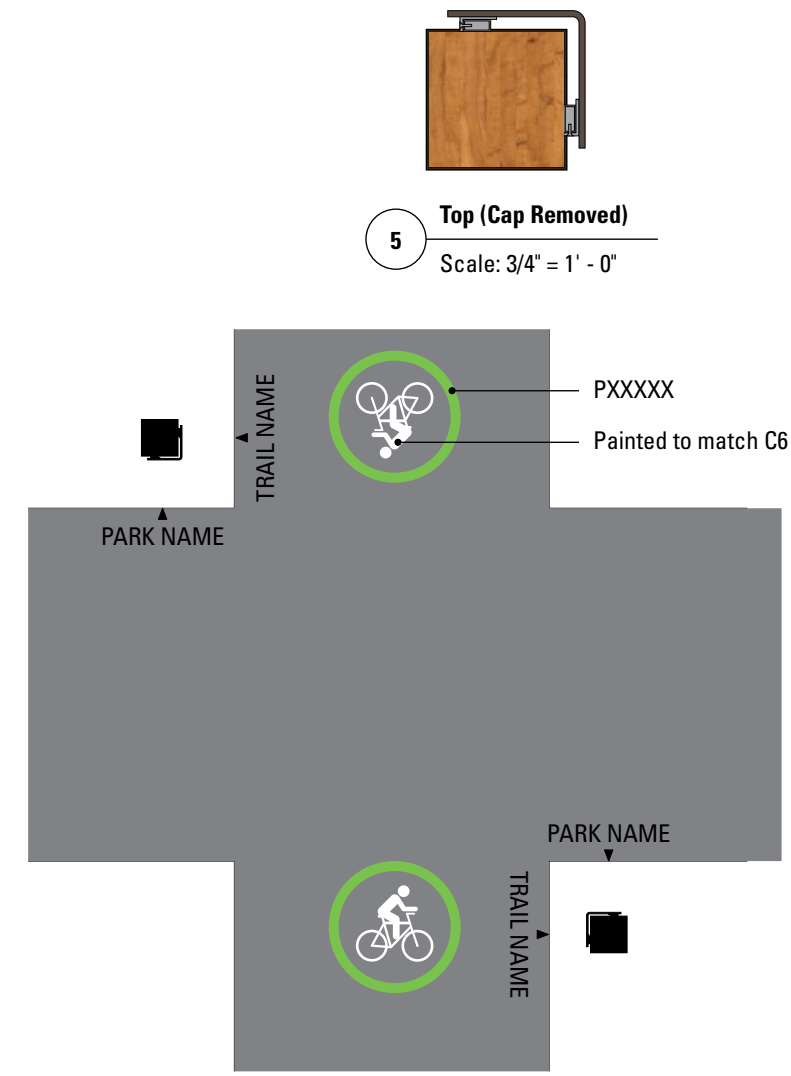
2 Side B
Scale: 3/4" = 1' - 0"



3 Side C
Scale: 3/4" = 1' - 0"



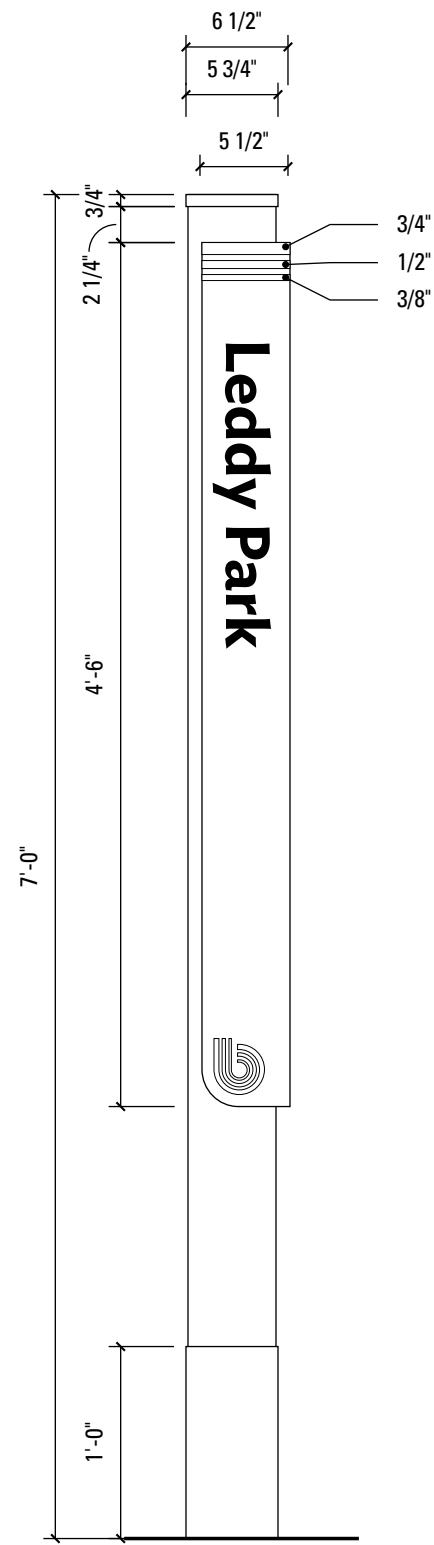
4 Side D
Scale: 3/4" = 1' - 0"



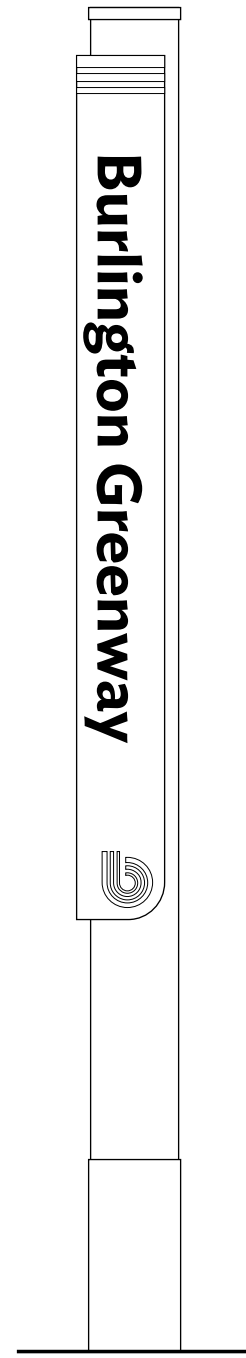
6 Proposed Orientation
Scale: NTS

BIKE PATH IDENTIFICATION

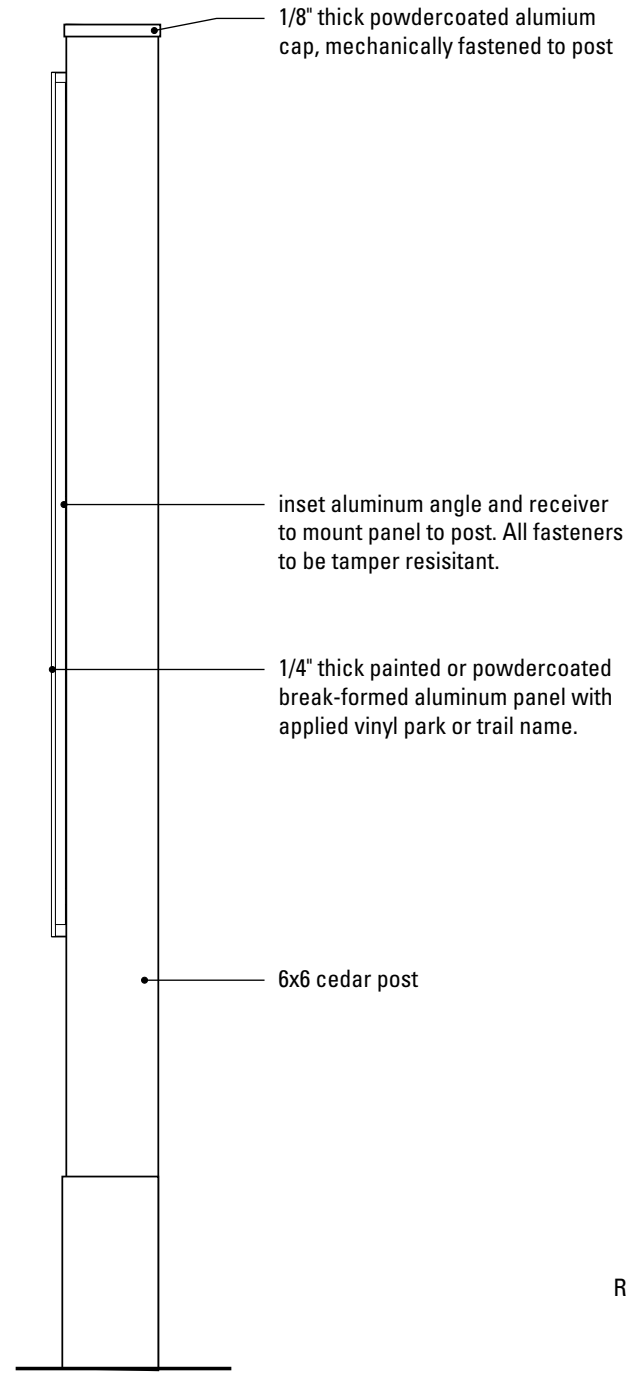




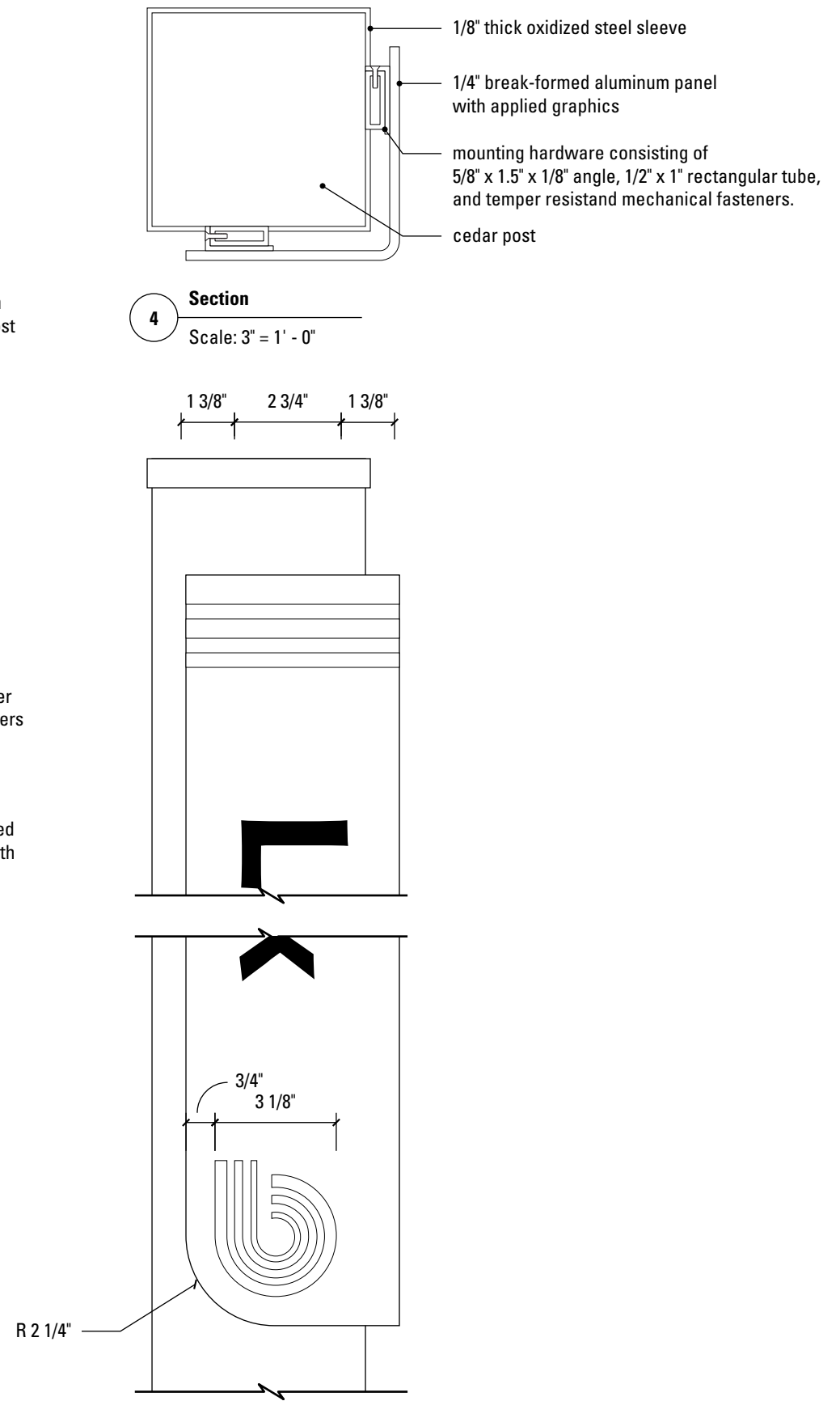
1 Detail Side A
Scale: 1" = 1' - 0"



2 Detail Side B
Scale: 1" = 1' - 0"



3 Detail Side C (Sim D)
Scale: 1" = 1' - 0"



5 Graphic Detail
Scale: 3" = 1' - 0"

BIKE PATH IDENTIFICATION

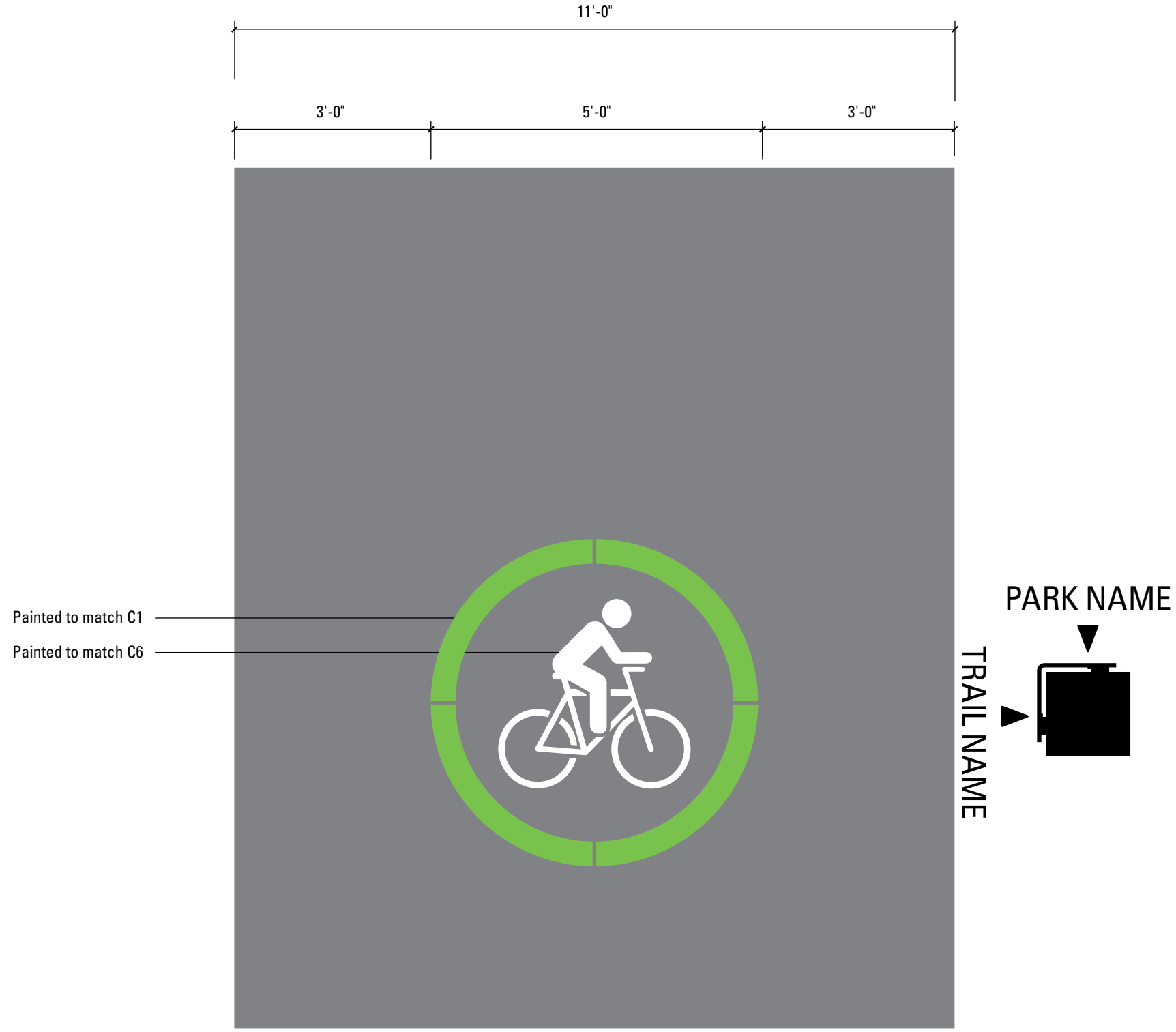


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1 Bike Path Icon
Scale: 1/2" = 1' - 0"



BIKE PATH IDENTIFICATION (DETAIL)



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Sign Description

Trail markers serve two purposes, first to identify trails and direction and secondly to convey distance. These markers can have various uses, and locations, but should be placed with the front perpendicular to the trail, and the edge parallel with the trail when used to indicate direction.

Mileage should always be the primary unit of measure and ideally should only be in whole increments. For use by international visitors, kilometers should also be indicated wherever mileage is identified. Kilometers should be indicated in the form of a decimal at a maximum of two decimal places.

Material Specifications

Cap
Formed 1/8" thick aluminum cap mechanically fastened to post, powder-coated M2.

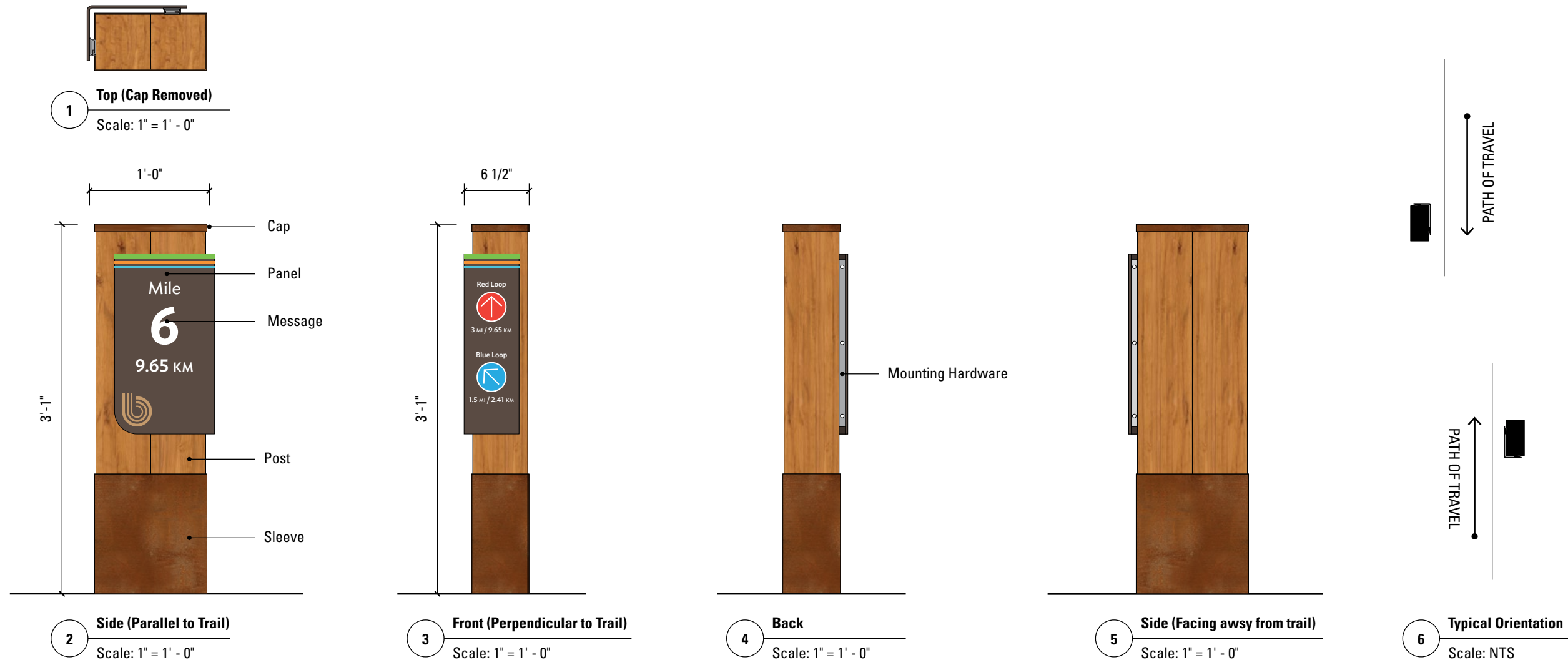
Mounting Hardware
Aluminum angles mechanically fastened to the post, and either welded, or chemically bonded to the panel. Tamper resistant mechanical fasteners should be used to prevent unauthorized removal.

Panel
1/8" thick break formed aluminum panel. Panel painted C4, with C5 Logo, and C1, C2, C3 Rules. Where found possible powder-coated base graphics (Rules and Logo) may be used.

Message
All text and directional devices will be applied directly printed on C6 reflective die cut vinyl with UV coating.

Sleeve
1/8" thick M2 fabricated sleeve is mechanically fastened to concrete base, above grade. Gap between concrete and sleeve should be grouted.

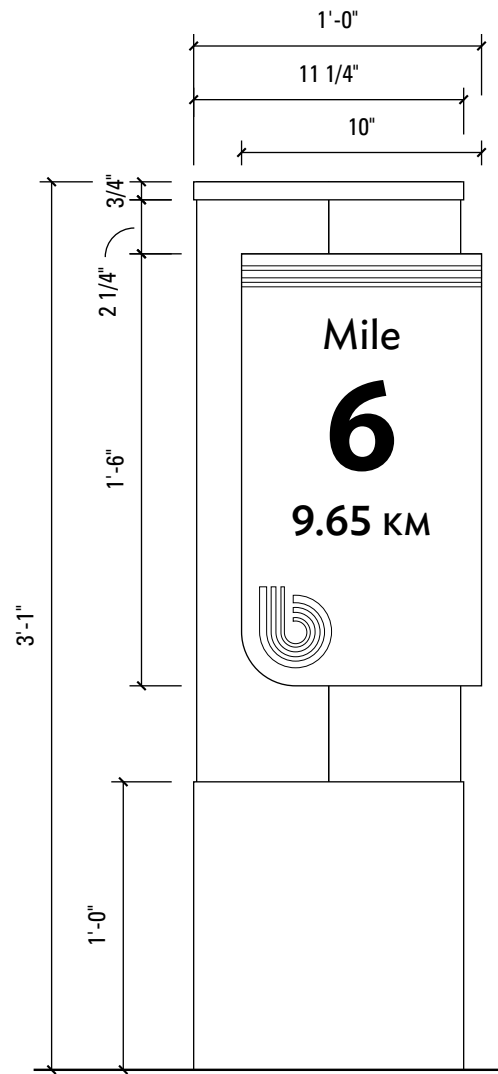
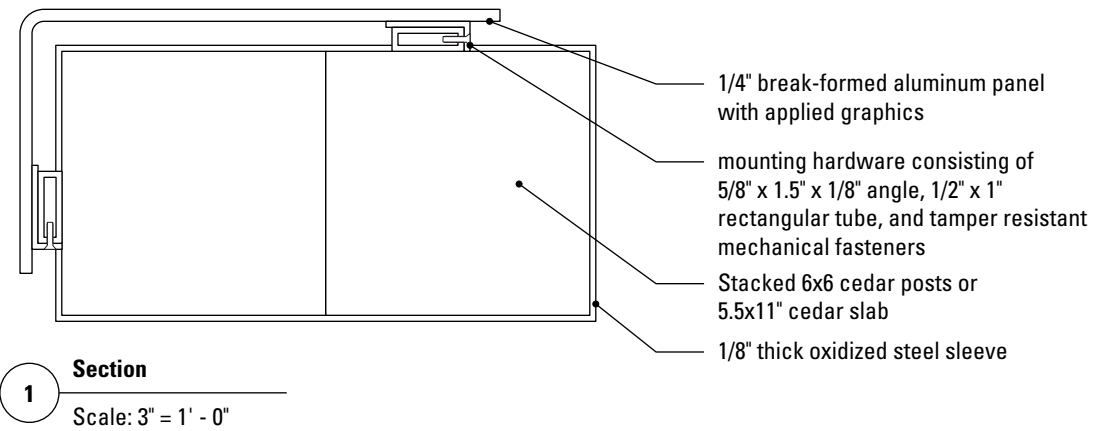
Footing
To be engineered per local code by fabricator. Fabricator to submit engineered shop drawings and graphic submission prior to fabrication.



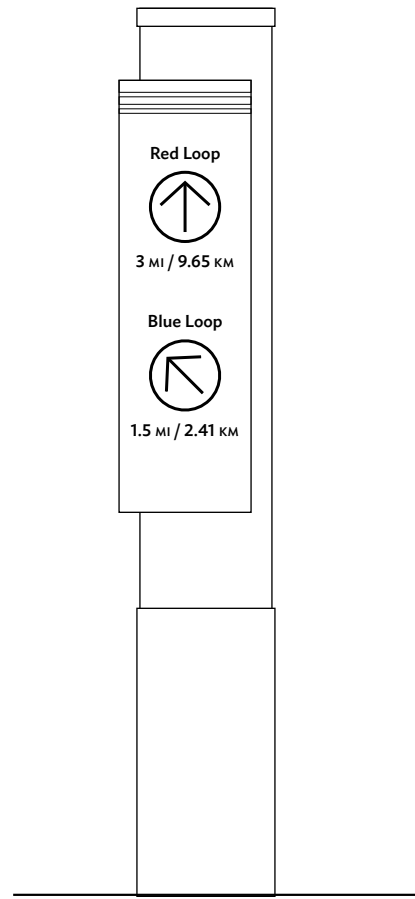
TRAIL DISTANCE MARKER

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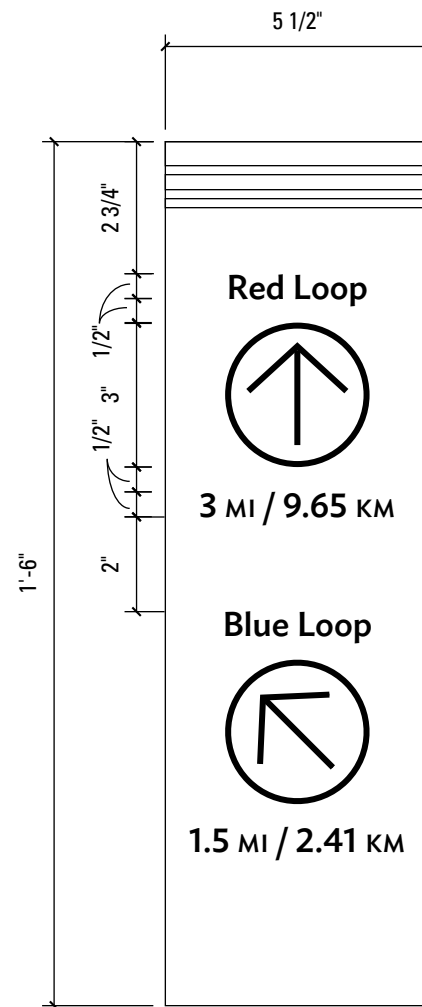




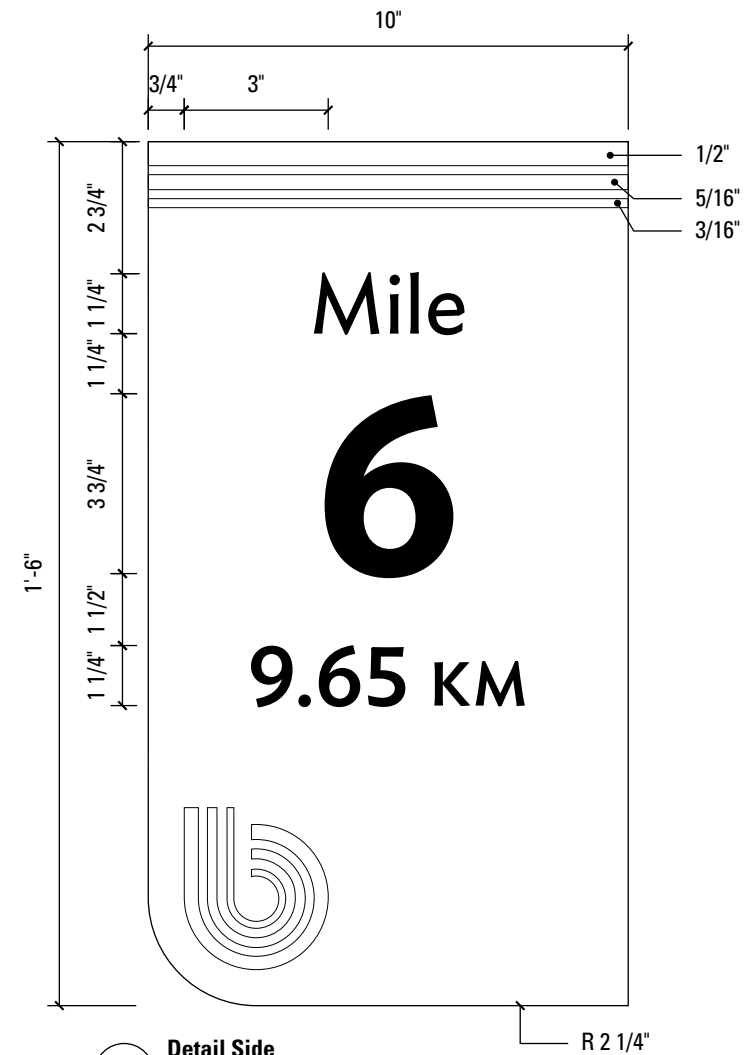
2 Side (Parallel to Trail)
 Scale: 1 1/2" = 1' - 0"



3 Front (Perpendicular to Trail)
 Scale: 1 1/2" = 1' - 0"



4 Detail Front
 Scale: 3" = 1' - 0"



5 Detail Side
 Scale: 3" = 1' - 0"

TRAIL DISTANCE MARKER



Sign Description

Interpretive signage is used to share interesting information about the park. This information can include historical timelines and photos, facts about plant and wildlife, and photos showing the site prior to it becoming a park. Kiosks carry four interpretive panels.

Location Guidelines

Kiosks should be positioned with a minimum setback of 2' from the trail.

Messaging Guidelines

Header text should include park name on at least one side of the kiosk and be set in title case (upper and lower case). The type sizes are as follows:

Title: Ideal Sans Semibold, 1 1/4" cap height
Subhead: Ideal Sans Book, 5/8" cap height
Body: Ideal Sans Book, 3/8" cap height
Caption: Ideal Sans Book, 1/4" cap height

The gutter between the text boxes and margins should be a minimum of 1 1/4".

Material Specifications

Cap

Formed 1/8" thick aluminum cap mechanically fastened to post, powder-coated M2

Rail

Aluminum rail and plates mechanically fastened to posts powder-coated C10

Panel

1" pan formed, or fabricated aluminum panel mounted to rail with angle and tamper resistant mechanical fasteners. Panel painted or powdercoated C4, with C5 Logo, and C1, C2, C3 Rules. For applications where only one side is messaged, single panel may be used with backer so panel appears solid.

Post

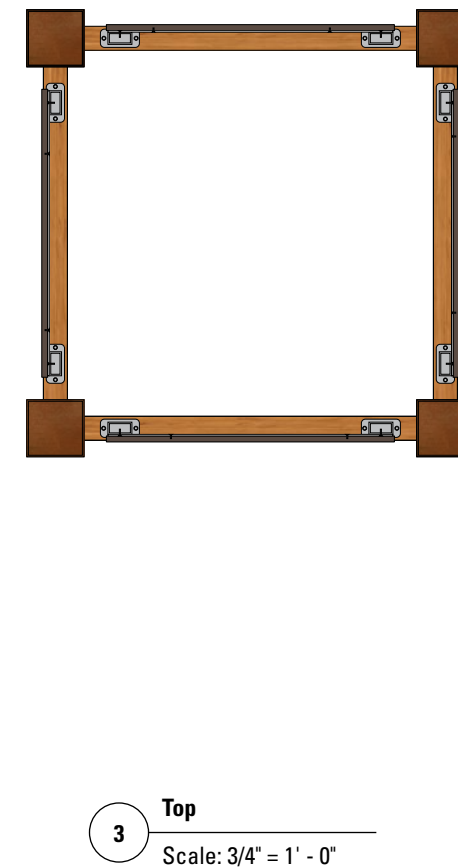
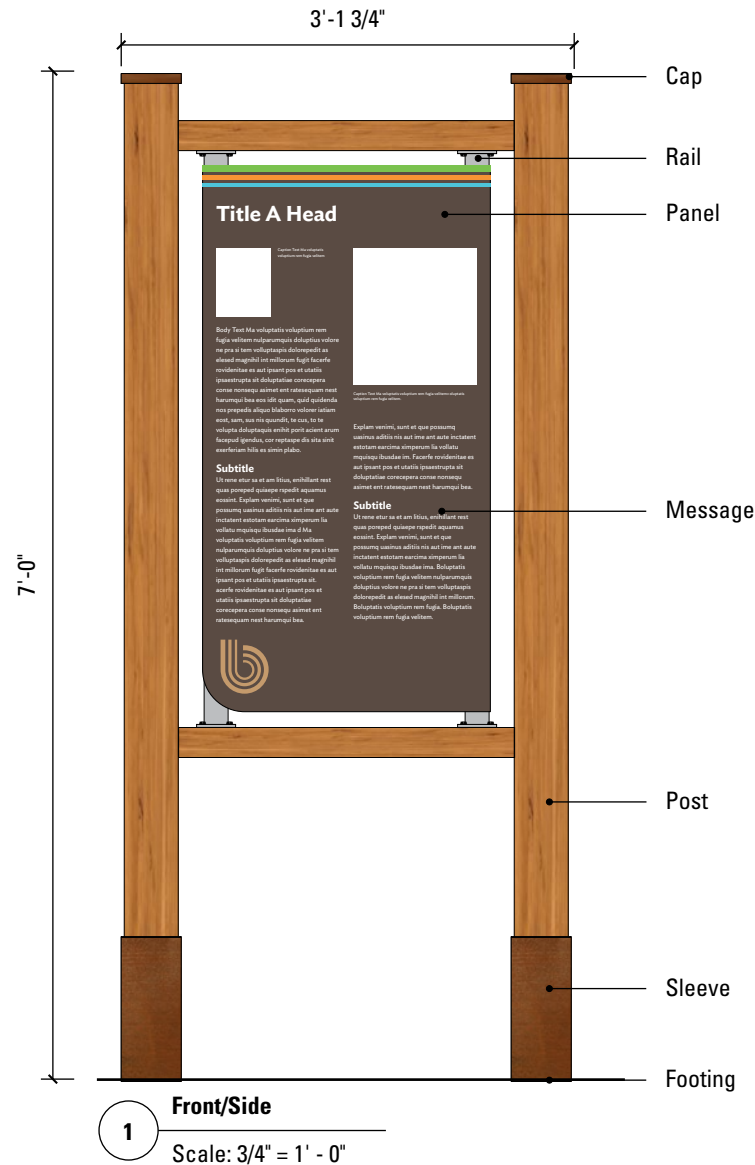
Cedar 5" x 5" post

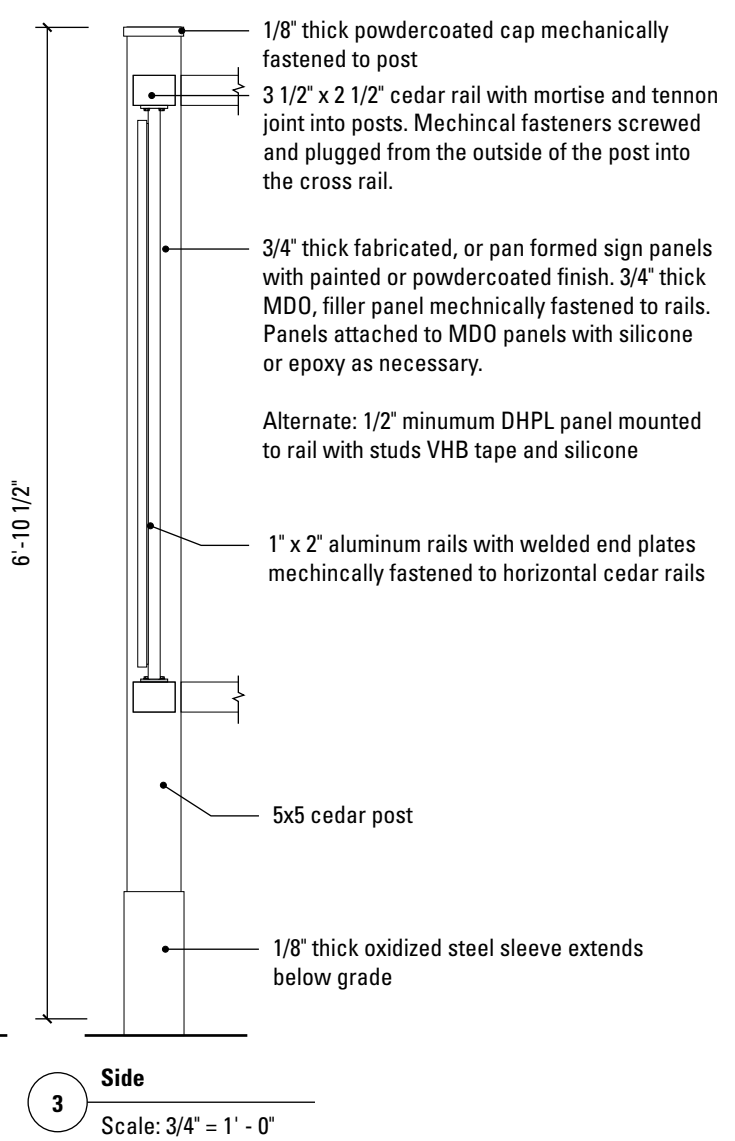
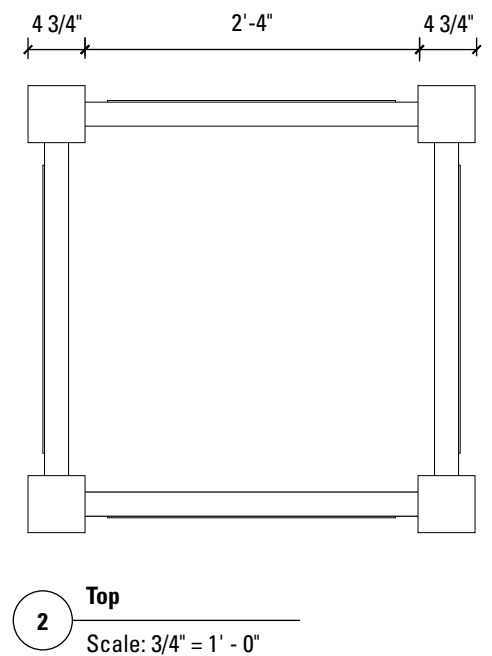
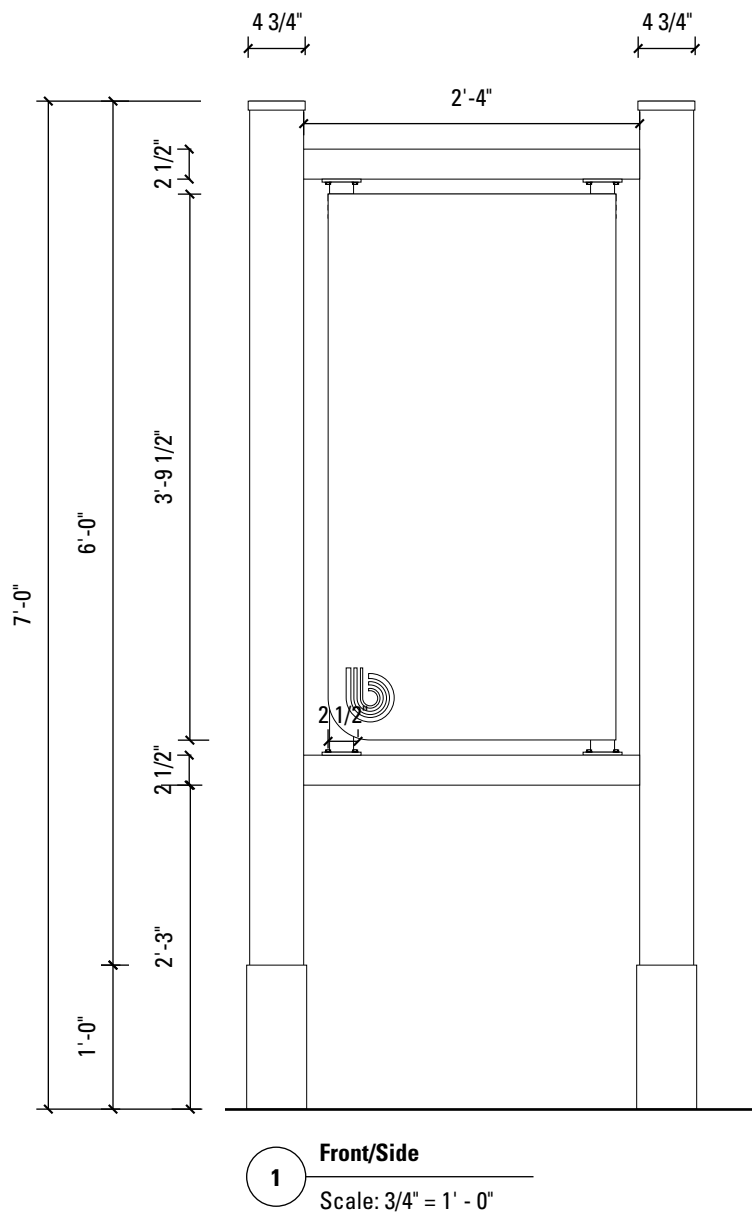
Sleeve

1/8" thick M2 fabricated sleeve is mechanically fastened to concrete base, above grade. Gap between concrete and sleeve should be grouted.

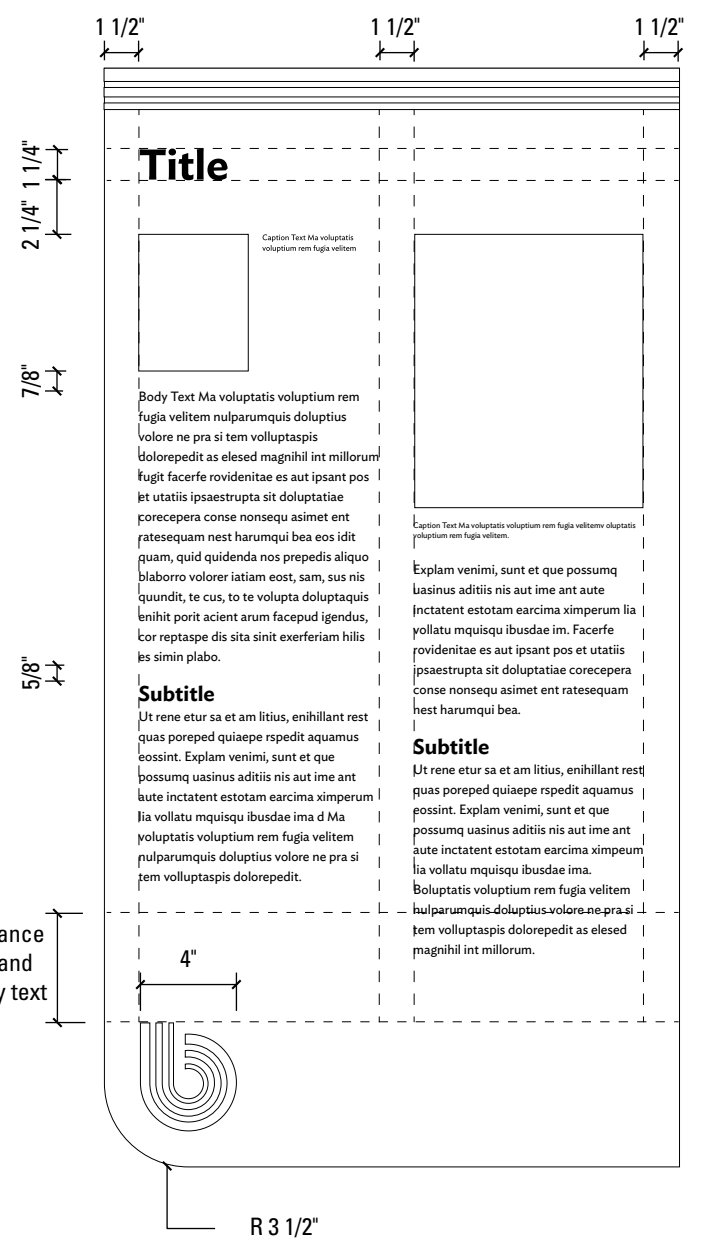
Footing

To be engineered per local code by fabricator. Fabricator to submit engineered shop drawings and graphic submission prior to fabrication.





TYPOGRAPHY
 Title: Ideal Sans Semibold, 1 1/4" cap height
 Subhead: Ideal Sans Book, 5/8" cap height
 Body Text: Ideal Sans Book, 3/8" cap height
 Caption: Ideal Sans Book, 1/4" cap height



5/8" from image to caption
 1" from baseline of caption to cap height of the body text



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Sign Description

Interpretive signage is used to share interesting information about the park. This information can include historical timelines and photos, facts about plant and wildlife, and photos showing the site prior to it becoming a park.

Single post interpretive signs may carry two or four panels. While shown as double sided left and right of post on elevation, they may be suspended on the right side only at the discretion of the BPRW.

Location Guidelines

Kiosks should be positioned with a minimum setback of 2' from the trail.

Messaging Guidelines

Header text should include park name on at least one side of the kiosk and be set in title case (upper and lower case). The type sizes are as follows:

Title: Ideal Sans Semibold, 1 1/4" cap height
Subhead: Ideal Sans Book, 5/8" cap height
Body: Ideal Sans Book, 3/8" cap height
Caption: Ideal Sans Book, 1/4" cap height

The gutter between the text boxes and margins should be a minimum of 1 1/4".

Material Specifications

Cap
 Formed 1/8" thick aluminum cap mechanically fastened to post, powder-coated M2

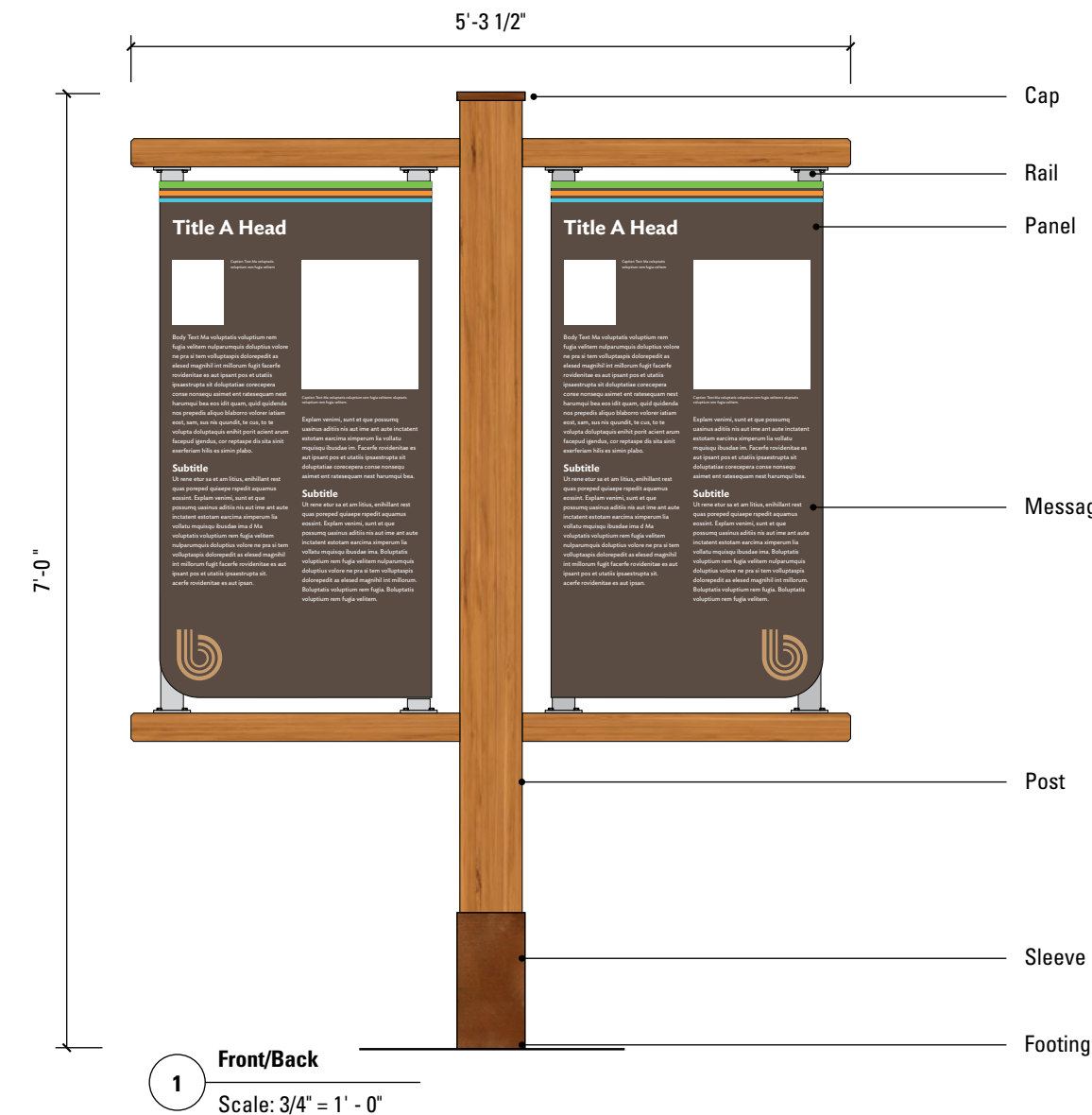
Rail
 Aluminum rail and plates mechanically fastened to posts powder-coated C10

Panel
 1" pan formed, or fabricated aluminum panel mounted to rail with angle and tamper resistant mechanical fasteners. Panel painted or powdercoated C4, with C5 Logo, and C1, C2, C3 Rules. For applications where only one side is messaged, single panel may be used with backer so panel appears solid.

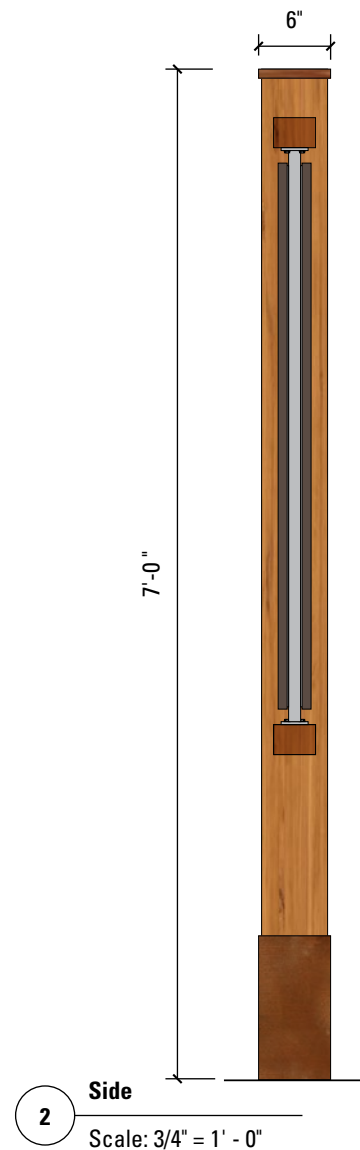
Post
 Cedar 5" x 5" post

Sleeve
 1/8" thick M2 fabricated sleeve is mechanically fastened to concrete base, above grade. Gap between concrete and sleeve should be grouted.

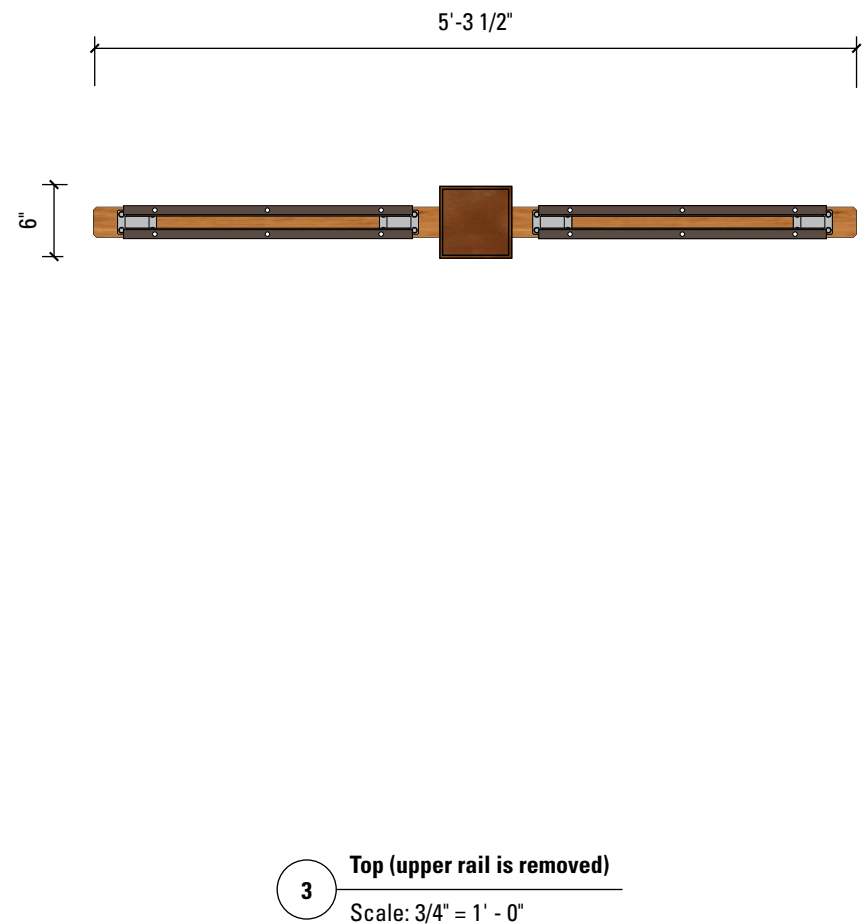
Footing
 To be engineered per local code by fabricator. Fabricator to submit engineered shop drawings and graphic submission prior to fabrication.



1 Front/Back
 Scale: 3/4" = 1' - 0"



2 Side
 Scale: 3/4" = 1' - 0"



3 Top (upper rail is removed)
 Scale: 3/4" = 1' - 0"

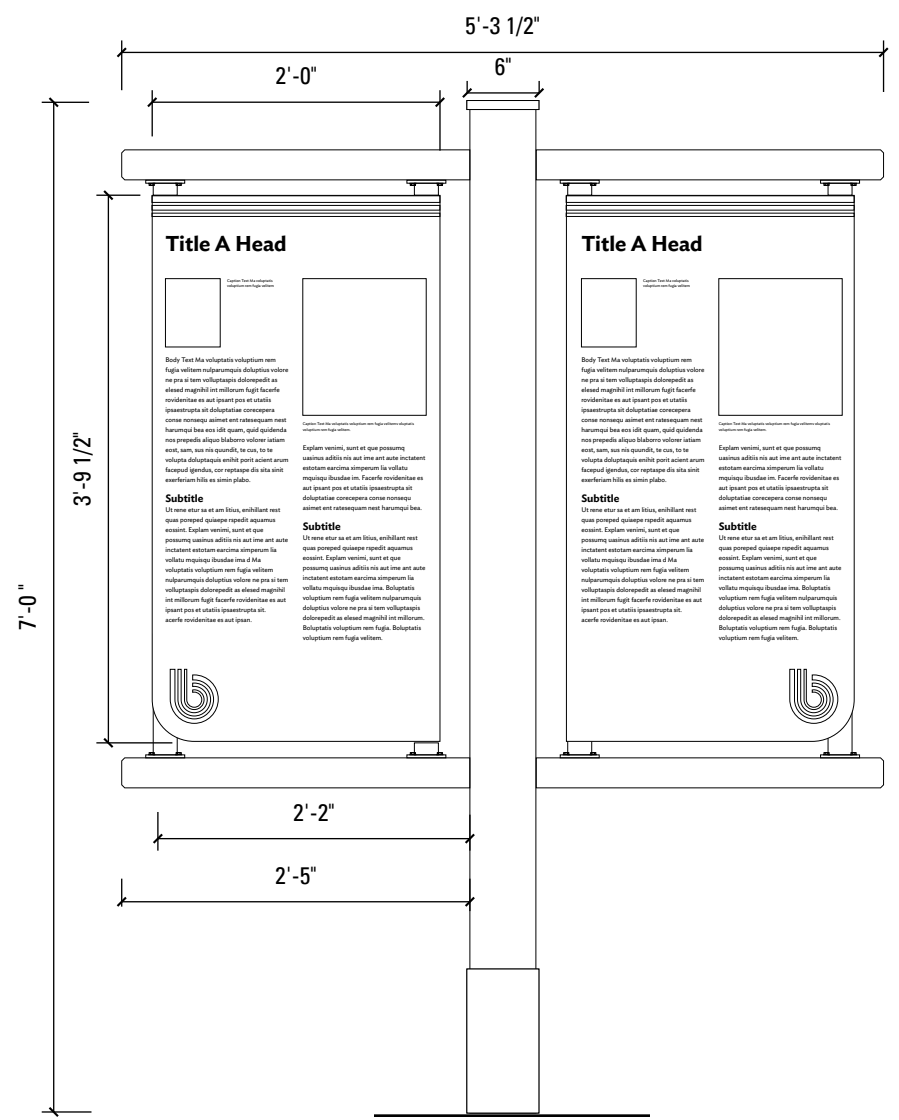
INTERPRETIVE - SINGLE POST

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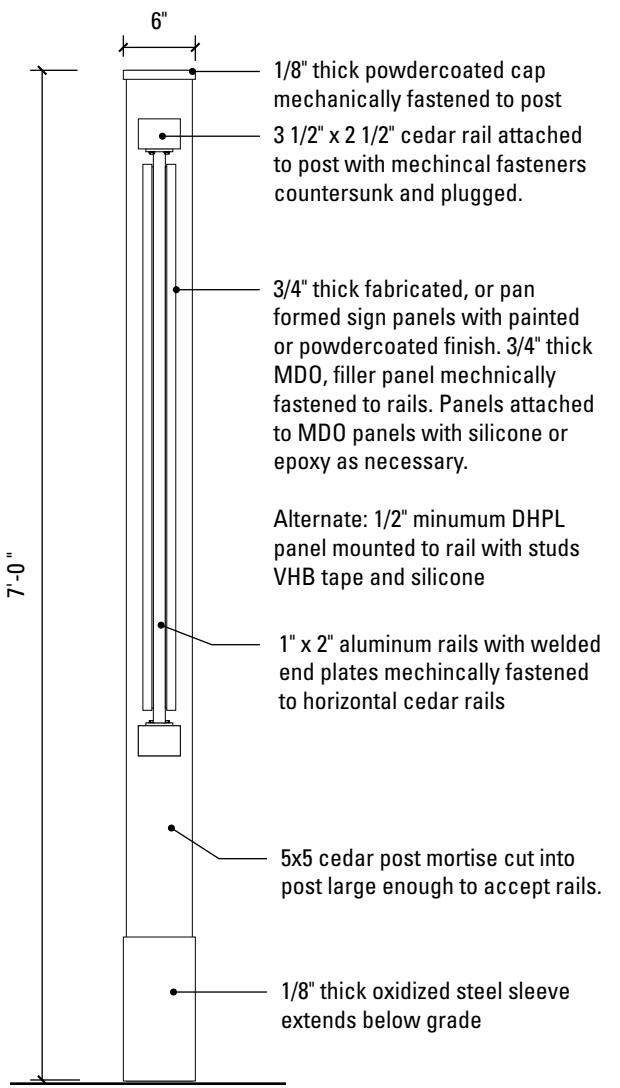
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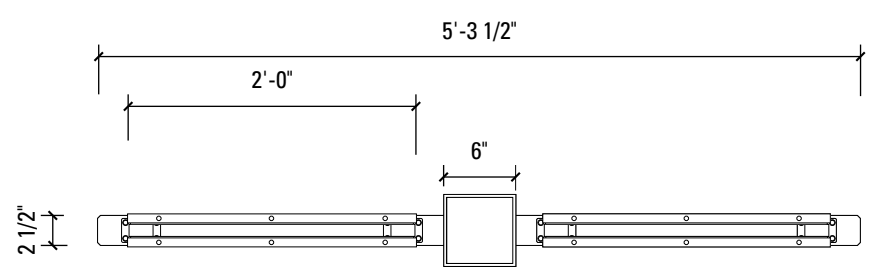




1 Front/Back
Scale: 3/4" = 1' - 0"

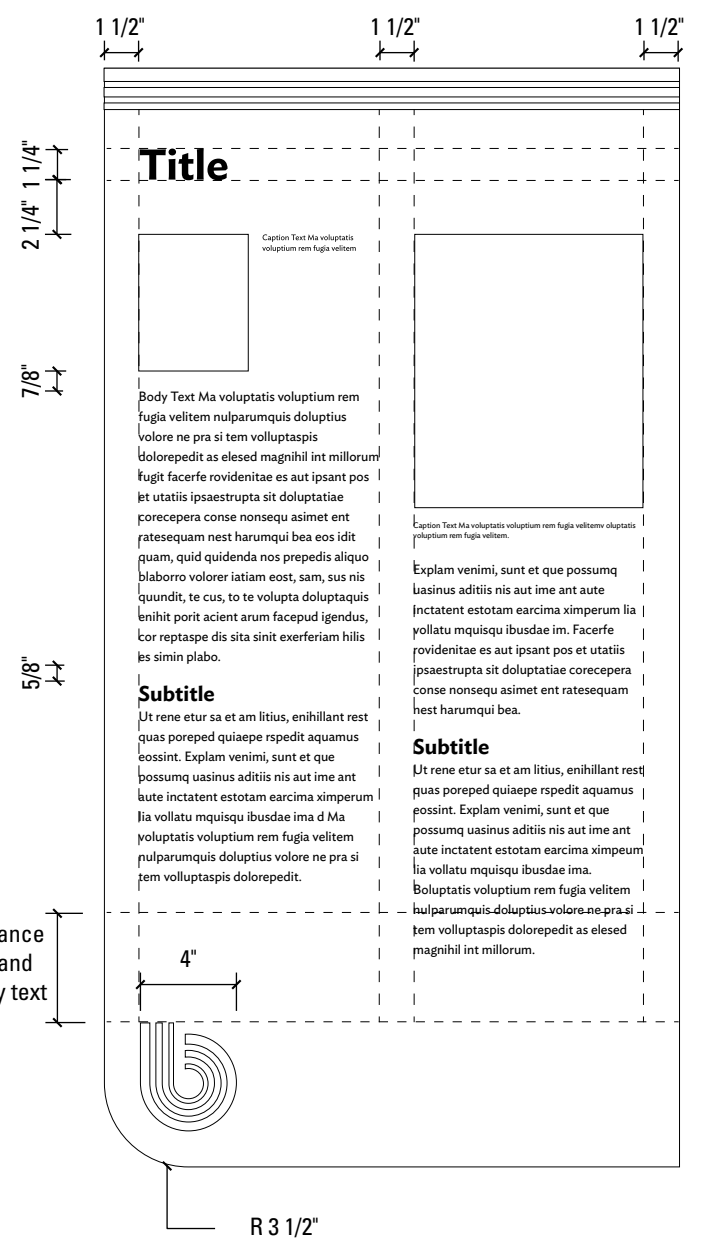


2 Side
Scale: 3/4" = 1' - 0"



4 Section
Scale: 3/4" = 1' - 0"

TYPOGRAPHY
Title: Ideal Sans Semibold, 1 1/4" cap height
Subhead: Ideal Sans Book, 5/8" cap height
Body Text: Ideal Sans Book, 3/8" cap height
Caption: Ideal Sans Book, 1/4" cap height



5 Typography Detail
Scale: 1 1/2" = 1' - 0"

5/8" from image to caption
1" from baseline of caption to cap height of the body text

INTERPRETIVE - SINGLE POST



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Sign Description

Interpretive signage is used to share interesting information about the park. This information can include historical timelines and photos, facts about plant and wildlife, and photos showing the site prior to it becoming a park.

Dual post interpretive signs may carry one or two panels.

Location Guidelines

Kiosks should be positioned with a minimum setback of 2' from the trail.

Messaging Guidelines

Header text should include park name on at least one side of the kiosk and be set in title case (upper and lower case). The type sizes are as follows:

Title: Ideal Sans Semibold, 1 1/4" cap height
Subhead: Ideal Sans Book, 5/8" cap height
Body: Ideal Sans Book, 3/8" cap height
Caption: Ideal Sans Book, 1/4" cap height

The gutter between the text boxes and margins should be a minimum of 1 1/4".

Material Specifications

Cap
 Formed 1/8" thick aluminum cap mechanically fastened to post, powder-coated M2

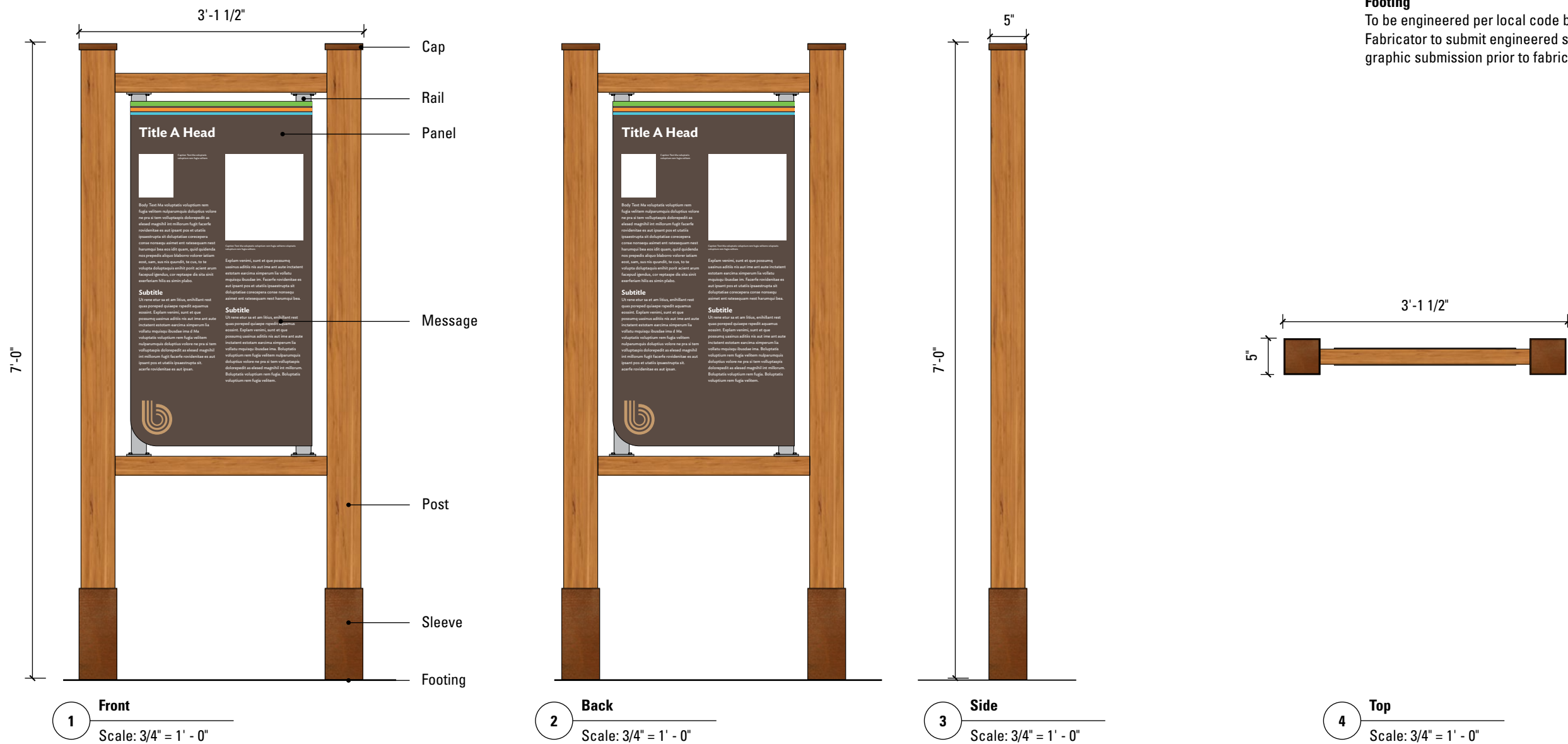
Rail
 Aluminum rail and plates mechanically fastened to posts powder-coated C10

Panel
 1" pan formed, or fabricated aluminum panel mounted to rail with angle and tamper resistant mechanical fasteners. Panel painted or powdercoated C4, with C5 Logo, and C1, C2, C3 Rules. For applications where only one side is messaged, single panel may be used with backer so panel appears solid.

Post
 Cedar 5" x 5" post

Sleeve
 1/8" thick M2 fabricated sleeve is mechanically fastened to concrete base, above grade. Gap between concrete and sleeve should be grouted.

Footing
 To be engineered per local code by fabricator. Fabricator to submit engineered shop drawings and graphic submission prior to fabrication.

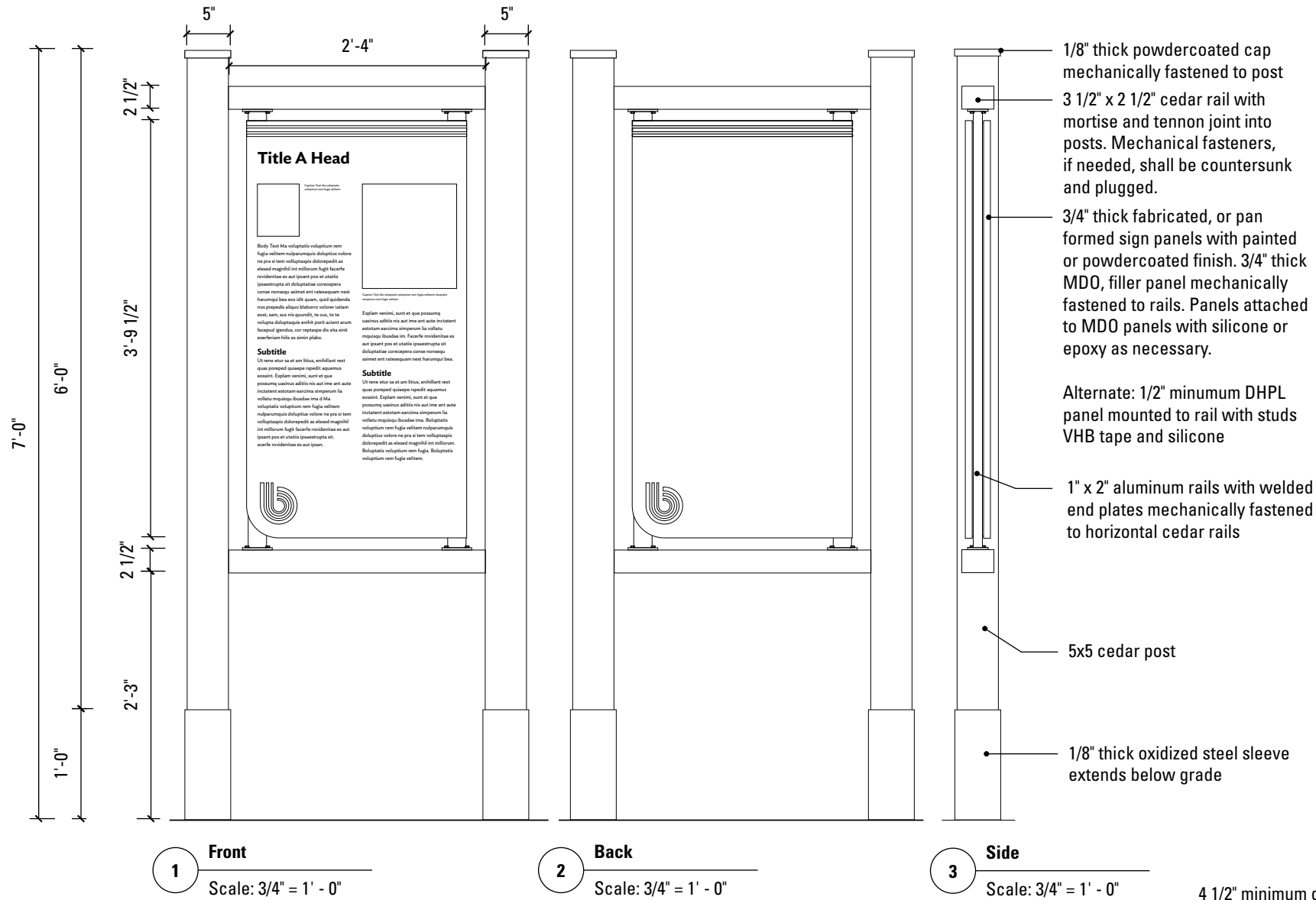


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1/8" thick powdercoated cap mechanically fastened to post

3 1/2" x 2 1/2" cedar rail with mortise and tennon joint into posts. Mechanical fasteners, if needed, shall be countersunk and plugged.

3/4" thick fabricated, or pan formed sign panels with painted or powdercoated finish. 3/4" thick MDO, filler panel mechanically fastened to rails. Panels attached to MDO panels with silicone or epoxy as necessary.

Alternate: 1/2" minimum DHPL panel mounted to rail with studs VHB tape and silicone

1" x 2" aluminum rails with welded end plates mechanically fastened to horizontal cedar rails

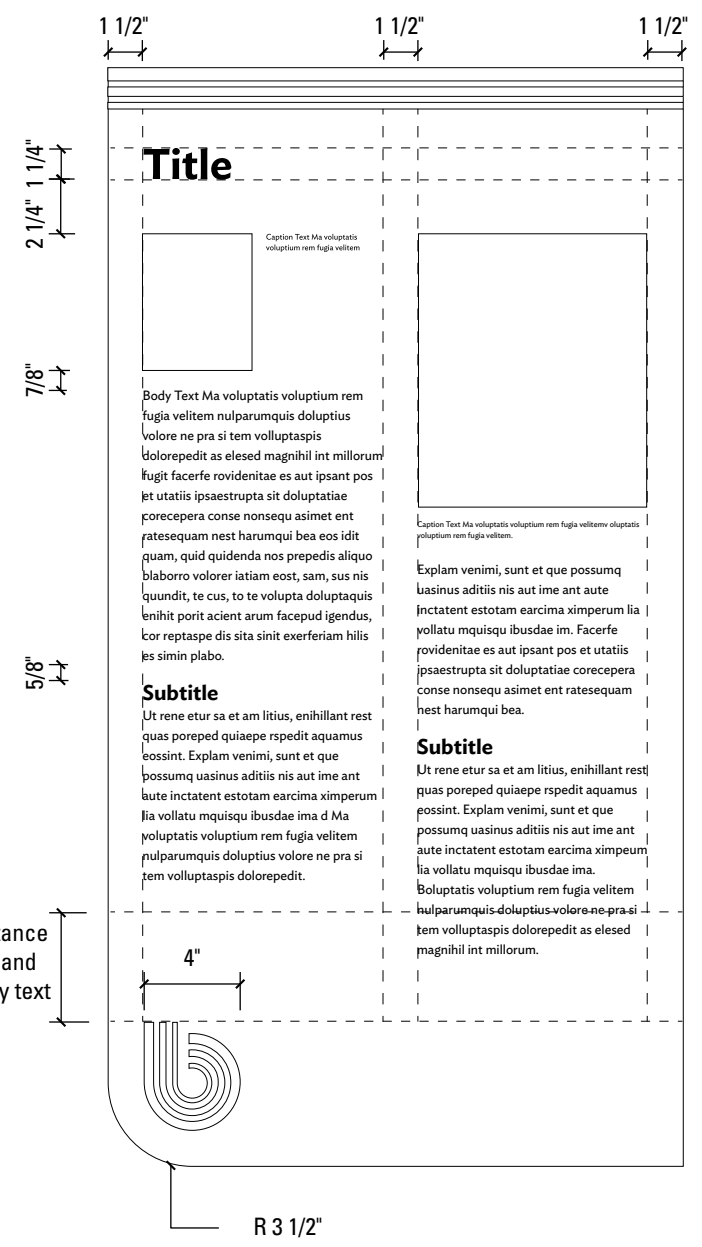
5x5 cedar post

1/8" thick oxidized steel sleeve extends below grade

4 1/2" minimum distance between 'b' mark and baseline of the body text

TYPOGRAPHY

Title: Ideal Sans Semibold, 1 1/4" cap height
 Subhead: Ideal Sans Book, 5/8" cap height
 Body Text: Ideal Sans Book, 3/8" cap height
 Caption: Ideal Sans Book, 1/4" cap height



5 Typography Detail
Scale: 1 1/2" = 1' - 0"

5/8" from image to caption
 1" from baseline of caption to cap height of the body text

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Sign Description

Map kiosks are used in lieu of interpretive kiosks, containing local and regional maps of a park or series of parks. These elements can be used either on trails, or at the start of both bike and hiking trails. The messaging should contain the name of the park on the front panel above the map, and either park name or trail name on the return. This sign type when located perpendicular to the trail may have a second panel applied on the other side. They should be located a minimum of 2'-0" from the path of travel, and located within a clearing for users to view.

Maps and graphics shown are conceptual only, and will be developed with BPRW and a selected vendor before implementation.

Map kiosks can be single or double sided depending on location and programming preferences.

Material Specifications

Cap

Formed 1/8" thick aluminum cap mechanically fastened to post, powder-coated M2

Panel

1/4" thick break-formed aluminum panel painted or powdercoated C4, with C5 Logo, and C1, C2, C3 Rules. Attached to mounting hardware with tamper resistant mechanical fasteners.

Message

Graphics to be directly printed or 4 color powdercoat imaged on the panels

Post

(4) four interconnected Cedar 6x6 post, or 5.5" x 1' - 10" cedar slab. Posts should be clear grade and virtually free of imperfections.

Sleeve

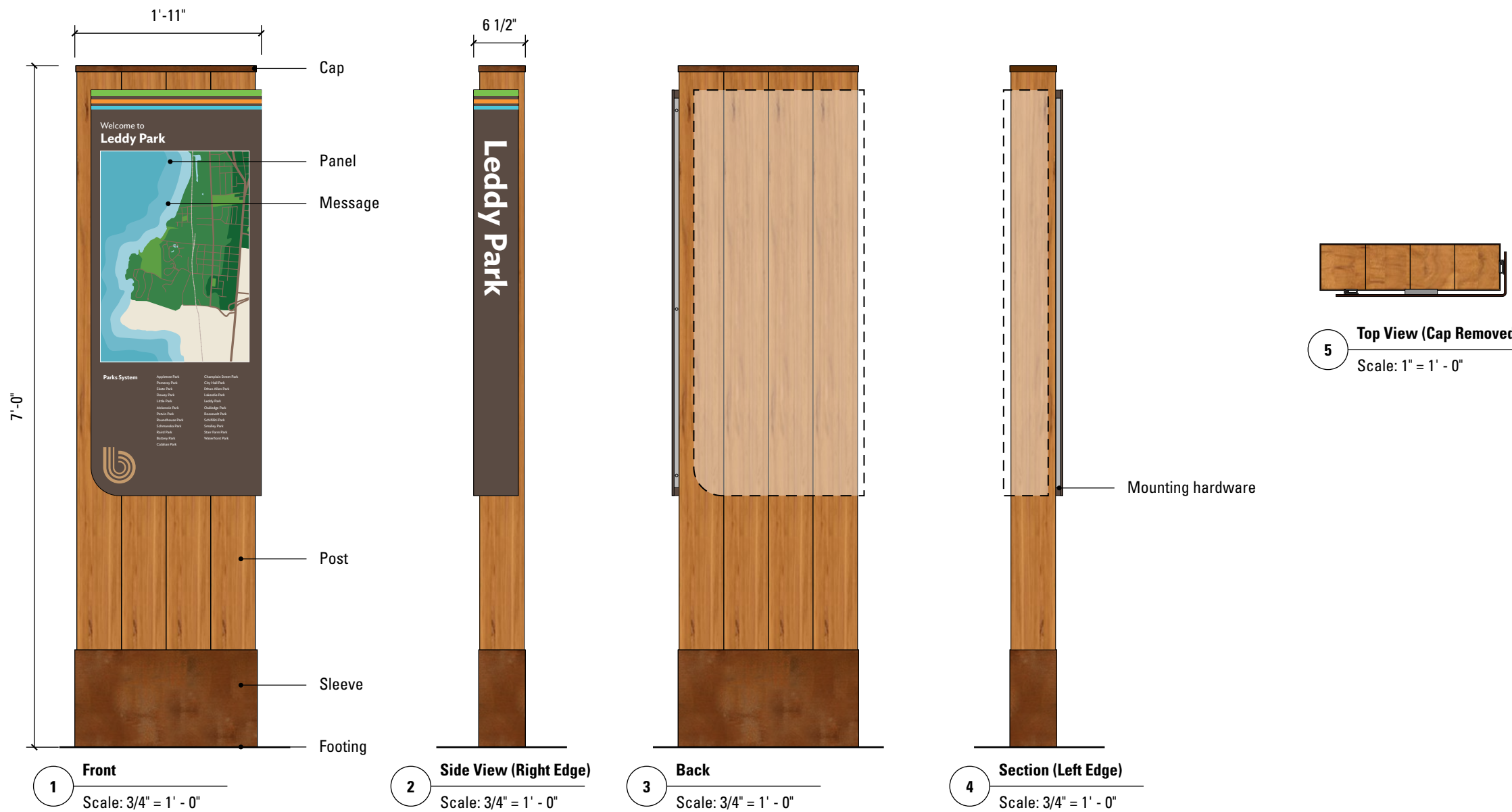
1/8" thick M2 fabricated sleeve is mechanically fastened to concrete base, above grade. Gap between concrete and sleeve should be grouted.

Mounting Hardware

3/4" x 1/8" aluminum angle welded, bonded, or mechanically fastened to back of panel. Mechanical fasteners through angle into aluminum tube screwed to post. All fasteners to be tamper resistant.

Footing

To be engineered per local code by fabricator. Fabricator to submit engineered shop drawings and graphic submission prior to fabrication.

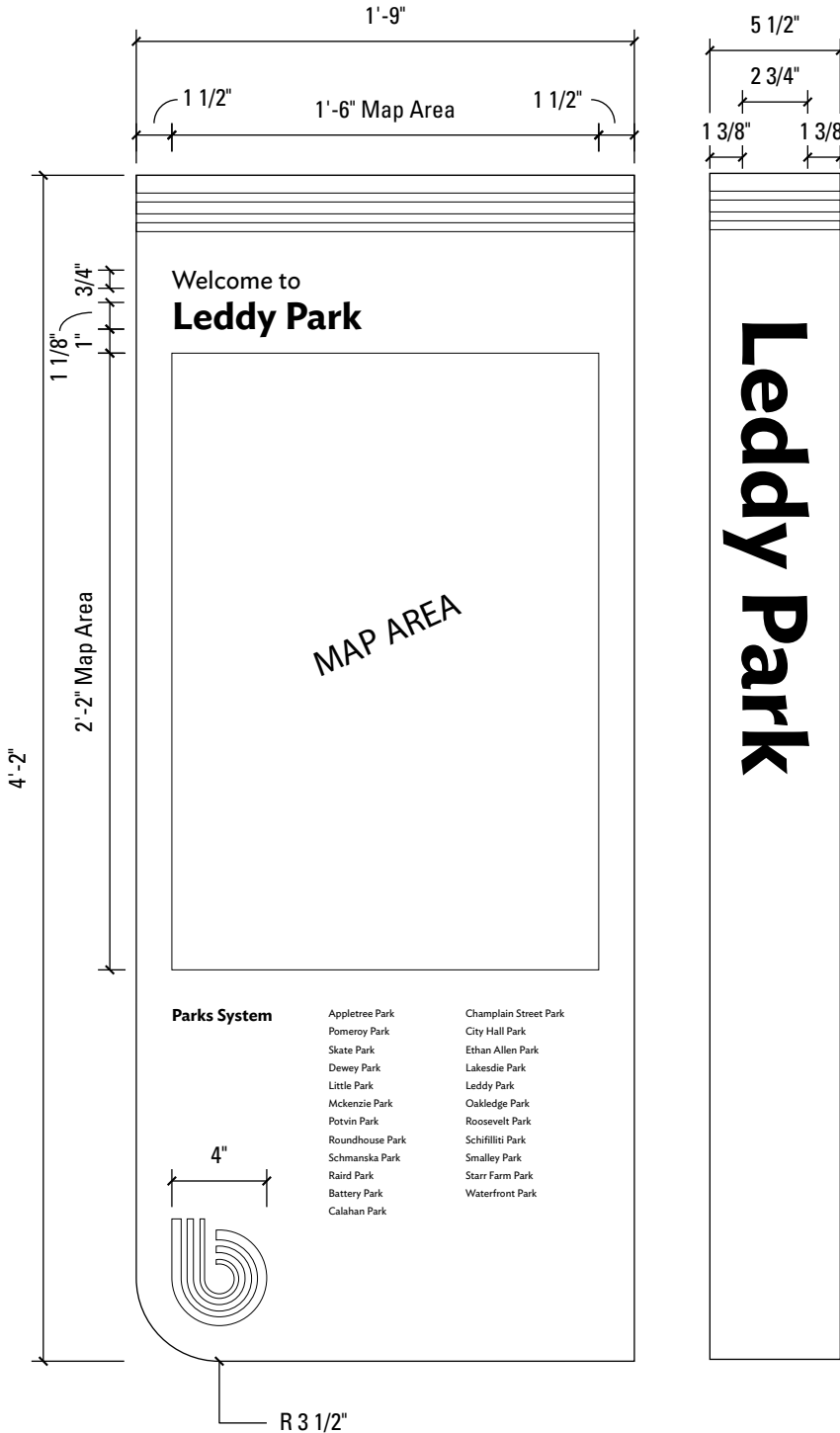
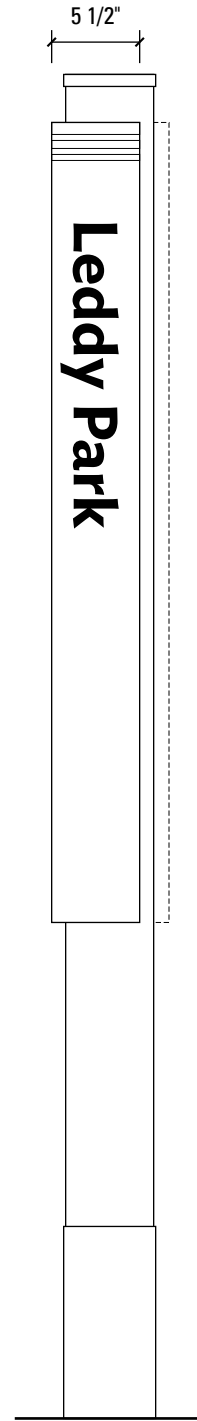
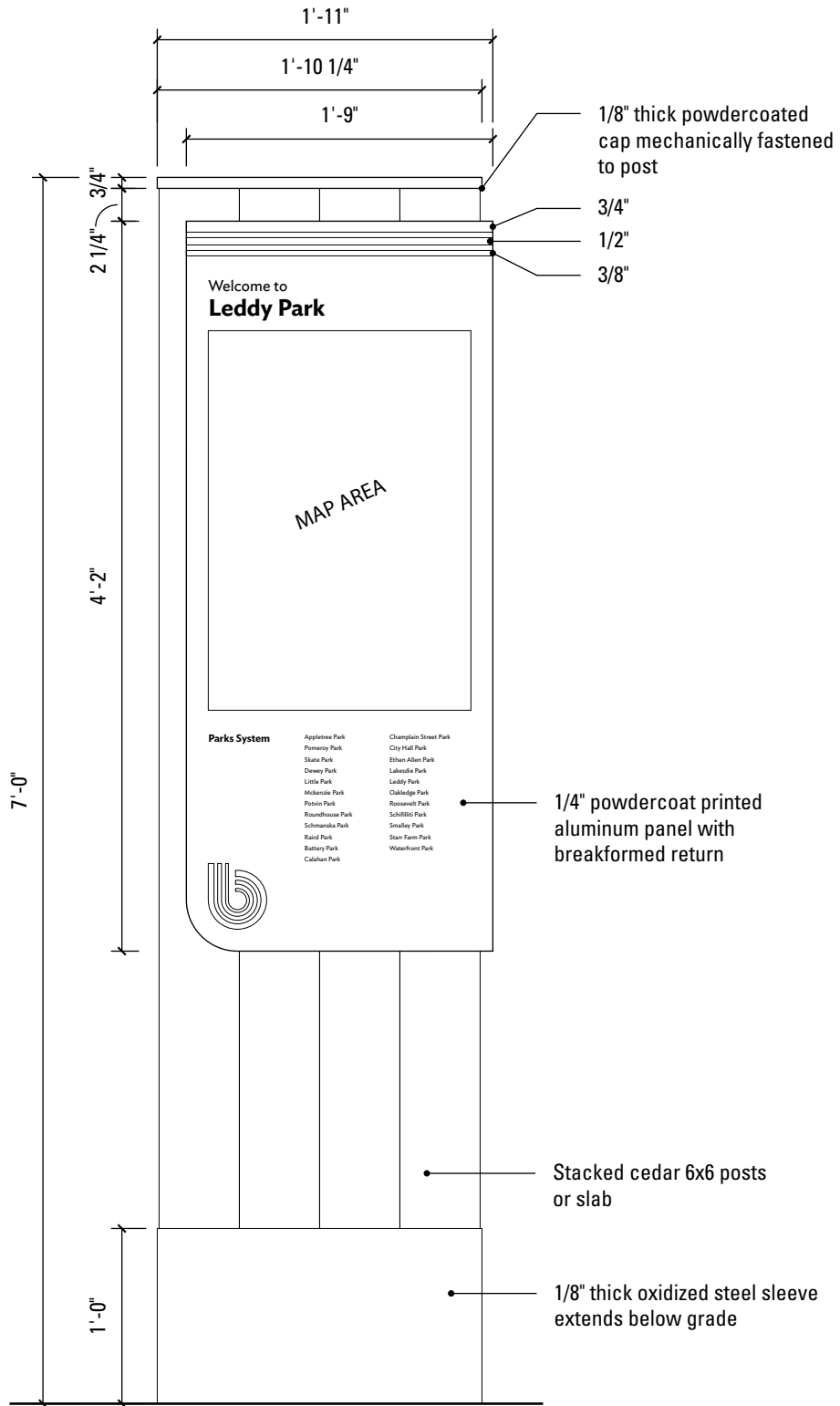
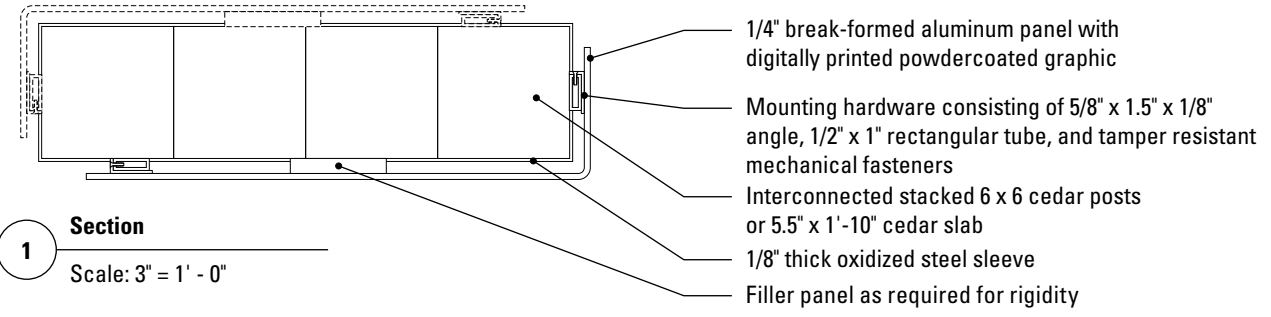


MAP KIOSK

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MAP KIOSK



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Sign Description

Power coated aluminum angle wrapping (2) two sides of cedar post with metal sleeve. Panel messaged with applied vinyl or mask and spray BPRW 'b' mark, park name, and brand stripes. Metal sleeve protects the base of the post and extends below grade and metal caps protect the top of the post. Rules and regulations signs should be used in urban parks to identify amenities and communicate any restrictions of use.

Location Guidelines

Rules and regulations signage should be located at entries to amenities or located at prominent viewpoints while using the amenity.

Messaging Guidelines

Amenity name should be title case and include the location above it.

Material Specifications

Cap

Formed 1/8" thick aluminum cap mechanically fastened to post, powder-coated M2

Panel

1/4" thick break-formed aluminum panel painted or powdercoated C4, with C5 Logo, and C1, C2, C3 Rules. Attached to mounting hardware with tamper resistant mechanical fasteners.

Message

Graphics to be directly printed or 4 color powdercoat imaged on the panels

Post

(4) four interconnected Cedar 6x6 post, or 5.5" x 1' - 10" cedar slab. Posts should be clear grade and virtually free of imperfections.

Sleeve

1/8" thick M2 fabricated sleeve is mechanically fastened to concrete base, above grade. Gap between concrete and sleeve should be grouted.

Mounting Hardware

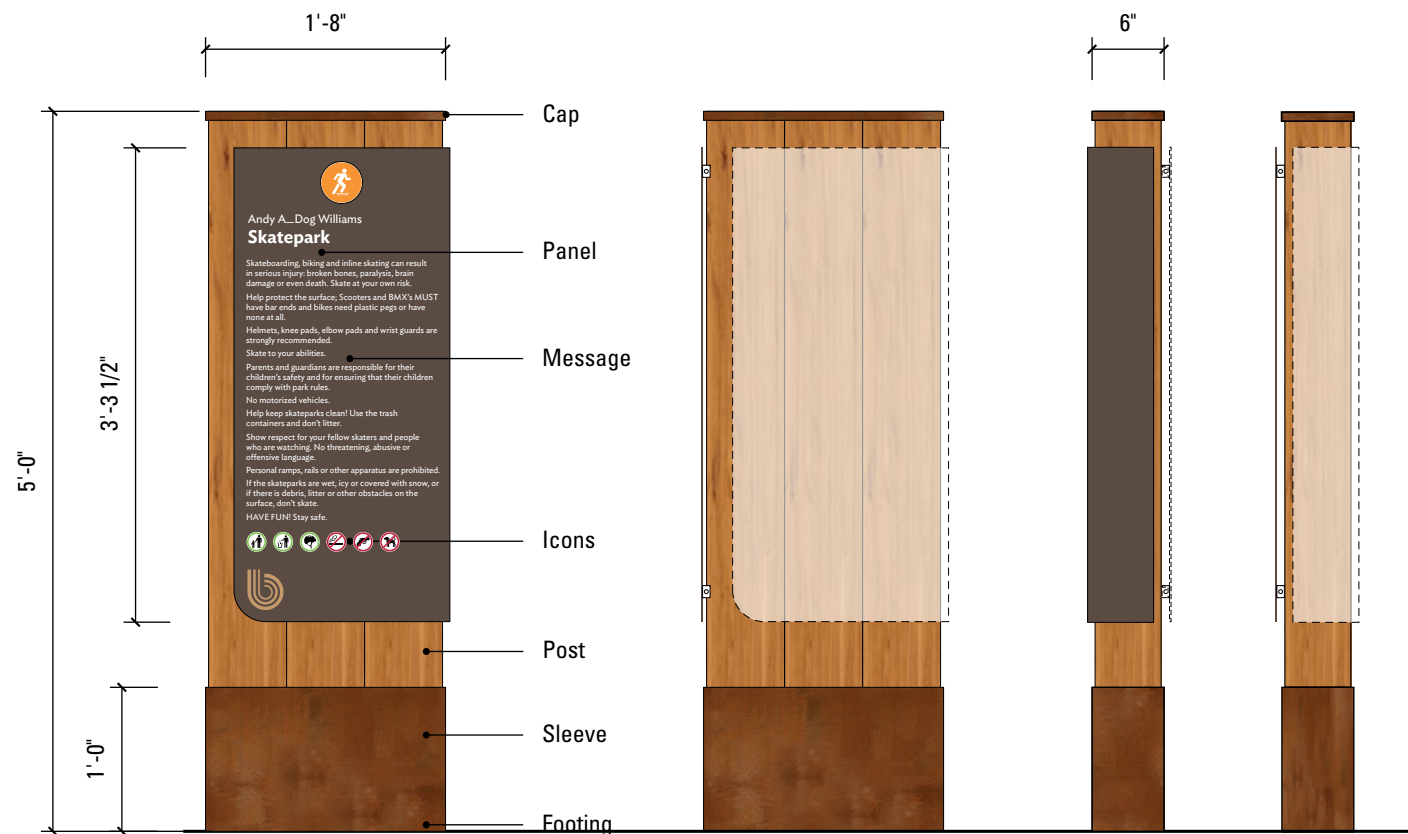
3/4" x 1/8 aluminum angle welded, bonded, or mechanically fastened to back of panel. Mechanical fasteners through angle into aluminum tube screwed to post. All fasteners to be tamper resistant.

Footing

To be engineered per local code by fabricator. Fabricator to submit engineered shop drawings and graphic submission prior to fabrication.

Icons and Logo

Direct printed on C6 Vinyl, or Die Cut multi layered vinyl film where applicable.



1 **Front**
Scale: 3/4" = 1' - 0"

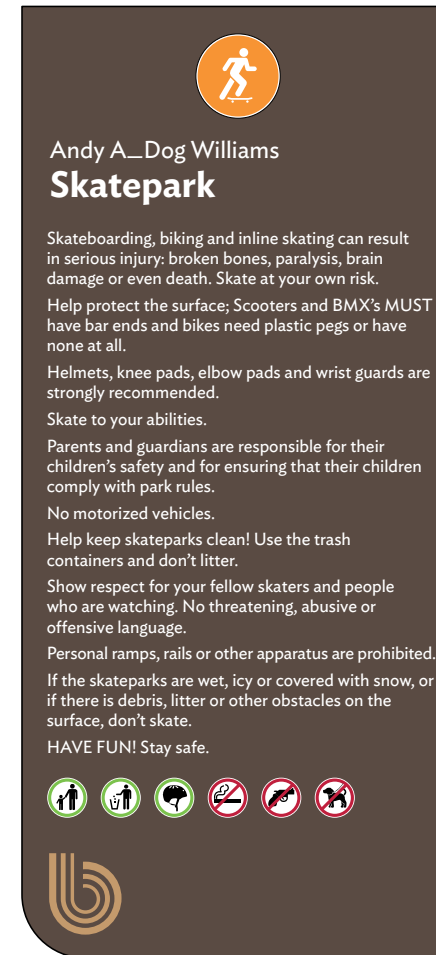
2 **Back**
Scale: 3/4" = 1' - 0"

3 **Side (Wrap)**
Scale: 3/4" = 1' - 0"

4 **Side**
Scale: 3/4" = 1' - 0"

5 **Top (Cap removed)**
Scale: 3/4" = 1' - 0"

6 **Typography Detail**
Scale: 1 1/2" = 1' - 0"



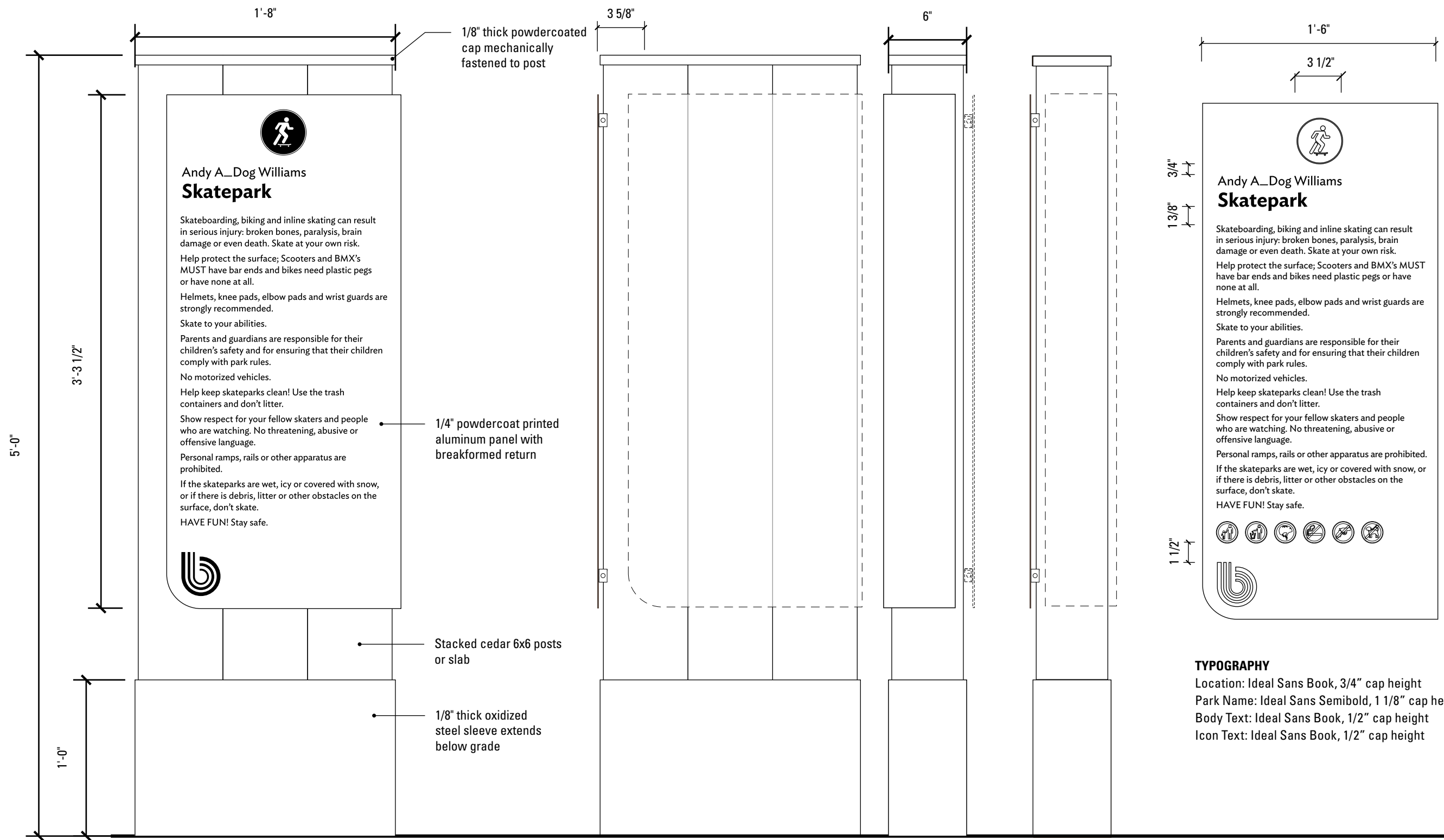
RULES AND REGULATIONS - POST

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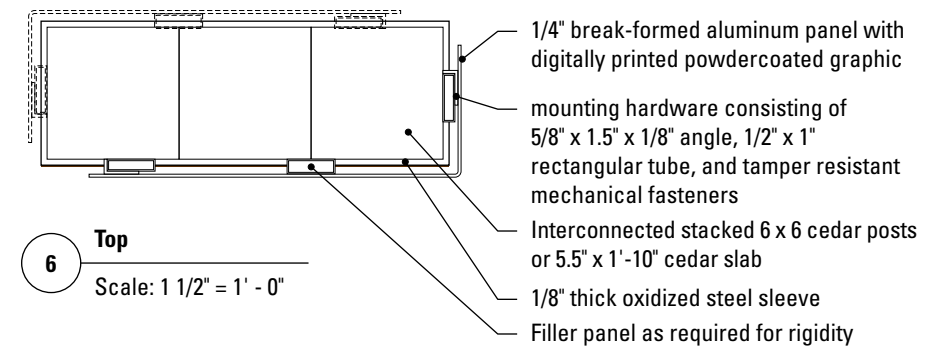
1 Front
Scale: 1 1/2" = 1' - 0"

2 Back
Scale: 1 1/2" = 1' - 0"

3 Side (Wrap)
Scale: 1 1/2" = 1' - 0"

4 Side
Scale: 1 1/2" = 1' - 0"

5 Typography Detail
Scale: 1 1/2" = 1' - 0"



6 Top
Scale: 1 1/2" = 1' - 0"

- 1/4" break-formed aluminum panel with digitally printed powdercoated graphic
- mounting hardware consisting of 5/8" x 1.5" x 1/8" angle, 1/2" x 1" rectangular tube, and tamper resistant mechanical fasteners
- Interconnected stacked 6 x 6 cedar posts or 5.5" x 1'-10" cedar slab
- 1/8" thick oxidized steel sleeve
- Filler panel as required for rigidity

TYPOGRAPHY
 Location: Ideal Sans Book, 3/4" cap height
 Park Name: Ideal Sans Semibold, 1 1/8" cap height
 Body Text: Ideal Sans Book, 1/2" cap height
 Icon Text: Ideal Sans Book, 1/2" cap height

RULES AND REGULATIONS - POST



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Sign Description

Rule and Regulation signage is incorporated throughout the community at points of access to Community Gardens, Dog Parks, Skate Parks and other points of Public Use of BPRW and City Property.

Messaging and layout will be provided by BPRW or designer prior to fabrication.

Rules and regulations signage should be located at entries to amenities or located at prominent viewpoints while using the amenity.

Material Specifications

Panel

1/2" pan formed, or fabricated aluminum panel mounted to rail with angle and tamper resistant mechanical fasteners. Panel painted or powdercoated C4, and C1, C2, C3 logo.

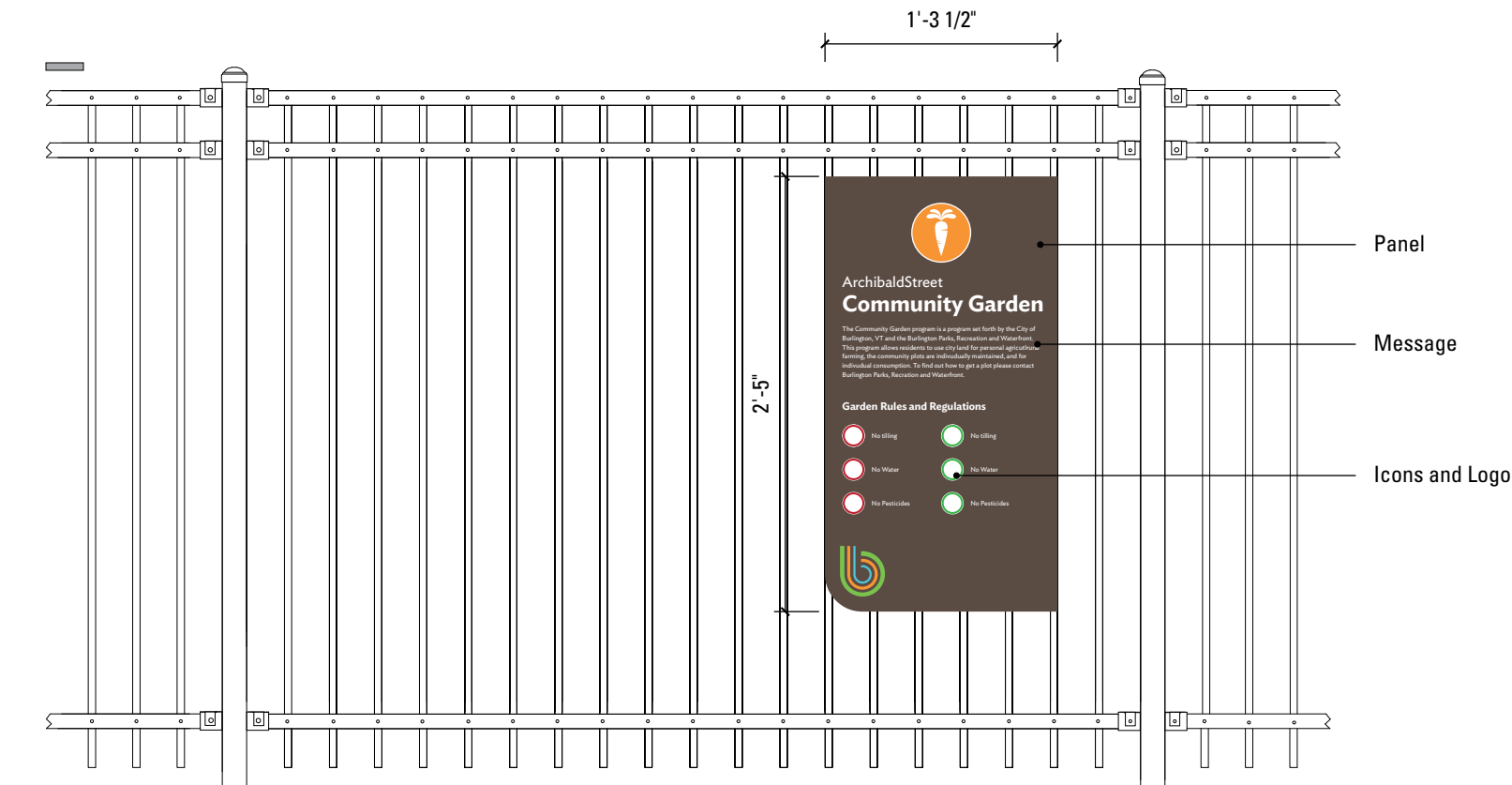
Alternate a 1/4" thick solid aluminum panel may be implemented for this sign type. Mechanical fasteners must be tamper resistant, and not penetrate the sign face. All hardware must be painted to match sign base color C1.

Message

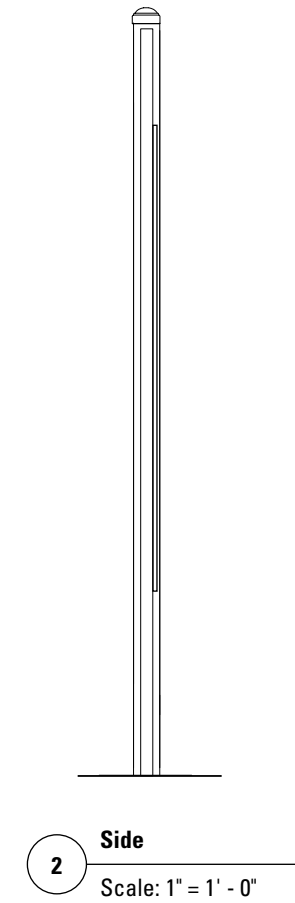
Applied C6 Vinyl Set in various program fonts minimum size to be 3/8" Cap Height

Icons and Logo

Direct printed on C6 Vinyl, or Die Cut multi layered vinyl film where applicable.



1 **Panel**
Scale: 1" = 1' - 0"



2 **Side**
Scale: 1" = 1' - 0"

RULES AND REGULATIONS - FENCE MOUNTED

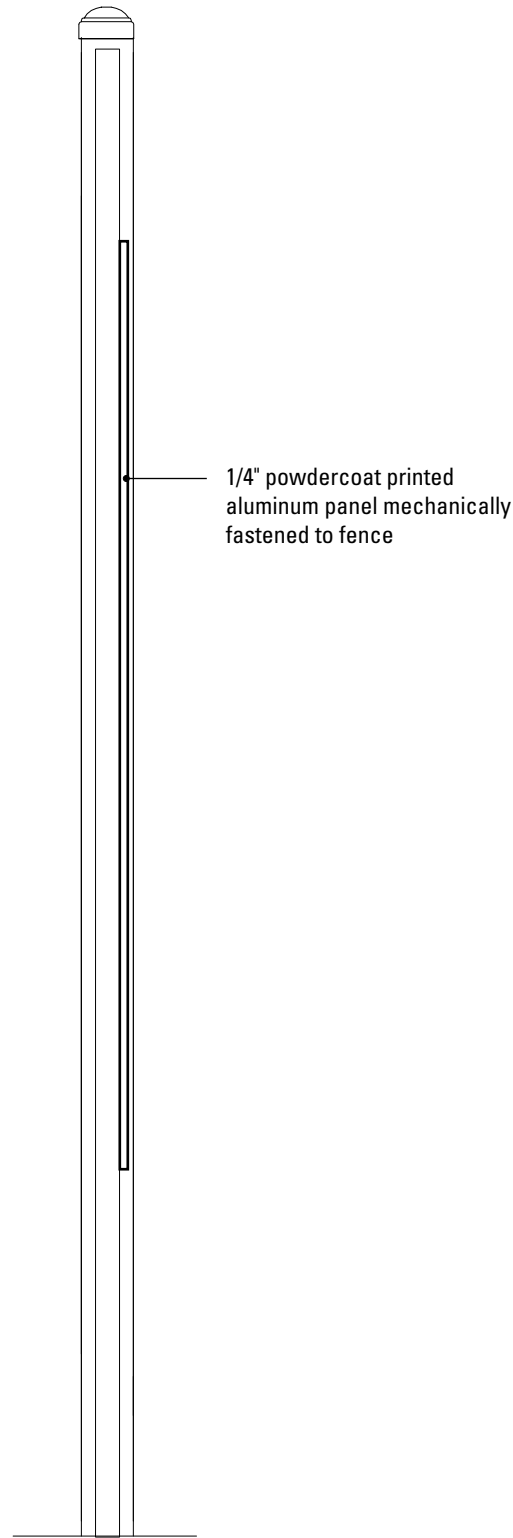


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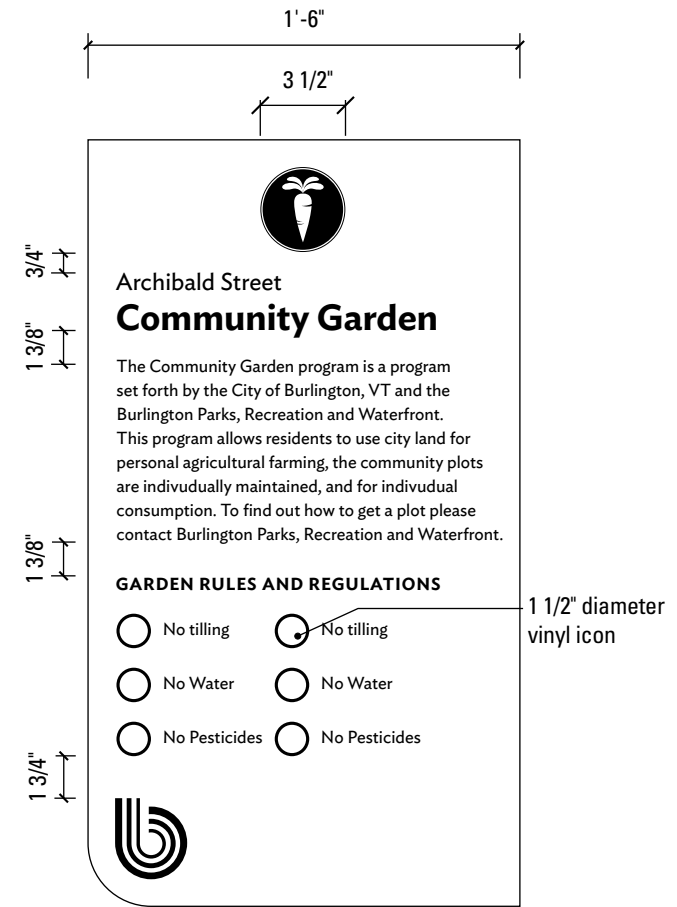
DESIGN INTENT ONLY - NOT FOR CONSTRUCTION



1 Panel Detail
Scale: 2" = 1' - 0"



2 Side
Scale: 2" = 1' - 0"



TYPOGRAPHY

Location: Ideal Sans Book, 3/4" cap height
 Park Name: Ideal Sans Semibold, 1 1/8" cap height
 Body Text: Ideal Sans Book, 1/2" cap height
 Icon Text: Ideal Sans Book, 1/2" cap height

3 Typography Detail
Scale: 1 1/2" = 1' - 0"

RULES AND REGULATIONS - FENCE MOUNTED



**BURLINGTON
PARKS
RECREATION
WATERFRONT**

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Sign Description

Sandwich board signs are a way for parks to highlight events and share important and current information, including concerts, farmers' markets, and cancellations due to inclement weather.

Location

The sandwich board signs should be positioned at a park entrance or next to a trailhead.

Material Specifications

Panel

1/2" pan formed, or fabricated aluminum panel mounted to wood sandwich board sign. Panel painted with chalkboard paint. Screenprinted logo matching C1, C2, C3. Board title screenprinted C6.

Mechanical fasteners must be tamper resistant, and not penetrate the sign face. All hardware must be painted to match color C1.

Message

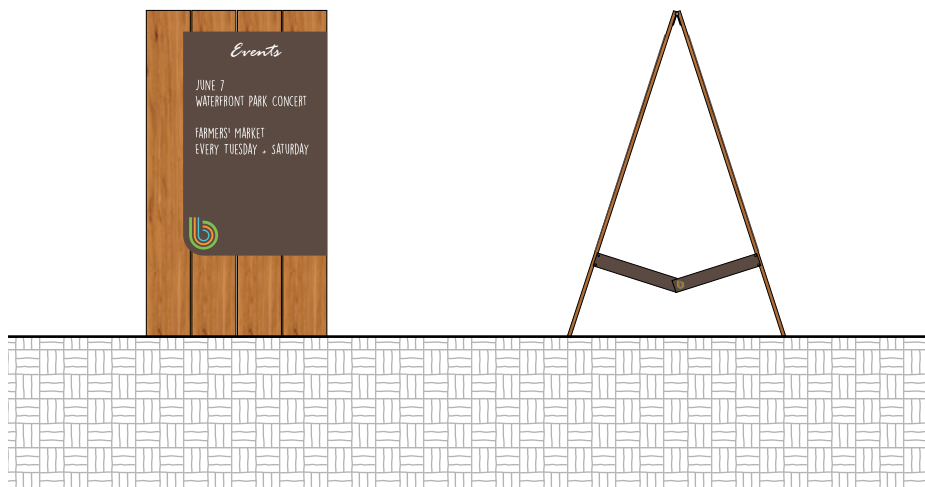
Board title can be screenprinted.

Icons and Logo

Direct printed on C6 Vinyl, or Die Cut multi layered vinyl film where applicable.

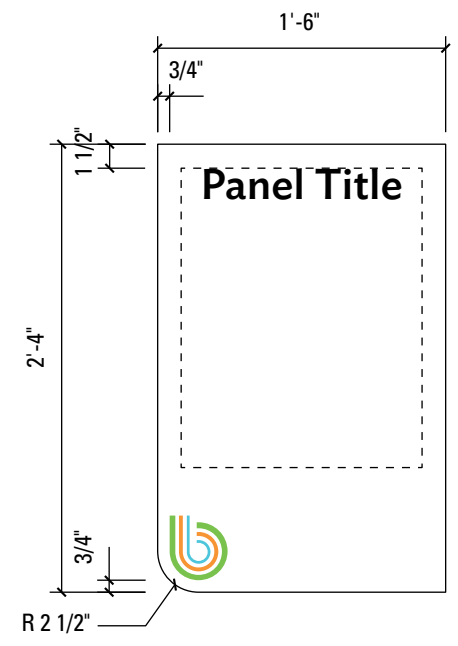
Pre-made Model

An off-the-shelf a-frame sandwich board sign can be purchased here: <http://www.webstaurantstore.com/american-metalcraft-securit-sbdb85-a-frame-sign-board-22-x-34-natural-finish/124SBDB85%20%20%20NATURAL.html>

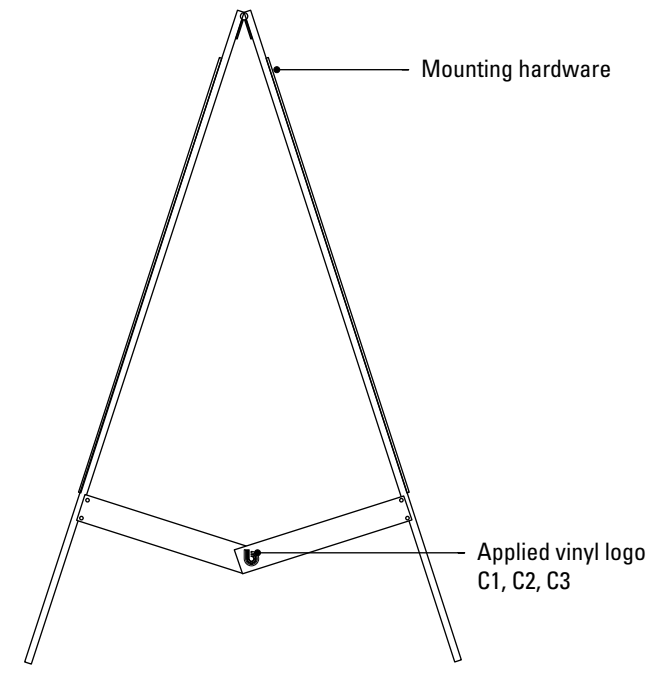


1 Front and Back
Scale: 1/2" = 1' - 0"

2 Side
Scale: 1/2" = 1' - 0"



3 Panel Detail
Scale: 1" = 1' - 0"



4 Side
Scale: 1" = 1' - 0"

SANDWICH BOARD SIGN

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Sign Description

Parking Lot identification signs are to be used at entries to BPRW owned parking lots. These signs should only be used for parking areas that are outside of a park, or to identify restrictions of the individual lots. Information contained on these signs should be limited to name lot name, and any restrictions. Rates, and fine grain type information should be located at meters or pay kiosks.

Material Specifications

Cap

Formed 1/8" thick aluminum cap mechanically fastened to post, powder-coated M2

Panel

1/4" thick break-formed aluminum panel painted or powdercoated C4, with C1, C2, C3 Logos, C8 Parking Disk and C6 applied vinyl graphics. Regulation symbols to be screen printed or direct printed on C6 vinyl. Attached to mounting hardware with tamper resistant mechanical fasteners.

Message

Applied vinyl graphics multiple colors

Post

(4) four interconnected Cedar 6x6 post, or 5.5" x 1' - 10" cedar slab. Posts should be clear grade and virtually free of imperfections.

Sleeve

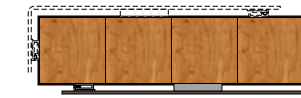
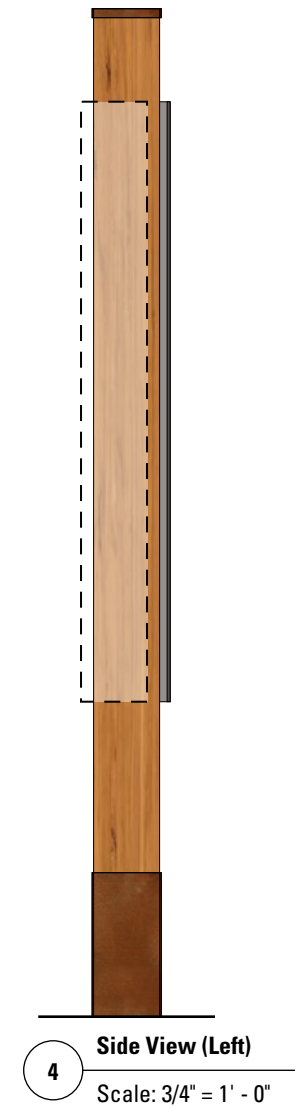
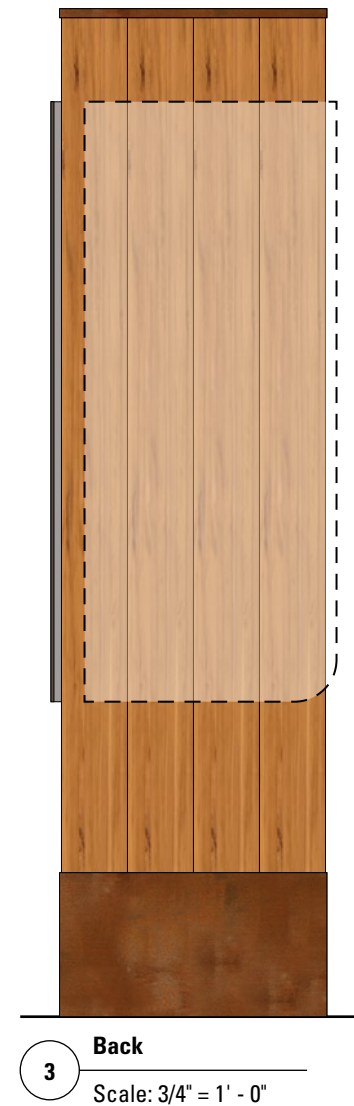
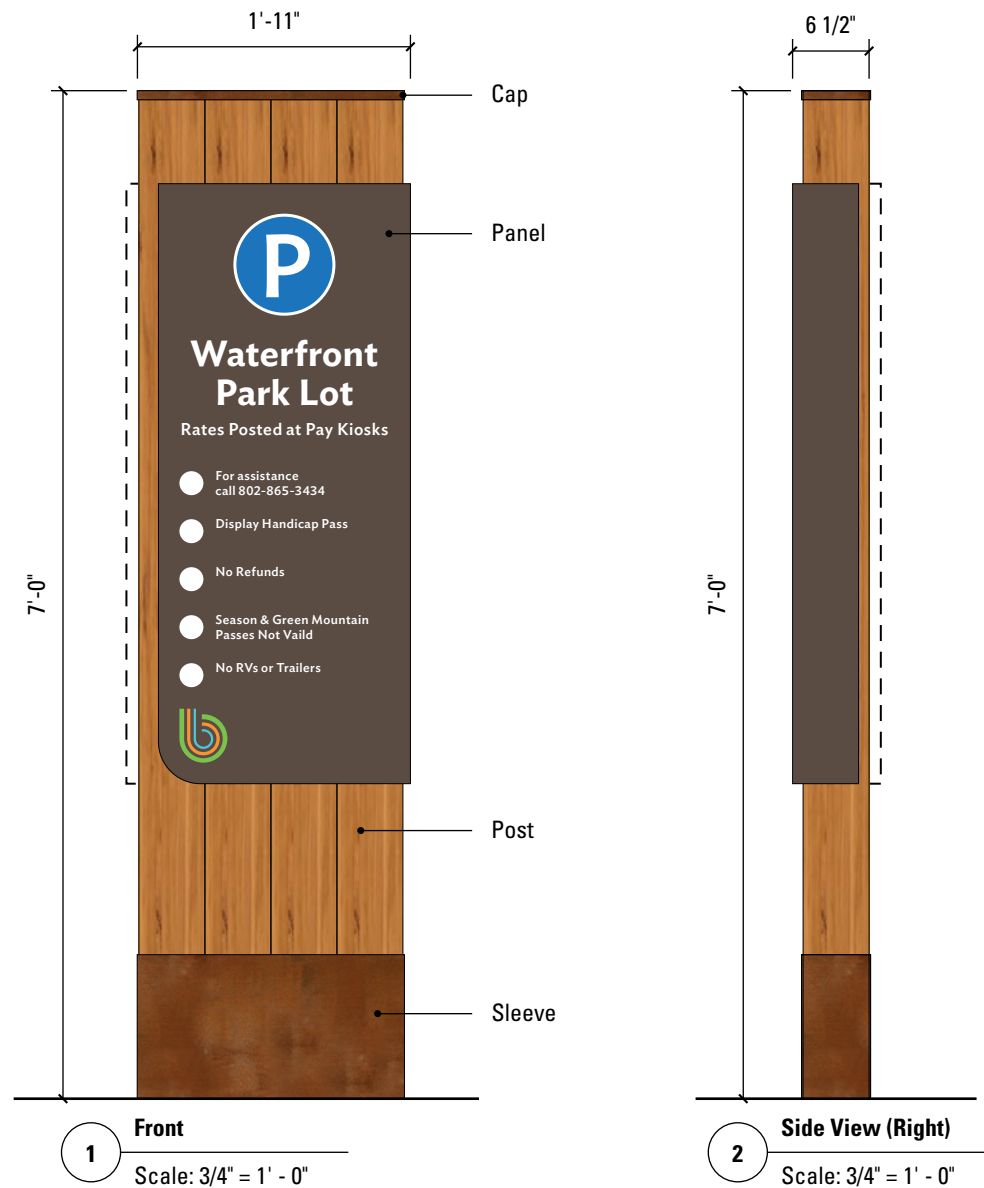
1/8" thick M2 fabricated sleeve is mechanically fastened to concrete base, above grade. Gap between concrete and sleeve should be grouted.

Mounting Hardware

3/4" x 1/8" aluminum angle welded, bonded, or mechanically fastened to back of panel. Mechanical fasteners through angle into aluminum tube screwed to post. All fasteners to be tamper resistant.

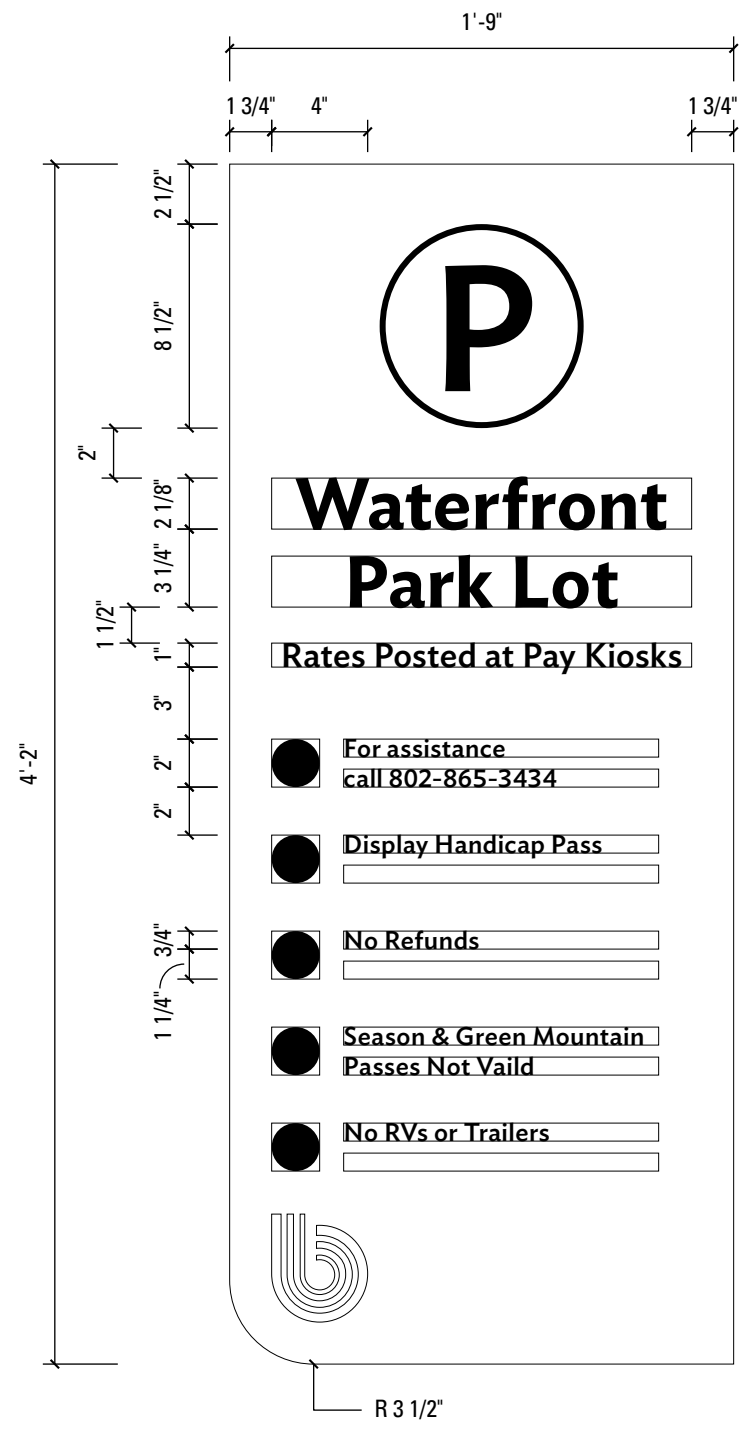
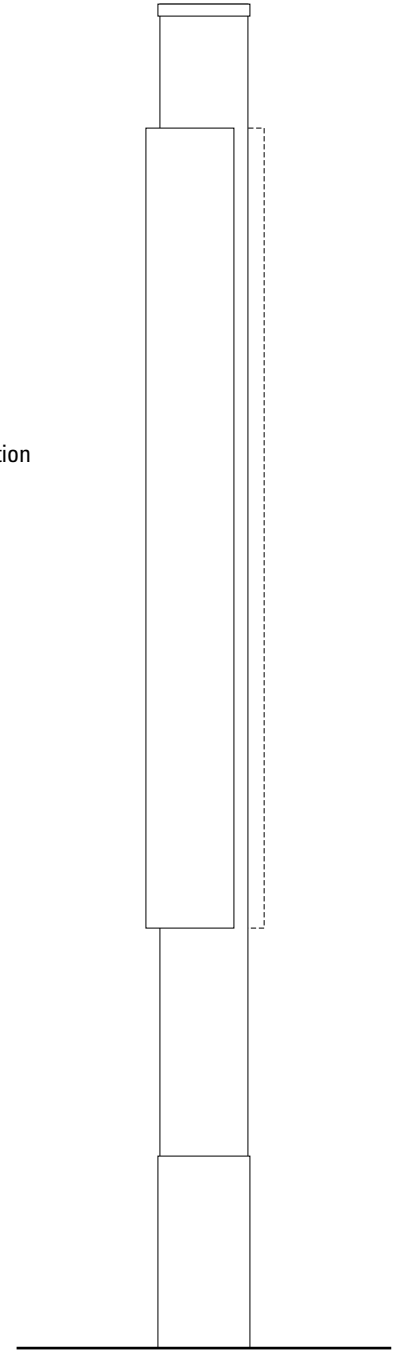
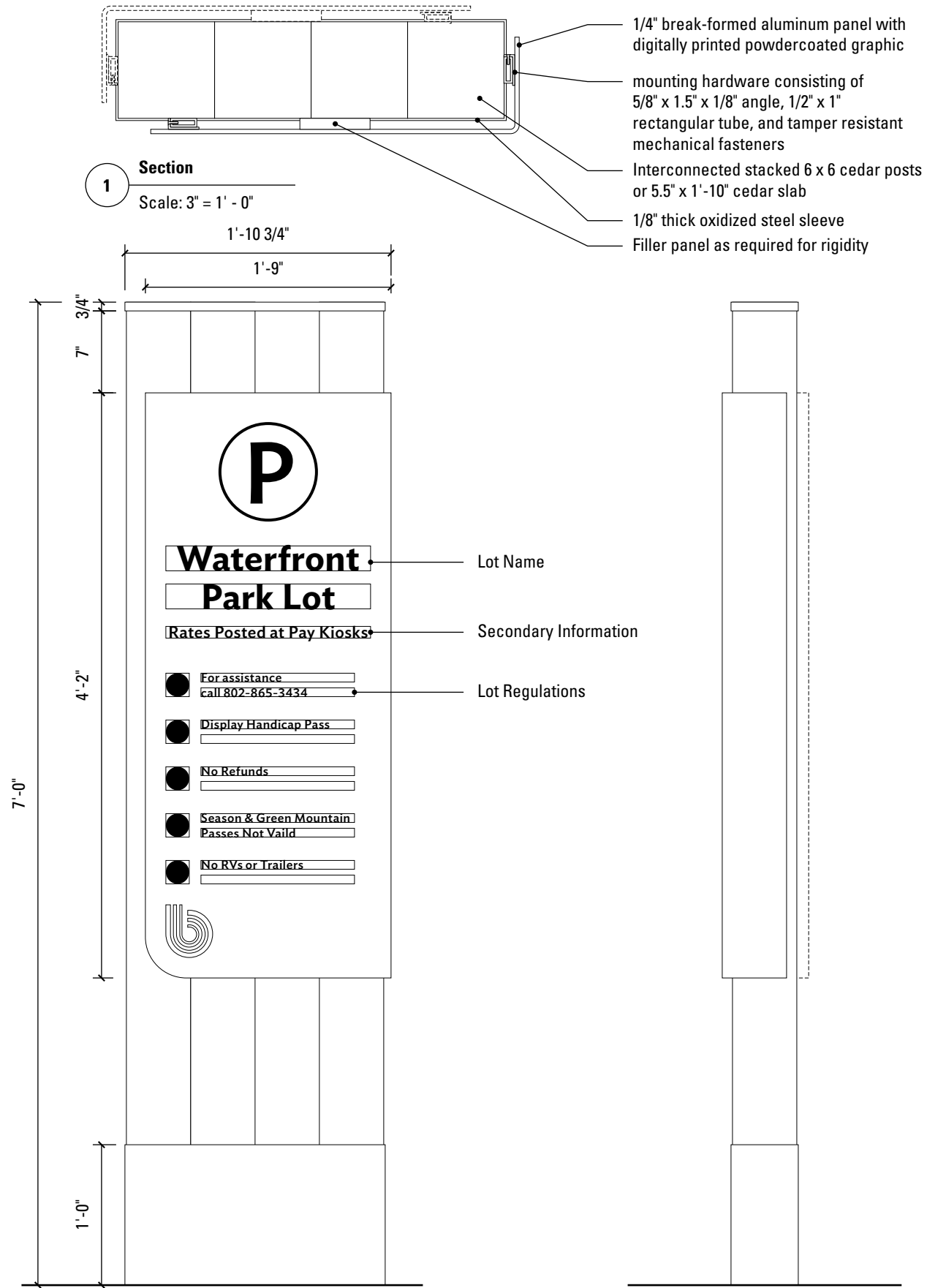
Footing

To be engineered per local code by fabricator. Fabricator to submit engineered shop drawings and graphic submission prior to fabrication.



4 Top View (Cap Removed)
Scale: 3/4" = 1' - 0"

PARKING: LOT IDENTIFICATION



PARKING: LOT IDENTIFICATION



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Sign Description

Pay Kiosk Directional signage shall be installed at lots that use pay kiosks. These signs can be mounted to light posts via straps and brackets mounted from behind, or applied directly to walls using stud welded studs, VHB tape and epoxy.

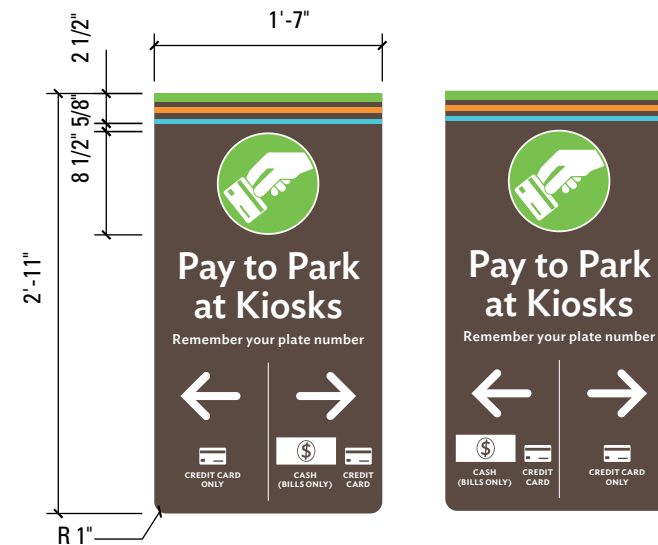
Material Specifications

Panel:
1/8" aluminum panel powdercoated or painted to match C4. Applied vinyl stripes C1, C2, C3 and applied vinyl text and graphics C6. Pay Icon C1/C6.

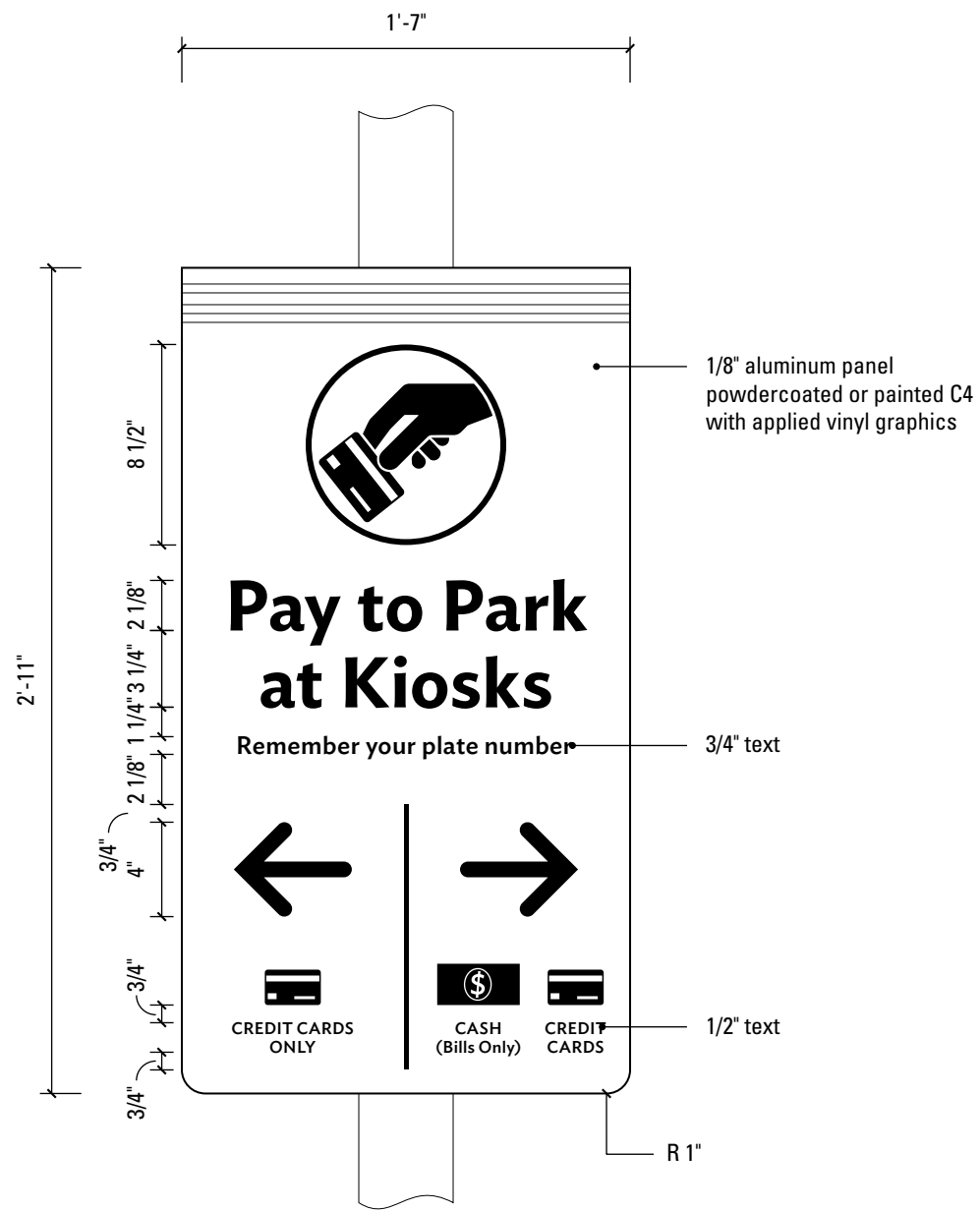
Mounting Hardware
Aluminum channel welded to back side of panel for light post applications, or blind studs, VHB tape and epoxy as needed.



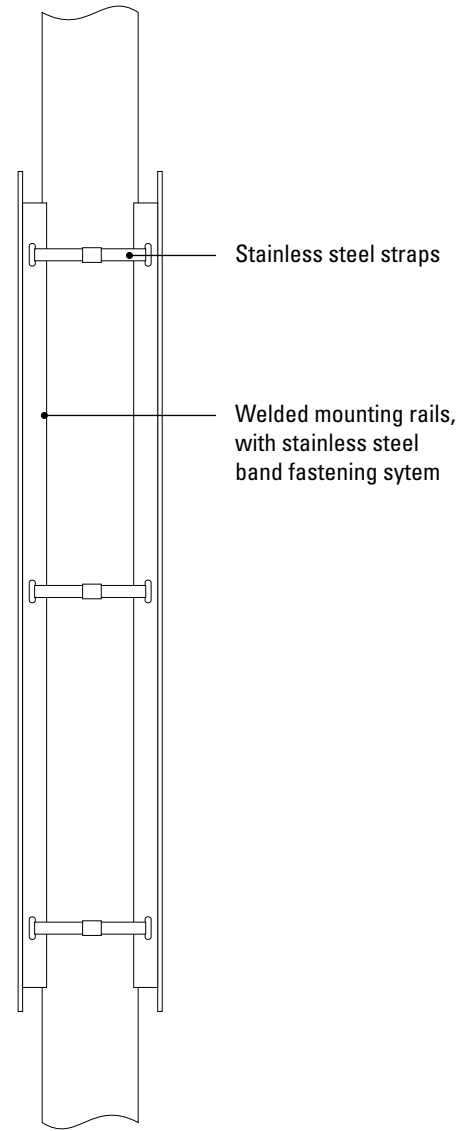
1 **Panel**
Scale: 1/2" = 1' - 0"



2 **Panel Detail (Sides A and B)**
Scale: 3/4" = 1' - 0"



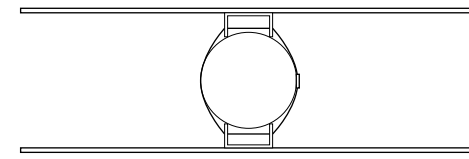
1 Panel Detail
Scale: 1 1/2" = 1' - 0"



2 End View (post mounted)
Scale: 1 1/2" = 1' - 0"



3 End View (wall mounted)
Scale: 1 1/2" = 1' - 0"



4 Top View (post mounted)
Scale: 1 1/2" = 1' - 0"

PARKING: PAY KIOSK DIRECTIONAL



Sign Description

Pay Kiosk information panels convey all rates, seasonality, and hours of operation. These signs may be supplied by the pay kiosk vendor, or local sign vendors and fabricators.

Material Specifications

Panels:
Inset Screen to be second surface mounted print mounted to thin polycarbonate panel, adhered to recess in pay kiosk. Mount with laminating tape or coordinate mounting with parking kiosk provider.

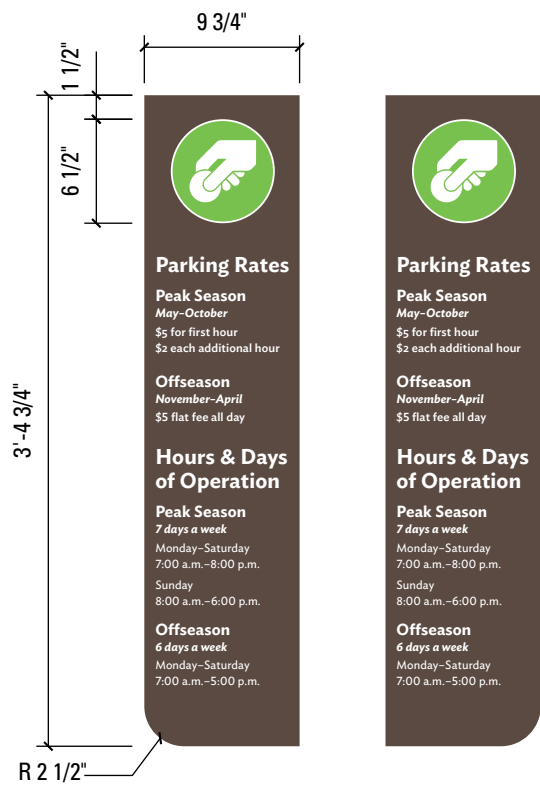
Messaging:
Messaging shown here is for placeholder only. Actual messaging may differ.



1 Front
Scale: 1/2" = 1' - 0"

2 Side A Elevation
Scale: 1/2" = 1' - 0"

3 Side B Elevation
Scale: 1/2" = 1' - 0"



4 Panel Detail (Sides A and B)
Scale: 1" = 1' - 0"



5 Inset Screen Detail
Scale: 3" = 1' - 0"

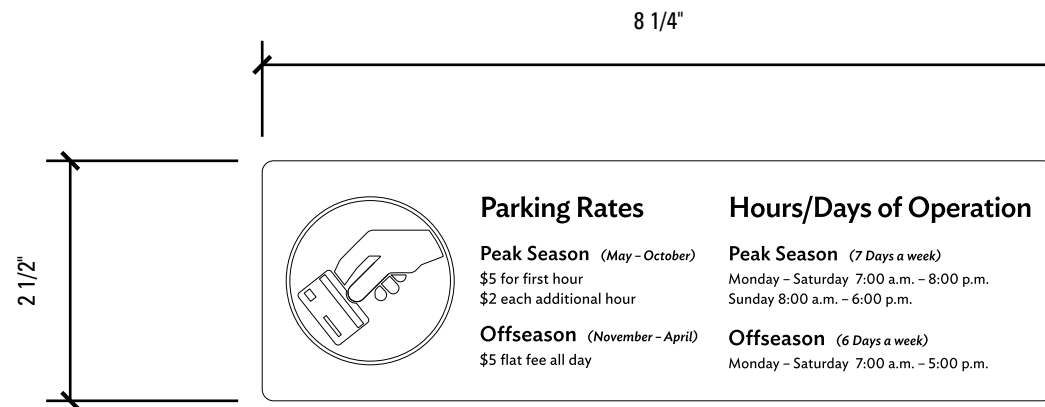


TYPOGRAPHY

Parking Rates: Ideal Sans Semibold, 1" cap height
 Season Head: Ideal Sans Semibold, 3/4" cap height
 Months: Ideal Sans Semibold Italic, 1/2" cap height
 Rates: Ideal Sans Medium, 1/2" cap height
 Days/Times: Ideal Sans Book, 1/2" cap height

1 Panel Detail (Sides A and B)

Scale: 2" = 1' - 0"



TYPOGRAPHY

Parking Rates: Ideal Sans Semibold, 3/8" cap height
 Season Head: Ideal Sans Semibold, 1/4" cap height
 Months: Ideal Sans Semibold Italic, 1/8" cap height
 Rates: Ideal Sans Medium, 1/8" cap height
 Days/Times: Ideal Sans Book, 1/8" cap height

2 Inset Screen Detail

Scale: 6" = 1' - 0"

PARKING: PAY KIOSK



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Performance Specifications

PART 1 - GENERAL

1.1 The Requirement

- A. The intent of this specification is to provide for complete design, manufacturing and installation for the signage program for Burlington Parks, Recreation & Waterfront. Contractor shall provide engineered design, furnish all materials, install all equipment and provide all labor necessary to complete the work shown on the plans and/or listed below and all other work and miscellaneous items not specifically mentioned but reasonably inferred, including all accessories and appurtenances required for a complete system.
- B. The work includes the following:
1. Fabrication of all sign types indicated on the plans.
 2. Site observation to verify existing site conditions and dimensions. Site observation shall note all potential installation conflicts between sign installation locations and existing building conditions and systems.
 3. Coordination with BPRW Representatives and Project Architect during all phases of development, fabrication, and installation.
 4. Shop drawings, layouts, samples, and prototypes for BPRW Representatives' and Project Architect's acceptance.
 5. Full scale prototypes and mockups where required in the plans and these special provisions.
 6. Structural design and calculations when appropriate to substantiate design.
 7. Sign Fabrication: Signs, messages, and graphics are indicated on the plans and in these special provisions and require various materials, various finishes, and various fabrication and installation techniques.
 8. Furnish and install all supports and footings required for the installation of all signs.
 9. Installation of all fabricated signs, including all fasteners and appurtenances.
 10. Preparation and delivery of maintenance manual/as-built drawings for BPRW use.
 11. Electronic template files of sign text layouts for use by BPRW for ongoing maintenance.

1.2 Reference Specifications and Standards

- A. All material and construction work shall be carried out in conformity with the various applicable local, company, state, national or international standards, including but not limited to the following:
1. American Concrete Institute (ACI):
 - a. 304 Measuring, Mixing, Transporting, and Placing Concrete.
 - b. 305 Hot Weathering Concrete
 - c. 316 Construction of Concrete Pavements and Concrete Bases.

- d. American Society for Testing and Materials (ASTM):
 - e. A 53 Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless
 - f. B 209 Aluminum and Aluminum Alloy Sheet and Plate.
 - g. B 221 Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes
 - h. B 308 Aluminum-Alloy 6061 T6 Standard Structural Shapes Rolled or Extruded
 - i. B 429 Aluminum-Alloy Extruded Structural Pipe and Tubing.
2. American Welding Society (AWS):
3. Aluminum
 - a. Welders Certification: Provide certifications signed by Contractor, certifying that welders employed on Project comply with requirements specified under AWS D1.1 and AWS D1.3.

B. Codes:

1. Contractor is responsible for complying with all federal, state, and city/town building and highway codes. Any and all proposed fabrication/installation that does not comply with these codes shall be brought to the attention of the BPRW's Representative for review and resolution prior to fabrication.
2. Contractor is responsible for complying with the Americans with Disabilities Act (ADA). ADA legislation and guidelines have been published in the Department of Justice Federal Register, July 26, 1991, 28 CFR Part 36, Title III: Public Accommodations and Commercial Facilities. Contractor is responsible for complying with all regulations subsequently issued.
3. Any and all proposed fabrication/installation that does not comply with ADA (including but not limited to construction, mounting, finish, contrast, and character height) shall be brought to the attention of the BPRW's Representative for review and resolution prior to fabrication.
4. All contractors and sub-contractors must comply with Burlington's Livable Wage.

1.3 Sign Fabricator Qualifications

- A. Indicate five (5) projects which are similar in nature to the project described herein and provide the following for each:
1. Name of project and its geographic location.
 2. Start date and completion date of project/work.
 3. Owner/Client's name, address, telephone, and contact person.
 4. Brief, but thorough, description of the work including all trades involved; name(s) of responsible supervisory fabrication and installation personnel.
 5. Photographs of project examples listed above which represent the work of the firm.
- B. The sign fabricator must have previous experience in the fabrication and installation of a similar sign program. At least three (3) of five (5) of the projects listed above must be of similar scope and complexity to the project described herein.

- C. Firm References: Provide three (3) references from the experience list above. Provide contact name, address, telephone number, and project name and location for each reference. It is imperative that accurate contact names and phone numbers be given for the projects listed. All references should include a contact person who can comment on the firm's ability to successfully complete a project of this type. The BPRW reserves the right to contact references for any projects provided as noted above, or through any other source available. Such references will be held in strict confidence.
- D. Insurance: provide a Certificate of Insurance verifying the amount of your firm's coverage for comprehensive general liability, worker's compensation, employer's liability, and professional liability.
- E. Sub-contractors: All sub-contractors must be identified, and a complete description of their role relative to this contract must be included. It is highly desirable that all sub-contractors named will have prior experience working as a team. All sub-contractors must have a good working relationship with the prime contractor. If no sub-contractors are noted, it is understood that all work will be performed by the proposer's staff. The BPRW reserves the right to accept or reject any sub-contractor.
- F. Minor irregularities in the bid which are immaterial or inconsequential in nature may be waived whenever it is determined by the BPRW to be in their best interest. If company literature or other publications are included, they should include reference to the document name and page. Submittals containing no such citations will be considered complete and without need to refer to other documents.

1.4 SHOP DRAWINGS

- A. These plans are for design intent only. The Contractor is responsible for the proper engineering of all items. The internal structure, dimensions, and specifications for all items shall be indicated in the shop drawings. BPRW's Representative will not provide electronic files of design intent drawings – it is intended that the Contractor produce original, CADD-generated shop drawings. In certain cases, artwork will be provided for specified patterns, logos, symbols and custom profiles.
- B. Description: Provide shop drawings for all items including:
1. Complete fabrication and installation drawings for each sign type. Indicate dimensions, materials, finishes, fastening, anchorage, joining, sealing, backing, utility requirements, rough-in, paving, foundation, expansion joints and adjacent related site conditions.
 2. Each sign type with all graphic elements.
 3. Accurately reproduced all letter styles.

1.5 Product Catalog Data

- A. Submit only manufacturer's standard drawings and catalog sheets, brochures, diagrams, schedules, charts, illustrations, test results, and other standard descriptive data pages which are pertinent. Delete all non-applicable data.
1. Mark-up each copy to identify pertinent materials, products, or models.
 2. Mark-up each copy of the submittal data to identify the Section, Page Number, and Article of the Specifications to which it is referenced.
 3. Show dimensions and clearances required.
- B. Provide three (3) complete sets to BPRW's Representative for review.

1.6 Submittals

- A. Submit physical samples of sufficient size and quantity to illustrate materials, finishes, equipment or workmanship, and to establish standards by which completed work will be judged. Samples must represent the functional characteristics of the product or material, with integrally related parts and attachment devices, colors, and finishes.
- B. Welders Certification: Provide certifications signed by Contractor, certifying that welders employed on Project comply with requirements specified under AWS D1.1 and AWS D1.3.
- C. Complete list of prototypes required shall be provided to sub-contractors. Prototypes shall become the property of BPRW and may be part of completed signs upon agreement and approval by the client.
- D. First article of production-run items, both large and small, will be reviewed by the BPRW's Representative before production run is commenced.
- E. Product Data: Submit manufacturer's product data of work of this Section. Provide complete product description and specifications, catalog cuts, and other descriptive data including concrete admixtures, concrete sealer, and curing material.
- F. Sign Location Plans: BPRW's Representative shall provide diagrammatic sign location diagrams. Based on these, Sign Contractor to prepare site-specific dimensioned sign location plans for review and approval by BPRW's Representatives. Submittal may be supported by site photos and notes.
- G. Contractor to prepare message schedule (as indicated in the plans) and resubmit to BPRW's Representative for approval.
- H. Field Measurements: Contractor shall take all necessary field measurements before preparation of shop drawings and fabrication. If field measurements are not possible prior to fabrication, allow for field cutting and fitting.
- I. Initial Selection Samples: Submit samples showing complete range of colors, textures, and finishes available for each material used.
- J. Verification Samples: Submit representative samples of the following materials for approval prior to construction. Show full color ranges and finish variations expected. Provide samples having minimum size of 36 sq. in.

1. Vinyl samples, in specified type style, size and graphic, for each color and finish as designated on the plans.
2. Representative masked and sprayed sample graphic in each color and finish as designated on the plans.
3. Paint color and finish sample on 1/8 in. thick aluminum, for each color and finish required.
4. For each sign type, provide one (1) full size sign face layout, accompanied by scaled plots of every sign face as listed on plans. Templates are not acceptable. Include character and word spacing. Outlined (pen-plotted) lettering is not acceptable. Plotted template or camera-ready artwork for making symbols specified; include arrow, parking symbol, etc.

1.7 Prototypes & Mock-Ups

- A. Sign Mock-ups: Prior to commencing work of this Section, provide requested mock-ups for sign types in this manual, contractor to coordinate mock-up locations that are acceptable to BPRW's Representative.
- B. Obtain BPRW's Representative's acceptance and approval of all visual qualities.
- C. Protect and maintain accepted mock-ups throughout the remainder of work of this section to serve as criteria for acceptance of visual qualities.

1.8 Submittal Requirements

- A. Accompany submittal with transmittal letter in duplicate, containing:
1. Date.
 2. Project title and number.
 3. Contractors name and address.
 4. Description of data contained in submittals.
 5. Listing of any letters containing description of deviations from Contract Documents.
 6. Other pertinent data.
- B. Submittal shall include:
1. Date and revision dates.
 2. Project title and name.
 3. The names of BPRW, BPRW's Representative, Contractor, sub-contractor, supplier, manufacturer, and separate detailer when pertinent.
 4. Identification of product or materials.
 5. Relationship of product to adjacent structure or materials.
 6. Clearly identified field dimensions, when known.
 7. Specification Section Number.
 8. Applicable standards, such as ASTM and others.
 9. A blank space, 4" x 4", for the BPRW's Representative's stamp or signature.

10. Identification and description of deviations from Contract Documents.
 11. Written request for selection of colors, patterns, and textures for materials contained in submittal. Note: Provide each and every item of finish, including color, pattern, and texture as selected or approved by BPRW's Representative.
 12. Contractor's stamp, initialed or signed, indicating review of submittal, compliance with Contract Documents, and verification of field measurements when applicable.
- C. Provide three (3) complete sets to BPRW's Representative for review.
- D. Calculations: Provide professionally prepared calculations and certification of the performance of the work. Show how design load requirements, wind load requirements and other performance criteria have been met. Provide calculations stamped and signed by a professional engineer registered in the State of Massachusetts.

1.9 Re-Submittal Requirements

- A. Shop Drawings
1. Review drawings and indicate revision date(s) as required, and resubmit as specified for initial submittal.
 2. Indicate on drawings all changes that are different than those requested by the BPRW's Representative.
 3. Product data and samples: Submit new data and samples in accord with some criteria as required for first submittal.

1.10 Distribution of Submittal After Review

- A. Distribute copies of shop drawings and product data which carry BPRW's Representative's acceptance to:
1. Contractors file, job site file, and product record documents file.
 2. Sub-contractors, suppliers, and sign fabricators as appropriate.
 3. Other prime contractors.
 4. Distribute samples as directed by BPRW's Representative.

1.11 Sign Fabrication - Contractor's Responsibilities

- A. Contractor is responsible for providing any necessary computer program conversion, font, computer program, or equipment purchases; or other provisions in order to coordinate exactly with the plans and other submissions.
- B. Review shop drawings, product data, and samples prior to submittal to BPRW's Representative.
- C. Verify field measurements, field construction criteria, catalog numbers, and similar data.
- D. If replacing existing sign, contractor is responsible for the removal of the existing sign.
- E. Coordinate each submittal with Contract Documents.
- F. Contractor's responsibility for errors and omissions in submittal or in deviations from the requirements of the Contract Documents is not relieved by the BPRW's Representative's review of submittal.
- G. Notify BPRW's Representative in writing of deviations from requirements of the Contract Documents at the time of submittal.
 - 1. A "deviation" shall be construed to mean any change to the sequence indicated on the plans or specifications.
 - 2. A "deviation" is not intended to allow substitutions or product options.
 - 3. In addition to notifying BPRW's Representative in writing of deviations, clearly indicate deviations on shop drawings
- H. Do not begin work that requires submittal until submittal have been returned with BPRW's Representative's written acceptance.
- I. After BPRW's Representative reviews submittal, distribute copies of accepted documents.

1.12 BPRW's Representative's Responsibilities

- A. Review submittal with reasonable promptness on basis of design concept of project and information contained in Contract Documents.
 - 1. The scope of the BPRW's Representative's review is to check for general conformance with the design concept of the project and general compliance with Contract Documents only. No responsibility is assumed by BPRW's Representative for accuracy of dimensions, details, quantities, or procedures shown on shop drawings or submittal.
 - 2. Omission in shop drawings of items, materials, or processes indicated in Contract Drawings or Specifications, or otherwise required for proper execution and completion of work, does not relieve the Contractor from responsibility for providing such items, materials, or processes. Contractor is responsible for accuracy, dimensions, quantities, strength of connection, coordination with various trades, and conformance to project requirements and all applicable codes.
 - 3. Acceptance of a separate or specified item does not necessarily constitute acceptance of an assembly in which item functions.

1.13 Affix initials or signature acknowledging review of submittal as follows:

- 1. Accepted.
- 2. Accepted with notations, re-submittal not required.
- 3. Not accepted. Re-submittal required.

- A. Return submittal to Contractor for distribution.

1.14 Maintenance Manuals / As-Built Drawings

- A. Contractor to provide to BPRW's Representative three (3) up-to-date copies of all shop drawings revised to reflect final as-built conditions, product data, and other information described in this Section.
 - 1. Make required submittal not later than four (4) weeks following completion of project.
 - 2. Submittals shall be made by permanent reproduction copy equipment from typewritten or typeset originals.
 - 3. Pre-punch 8 ½ x 11" sheets for standard three ring binders.
 - 4. Submit larger sheets in rolled and protected packages.
- B. Submittal format: Contractor to provide each of the following items, as applicable, for each required item.
 - 1. Manufacturer's data: provide catalog data sheets, specifications, name plate data, and parts list.
 - 2. Extra parts: Provide a listing of extra stock or parts furnished as part of the contract.
 - 3. Warranties: Provide specific manufacturer's warranty. List each component covered with day and date warranty begins, date of expiration, and name, address, and telephone number of person to contact regarding problems during warranty period.
 - 4. Provide three names, addresses, and telephone number of sign fabricator, its subcontractors, suppliers, installers, and authorized service and part suppliers. Format as follows:

4a. Sign Fabricator: _____
Address: _____
Telephone Number: _____
Fax Number: _____
Person to Contact: _____

1.15 Warranty

- A. Warrant all work against failure because of faulty materials, workmanship, assembly and installation, for a period of two (2) years from date of substantial completion.
- B. Fading, cracking, warping, peeling, delaminating, rusting, corroding, and structural failure, including distortion by whatever cause, shall be construed to mean failure because of faulty materials and workmanship.
- C. Failures during the warranty period shall be repaired or replaced to the satisfaction of the BPRW.

1.16 Maintenance Materials

- A. Touch-up paint: Provide BPRW with one quart can of touch-up paint of each type and color used in the work.

1.17 Quality Insurance

- A. Source: For each material type required for the work of this Section, provide primary materials which are the product of one manufacturer. Provide secondary or accessory materials which are acceptable to the manufacturers of primary materials.
- B. Installer: A firm with a minimum of three years experience in type of work required by this Section and which is acceptable to manufacturers of primary materials.
 - 1. If installer is different company than Contractor, notify BPRW's Representative in advance providing installer's name, address, telephone number, and name of contact person.
- C. All work and material shall be in accordance with all applicable codes and standards and shall be acceptable to all authorities having jurisdiction. Work shall meet or exceed the requirements of the applicable Building Code.
- D. Design Criteria: The plans indicate size, profiles, and dimensional requirements of signs and graphics, and are based on the specific type and model indicated. Signs by other manufacturers may be considered provided the deviations in dimensions and profiles are minor and do not, in the opinion of the BPRW's Representative, change the design concept.
 - 1. Fonts: Contractor must purchase specified original font software from font suppliers; BPRW will not supply font software or digital copies of fonts. Conversions, translations, or "close matches" are not acceptable.
 - 2. Computer Capabilities: Contractor must have capability to process digital files prepared on Windows PC platform. Translations to alternate sign cutting platforms must be approved by the BPRW's Representative.
 - 3. Software: Contractor must possess PC-based software version of Adobe Illustrator. Conversions to other software or platforms must be approved by the BPRW's Representative.

1.18 Performance Requirements

- A. Design: Signage units shall be engineered and designed by a Vermont licensed engineer to withstand stresses induced by wind loads, live loads, dead loads, temperature, shrinkage, fabrication, handling and erection in accordance with applicable codes. Furnish engineer's certificate stating that sign design meets or exceeds requirements of Contract Documents.

1.19 Delivery, Storage and Handling

- A. Deliver materials and products unopened. Store and handle in strict compliance with manufacturer's instructions and recommendations. Store under cover and protect from weather damage.
- B. Sequence deliveries to avoid delays, but minimize on-site storage.

PART 2 PRODUCTS

2.1 Aluminum

- A. General: Provide alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with strength and durability properties for each aluminum form required not less than that of alloy and temper designated below.
- B. Yield strength for Alloy 6063-T5/T52 is 15 to 16 ksi (105 to 110 MPa).
- C. Extruded Bars and Shapes: ASTM B 221 (ASTM B 221M), Alloy 6063-T5/T52.
- D. Drawn Seamless Tubing: ASTM B 210 (ASTM B 210M) or ASTM B 483/B 483M, Alloy 6063-T832.
- E. Plate and Sheet: ASTM B 209 (ASTM B 209M), Alloy 6061-T6.
- F. Castings: ASTM B 26/B 26M, Alloy A356.0-T6.

2.2 Steel

- A. General: If Contractor employs steel for structural design, provide manufacturer's standard extrusions, sections, sheet, and plate, of alloy and temper recommended by steel manufacturer or finisher for type, use, and finish indicated, but not less than strength and durability properties specified below.
- B. Steel Tubing: ASTM A500 or A 501, hot or cold rolled.

2.3 Wood

- A. Lumber shall be of sound stock, new, straight, of consistent size, free of stains and mildew, and kiln dried to a moisture content of not more than 19%, by weight. Wood members shall be selected for best possible appearance from the grade of stock specified.

2.4 Non-Reflective Vinyl

- A. Applied Non-reflective Vinyl Graphics: Pressure sensitive vinyl graphics shall be Scotchcal, Series 7725 applied pressure sensitive vinyl, manufactured by 3M, Avery Dennison 900 Supercast Film, or Oracal 951 Premium Cast Film, substitutions may be submitted and used as approved by BPRW's Representative. Color shall be as indicated in the plans.

2.5 Miscellaneous Materials

- A. Fasteners: Unless otherwise indicated, use concealed fasteners in all work of this Section. Fabricate fasteners from metals that are non-corrosive (aluminum or non-magnetic stainless steel) to sign surface materials and mounting substrates.
 - 1. Exposed fasteners shall be counter sunk flat head, vandal-resistant, and painted to match surface the head appears.
 - 2. Spacers and washers shall be neoprene or EPDM.
 - 3. Anchors and Inserts: Provide non-ferrous metal or hot-dip galvanized anchors and inserts for exterior installations. Provide toothed steel or lead expansion bolt devices for drilled-in place anchors. Furnish inserts to other trades when required to be cast into concrete.
 - 4. Permanent Bond Adhesive: Provide structural adhesive suitable for bonding a variety of dissimilar industrial surfaces over a wide temperature range, similar to "PR-943", manufactured by Products Research and Chemical Corporation, Gloucester City, NJ 08030, or approved equal.
 - 5. Vinyl Tape Mounting: Use double-sided foam tape, of the thickness indicated, to mount signs to smooth, nonporous surfaces. Do not use this method for vinyl-covered or rough surfaces.
 - 6. Silicone Adhesive Mounting: Use liquid silicone adhesive as recommended by sign fabricator to attach signs to irregular, porous or vinyl-covered surfaces. Use double sided vinyl tape where recommended by sign fabricator to hold sign in place until adhesive cures.
 - 7. Concealed Mounting: Mount signs by inserting threaded studs into tapped holes on the back of the sign. Set in predrilled holes filled with quick-setting epoxy as recommended by sign fabricator.
 - 8. Sign contractor to be responsible for fastener compatibility with all project substrates, and that no oxidation or reactive process occur between any project related materials.
 - 9. Sign contractor to provide color matched vinyl backer, on first surface of glass, when mounting sign panels to front surface of glass. Sign contractor responsible to make any perforations to the envelope of the building water-tight.
 - 10. Anchors and Inserts: Provide non-ferrous metal or hot-dip galvanized anchors and inserts for exterior installations. Provide toothed steel or lead expansion bolt devices for drilled-in place anchors. Furnish inserts to other trades when required to be cast into concrete.
 - 11. Permanent Bond Adhesive: Provide structural adhesive suitable for bonding a variety of dissimilar industrial surfaces over a wide temperature range, similar to "PR-943", manufactured by Products Research and Chemical Corporation, Gloucester City, NJ 08030, or equal as approved by BPRW's Representative.
 - 12. Grout for Exterior Applications: Provide Factory-packaged, non-shrink, non-staining, hydraulic controlled expansion epoxy-type, or cement formulation for mixing with water at project site. Provide formulation that is resistant to erosion from water exposure without need for protection by a sealer or waterproof coating. Provide Super Por-Rok, Erosion-Resistant Anchoring Cement, manufactured by Minwax Construction Products Division, or equal as approved by BPRW's Representative.

2.6 Finishes: Paint

- A. Acrylic Polyurethane Finish: For surfaces indicated in the plans to be painted with acrylic polyurethane, provide Matthews Acrylic Polyurethane, satin finish paint system consisting of a pigmented component, a catalyst and a flattening agent, manufactured by Matthews Paint Company, Wheeling, IL 60090, or equal as approved by BPRW's Representative. Paint shall contain three ultraviolet inhibitors to prevent fading.
- B. Color selection: Exterior aluminum sign, post, and support surfaces indicated to be painted shall be in colors and finishes indicated on the plans.
 - 1. Compile and maintain a listing of all colors with the factory batch number and formulation code for all paints and coatings. At the date of substantial completion, submit the list to the BPRW's Representative for future maintenance reference.
- C. Provide finish coat color matching accepted color samples within industry tolerances and identified as specified. More than one color will be required.
- D. Gloss shall be satin, unless otherwise specified.
- E. The term "paint" refers to those materials that require a finished surface as recommended by the approved materials manufacturer. "Paint" includes preparation, priming/sealing, and intermediate and finish coats as applicable.
- F. Sample finishes: Refer to Section 1.06.
- G. Application and Finish:
 - 1. Coatings shall be applied by an applicator having facilities, equipment, and experience required to apply the finish to the manufacturer's specifications. All substrates shall be cleansed of any foreign substance such as oil, grease, dirt, etc. Typical finish shall consist of:
 - a. An acid-wash prime coat applied per manufacturer's specifications when using raw metal as a substrate.
 - b. Primer/filler seal coat, properly applied to all substrates per manufacturer's specifications including dry film thickness
 - c. Primer/filler coat sanded smooth before top coating and coated with a minimum of two applications of acrylic polyurethanes in colors indicated on the design drawings. Top coating shall be applied per manufacturer's recommendations to a minimum total dry film thickness of 2.0 mil.
 - d. Clear coat, properly applied to all substrates per manufacturer's specifications including dry film thickness.
 - 2. Coating Performance Criteria: (in addition to above)
 - a. Dry film thickness: Within minus 5% to plus 25% of the specified thickness
 - b. Abrasion resistance: ASTM D968 coefficient of abrasion 65 minimum.
 - c. Pencil hardness: 2H minimum.
 - d. Salt spray: ASTM B-117 withstanding 3500 hours, 100% salt fog at 95 degrees F and retaining adhesion, corrosion resistance, color, and gloss with no more than minimal blisters no larger than No. 8 (ASTM D-714), and no more than 1/16" creep or loss of adhesion from scribed line.

Coating Performance Criteria (continued)

- e. Humidity test: ASTM D-2247 withstanding 3500 hours 100% relative humidity at 95 to 100 degrees F and retaining adhesion, corrosion resistance, color, and gloss with no more than minimal blisters no larger than No. 8 (ASTM D-714), and no more than 1/16" creep or loss of adhesion from scribed line.
- f. Gloss: ASTM D523, +/-5%, using a 60 degree glossmeter, of the gloss level selected by the BPRW's Representative.
- g. Adhesion: No removal of any finish after 1/16" crosshatching to base metal, impacting to the point of metal rupture, and subjected to application and quick removal of cellophane tape.

2.7 Finishes : Powder Coating

A. Provide polyurethane base powder coating finish by Thermoset Powder Coating Systems: PPG Envirocron Powder Coatings as produced by PPG Industries One PPG Place Pittsburgh, PA or approved equal.

1. Performance Requirements: Powder coatings shall conform to the following:
2. Chemical Type: Polyurethane
3. Particle Size: Suitable for electrostatic spraying
4. Flexibility: Pass 1/8 in., as per ASTM D522 (Conical mandrel)
5. Adhesion: Pass (Class 5B) as per ASTM D3359 (Cross hatch)
6. Gloss: ASTM D523 (60 degree)
7. Pencil Hardness: 2H, as per ASTM D3363
8. Impact Resistance: Minimum of 100 lbs direct and reverse, as per ASTM D2794.

PART 3 - EXECUTION

3.1 GENERAL

- A. Contractor will field mark the location of all signs prior to installation. Contractor shall review all locations with BPRW's Representative before starting installation.
- B. Locate sign units and accessories where shown on plans. Use mounting methods indicated.
- C. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installation of work of this Section. When contract work requires placement of sign units in existing concrete, concrete shall be removed to the nearest joint in all directions. Where no joint exists between concrete to be removed and concrete to remain in place, the concrete shall be cut on a neat line to a minimum depth of 0.17-foot with a power driven saw before the concrete is removed. Sawcut location to be determined in coordination with the BPRW's Representative.
- D. Erect work square, plumb and true, accurately fitted, and with tight joints and intersections. All anchors, inserts and other members to be set in concrete shall be furnished loose by this trade to be built-into concrete by that trade. Avoid field cutting or drilling to greatest extent possible.
- E. Fit exposed connections accurately together to form hairline joints, except where invisible joints are indicated. Shop weld connections, except when

work cannot be shop welded due to shipping size or galvanizing limitations.

- F. Fastening to In-Place Construction: Provide anchorage devices and fasteners necessary for securing work of this Section to in-place construction. Include threaded fasteners for concrete and masonry inserts, toggle bolts, through bolts, lag bolts, wood screws, and other connectors required.
- G. Field Welding: Comply with AWS Code for procedures of manual welding, appearance and quality of welds, and correction methods for defective welds.
- H. Where members other than expansion bolts or inserts are fastened into rock or concrete, set such members in proprietary-type non-shrink epoxy grout manufactured specifically for such purpose. Use grouts strictly in accordance with manufacturer's directions. Form to receive members with galvanized metal sleeves, or other approved method to provide at least 1/2 in. clearance around entire perimeter.
- I. Electrolytic Isolation: Where dissimilar metals are to come into contact with one another, or in contact with concrete, isolate by application of a heavy coating of bituminous paint on contact surfaces in addition to shop coat specified above. Do not permit the bituminous paint in any way to remain on surfaces to be exposed or to receive sealant.

3.2 Workmanship

- A. It is intended that the workmanship be of the highest quality obtainable by the respective trades and crafts experienced in the fabrication of signs, and that all work be done by journeymen, or by tradesmen under the direct supervision of journeymen.

3.3 Fabrication

- A. General: Fabricate work of this Section in conformance with requirements indicated for materials, thicknesses, finishes, colors, designs, shapes, and sizes.
- B. Regional Materials: Panel signs manufactured within 500 miles (800 km) of Project site.
- C. All Signs: Fabricate flat and curved signs using metals and shapes of sufficient thickness, with reinforcing when necessary, to produce sufficient flatness, free of "oil canning", and to impart sufficient strength for size, design, and application indicated. Produce smooth, even level sign surfaces.
 1. Fabricate posts, brackets, and fittings from extruded aluminum to suit sign panel construction and mounting conditions indicated; all seams welded and ground smooth prior to painting.
 2. Colors: Where applied graphics require color selection, provide colors as indicated and as approved by BPRW's Representative.
 3. Graphic Content and Style: Provide graphics for signs in letter style, size, spacing, and arrangement indicated.
 4. Where applied vinyl copy is indicated, provide die-cut copy characters from vinyl film with pressure sensitive adhesive backing. Apply copy to exposed face of sign panel.
 5. Fabricate framing with reinforced corners, fabricated to a hairline fit.

6. All signs to be properly vented top and bottom to minimize water penetration and prevent moisture buildup or condensation on transparent surfaces.
7. Any openings or vents must have fine mesh screen barrier to prevent insect or animal intrusion and nesting.
8. Allow for thermal movement resulting from a maximum ambient temperature change (range) of 100° F. (55.5° C.). Design, fabricate, and install the sign assembly to prevent buckling, opening up of joints, and overstressing of welds and fasteners.

D. Welded Connections: Comply with AWS for recommended practices in shop welding. Provide welds behind finished surfaces without distortion or discoloration of the exposed side. Clean exposed welded surfaces of welding flux and dress on all exposed and contact surfaces.

E. Mill joints to a tight, hairline fit. Form joints exposed to the weather to exclude water penetration.

F. It is intended that all finished work be of the highest quality to pass eye-level examination and scrutiny by BPRW's Representative.

1. Construct all work to eliminate burrs, dents, cutting edges, and sharp corners.
2. Finish welds on exposed surfaces to be imperceptible in the finished work.
3. Finish all surfaces smooth except as indicated or directed otherwise.
4. Surfaces which are intended to be flat shall be without dents, bulges, oil canning, gaps, or other physical deformities.
5. Surfaces which are intended to be curved shall be smoothly free-flowing to required shapes.
6. All exterior hardware and fasteners shall be non-corrosive, non-rusting aluminum or stainless steel.
7. Conceal all fasteners except as indicated or directed otherwise.
8. Make access panels tight-fitting, lightproof, and flush to adjacent surfaces.
9. Conceal all identification labels and U.L. labels to conform to U.L. Codes.
10. Carefully follow manufacturer's recommended fabricating procedures regarding expansion/contraction, fastening, and restraining of all materials.
11. Exercise care to assure that painted, polished, and plated surfaces are unblemished in the finished work.
12. Isolate dissimilar materials. Exercise particular care to isolate nonferrous metals from ferrous metals.

3.4 FINISH

- A. Paint finish shall be applied in strict compliance with coating system manufacturer's instructions and recommendations for surface preparation, mil thickness, curing and other requirements.

3.5 INSPECTION

- A. Contractor shall examine substrates, supports, and conditions detrimental to the proper completion of work. Do not proceed with work until unsatisfactory conditions are corrected. Beginning of sign installation will be construed as Contractor accepting substrates and conditions.

3.6 Transportation of Work

- A. Transport, deliver, handle, and store materials and equipment at the job site in such a manner as to prevent damage to both the site and the signs, including damage to finishes and damage which might result from intrusions of foreign matter or moisture from any source.
- B. Packaging:
 - 1. Maintain packaged materials in manufacturer's original container with seals unbroken and labels intact until they are incorporated into the project.
 - 2. Packaged material shall bear the name of the manufacturer and the product, including brand name, color, stock number, and all other complete identifying information.
 - 3. Packages showing indications of damage that may affect conditions of content are not acceptable.
- C. Promptly remove all damaged or otherwise unsuitable materials and equipment from the job site.
- D. Storing:
 - 1. Store all materials and equipment in accord with manufacturer's instructions. Store above grade and properly protected from weather and construction activities.
- E. Protection:
 - 1. Maintain all finished surfaces clean, unmarred, and suitably protected until accepted by the BPRW's Representative.

3.7 Sign Installation

- A. General Installation Requirements: Strictly comply with manufacturer's instructions and recommendations, except where more restrictive requirements are specified in this section.
- B. Exterior signs shall be installed in various stages in response to the overall Project construction schedule. Install signage in strict accordance with approved phasing plan to be worked out with the BPRW's Representative.
- C. Installation: Install units plumb, level, in alignment and plane without warp or rack. Anchor securely in place.
- D. Verify the exact location with the BPRW's Representative for all signs prior to installation.
- E. Sign installation work shall be under the direct supervision of a journeyman sign erector.

- F. Securely anchor work in proper location using anchors, fasteners, or other methods approved on shop and erection drawings. All anchors/fasteners shall be appropriate for the anchorage condition.
- G. When sign is to be installed in existing concrete, sawcut and remove sidewalk to the nearest joint, in coordination with the BPRW's Representative, and replace sidewalk in like-kind.

3.8 Tolerances

- A. The following allowable installed tolerances are allowable variations from locations and dimensions indicated by the Contract Documents. Do not add these tolerances to any allowable tolerances indicated for other work.
 - 1. Allowable Variation from True Plumb: + 1/8 in. in 20 ft. - 0 in.
 - 2. Allowable Variation from True Line: + 1/8 in. in 20 ft. - 0 in.
 - 3. Allowable Variation from True Level: + 1/16 in. in 20 ft. - 0 in.

3.9 Adjusting, Cleaning, Touch-Up, and Protection

- A. Clean exposed surfaces using manufacturer's printed instructions recommending materials and methods to be used. Remove and replace work which cannot be successfully cleaned.
- B. Touch-up damaged coatings and finishes. Eliminate visible evidence of repair.
- C. Provide temporary protection during the course of work, and immediately after completion to ensure work is not damaged or deteriorated in any way at time of final acceptance. Remove temporary protections and reclean as necessary immediately prior to final acceptance.
- D. Clean-up work area after installation has been completed.

3.10 PUNCH LIST

- A. When Contractor considers the work has reached final completion (less than one percent of the contract remains to be completed), submit written notice, together with a written list of items to be completed or corrected.
- B. BPRW's Representative will inspect the status of completion and prepare a "Punch List" setting forth in detail any items on the Contractors list and additional items found unacceptable. When the punch list is complete, the BPRW's Representative will arrange a meeting with the Contractor to identify and explain all items and respond to questions regarding the work which must be done before final acceptance.
- C. Contractor shall correct punch list items within a BPRW's Representative-approved time frame established when the punch list is made. The time frame for completion of the punch list items shall not exceed the completion date of the Contract. The contract shall not be considered complete until punch list items are completed.