

Northeast Michigan Council of Governments

Department of Natural Resources Trail Wayfinding Signage Design Intent Drawings

9.13.16 FINAL DOCUMENT

corbindesign

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Trailhead Kiosk with Roof

Trailhead Kiosk No Roof

Small Trailhead Kiosk /interpretive kiosk

Large Trail Guide

Guide Post

Gateway Information/ Interpretive Kiosk

Gateway Identification

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Fabrications Specifications

A. Quality Standards

The materials, products, equipment and performance specifications described within, establish a standard of required function, dimension, appearance, performance and quality to be met by the Fabricator.

B. Structural Design

Details on design intent drawings indicate a design approach for sign structure but do not necessarily include all fabrication details required for the complete structural integrity of the signs, including consideration for static. dynamic and erection loads during handling, erecting, and service at the installed locations, nor do they necessarily consider the preferred shop practices of the individual Fabricators. Therefore, it shall be the responsibility of the Fabricator to perform the complete structural design and engineering of the signs and to incorporate all the safety features necessary to adequately support the sign for its intended use and purpose and to protect the Owner. Fabricator shall also be responsible for ensuring that all signs meet local, state and federal codes.

C. Vandalism Design

Fabrication and installation design is to withstand severe abuse and souvenir theft vandalism, but not less than the equivalent of resisting simple hand implements and tools (screwdrivers, knives, coins, keys, and similar items), and adult physical force. All hardware and fasteners within reach shall be vandal resistant.

D. Substitution

No substitution will be considered unless the Owner has received written request for approval. Fabricator may recommend equal or better equipment or method, but will be required to provide full documentation establishing such a substitution's equality or superiority as measured in the following:

- compliance with the visual design intent;
- cost;
- ease of maintenance; and
- performance.

The burden of proof of the merit of the proposed substitute is upon the Fabricator. The Owners decision of approval or disapproval of a proposed substitution shall be final.

E. Pre-fabrication Submittals

The awarded fabricator must submit a copy of the following items to the Owner and Designer for their review prior to fabrication proceeding:

Detailed engineered shop drawings for each sign 1. type are to be submitted as electronic PDF no larger than 11"x 17". Final Shop Drawings are to be stamped by an Engineer licensed in the state of the project. The shop drawings for each sign type shall illustrate/describe the following:

• Elevations and cross sections – front, sides, top and back (if necessary); side sections; internal structure section/details; enlarged details such as of extrusions, push-through letter mounting, mounting plate, etc.; with all final dimensions and call-outs for:

- Components construction details/information related to individual elements
- Materials color, type, gauge, and thickness (including substrates and overlays)
- Finishes color, type of product, manufacturer, and sheen
- Fonts, graphics specifications and message fields

• Exploded view (optional) - isometric view with components, materials, and finishes.

• Cross-section of corners – one illustration for each corner condition. Items to be illustrated: seams, joints, layers, internal support and fasteners.

• Mounting/installation details - provide foundation cross-sections (including hardware), bracket/post details, elevations, materials, finishes and fasteners.

• Electrical details are to be provided for all elements that require electricity. Specific items to be listed are:

- Light source and/or fixture type and manufacturer
- Power supply (transformer)
- Amperage and voltage per sign
- Electrical service required (source)
- Lighting detail provide an internal view of light fixtures, LED layout, transformers, external cut-off switch, light sensor, and timer.
- Engineering for wind load
- Removable panels (where applicable)
- Identify any dimensional or other changes in the overall sign required by virtue of the fabrication materials, techniques and/or engineering.

For the first release, we request that all drawings be received at one time. Future revised drawings can be received as they are completed.



2. Three (3) samples of each material (paint, vinyl, acrylic, veneer, masonry, metal, etc.) to be used on the sign using actual substrate materials. One sample will be returned, one sent to the Owner and one kept in the Designer's records.

A proofing document of final production keystrok-3. ing for all sign messages to verify line breaks, character and word spacing, and interline spacing. The proofs are to be scaled production art files, not full sized. Each layout is to be identified with the sign number.

The fabricator must submit a 12" x 12" to-scale 4. sample segment of the map insert product to the Designer for approval before producing the final map inserts.

Fabricator must submit a schedule detailing how 5. far in advance artwork will be required for printed maps and directories.

Fabricator must provide weekly status reports to 6. the Owner and Designer detailing fabrication and installation progress and the expected completion schedule.

F. Material Handling

The Fabricator is to pack, wrap, crate, bundle, box, bag, or otherwise package, handle, transport, and store all fabricated work as necessary to provide protection from damage by every cause. Fabricator shall provide clear and legible identifying information on all product packaging to ensure proper on-site identification and installation.

G. Sign Specifications: Construction Methodology

The drawings call for a variety of fabrication techniques. Fabricators are given leeway to fabricate the signs to meet the intent of the designs depicted by the drawings.

1. Because different systems of extrusions may result in slightly different dimensional requirements, the total height and width dimensions described in the sign construction on the drawings may be considered "nominal" for the purposes of cost quote.

2. Sign faces are to be fabricated using aluminum plate of varying thicknesses, as specified on design intent drawings, with a minimum thickness of .125" inches unless otherwise noted.

3. Sign cabinet seams shall be sealed to ensure they are watertight.

4. All finishes are to be satin finish, free from fading, peeling or cracking. Paint preparation of all exterior metal surfaces of the sign to include removal of all scratches and imperfections, sanding and chemical etching. Substrate cleaning, preparation, paint application and paint thickness to be in strict compliance with Matthews Paint or AkzoNobel published recommendations. Acceleration of the drying process is not allowed.

5. Except where approved otherwise by Owner, conceal fasteners.

6. Any sign faces smaller than 8' by 20' are to be fabricated from 1 piece of seamless material.

7. On welded joints, dimensional and structural welding

fonts.

8. Non-welded joints between various portions of signs Provide sufficient fastenings to preclude looseness, racking, or similar movement. 9. Provide drain holes as needed to prevent accumulation of water within signs. Holes must be inconspicuous and be in inconspicuous locations; holes must be located such that drainage does not occur onto signs, or other surfaces subject to staining. Provide internal system of baffles to prevent "light leaks" through drain holes of illuminated signs. Provide color-coordinated insect screening over drain holes. 10. Non-illuminated sign faces are to have lettering and

defects will not be accepted, including but not limited to: poor weld contours, including excessive bead convexity and reinforcement, and considerable concavity or undersized welds; cracks; undercutting; porosity; incomplete fusion; inadequate penetration; spatter; and non-metallic inclusions. Welding is to be performed by AWS (or similar) certified personnel, following AWS Standard Welding Procedure Specifications (SWPSs) for steel, aluminum, and stainless steel as appropriate.

must have a tight, hairline-type appearance, without gaps.

graphics created as surface-applied vinyl typography using Avery or 3M exterior grade, minimum 5-year warranty, unless otherwise noted in the design intent drawings.

11. High pressure laminate panels with embedded artwork are to be printed at a minimum of 1200 DPI using exterior inks. The panel must be a solid, one-piece panel with all graphic elements inseparable from the substrate in which they are embedded (izone, 888.464.9663).

12. Digitally printed graphics are to printed at a minimum of 1200 DPI using exterior inks and covered with exterior grade, graffiti resistant clear lamination.

13. Visible metal joints must adhere to a fit tolerance of .01".

14. Aluminum and steel components are to be isolated to prevent galvanic corrosion.

15. Steel components are to be powder coated per the coating manufacturers specifications to prevent corrosion.

H. Fonts/Typefaces

The fonts used for this project were selected specifically for this project by the Designer and Owner, and include those listed in the graphic standards.

It is the responsibility of the fabricator to purchase the

No substitution of any other typefaces may be made. Under no circumstances are typefaces to be electronically distorted ("squeezed" or "extended") for purposes of fitting to the specified sign or general alteration of the sign face composition unless noted in the drawings. This includes (but is not limited to) stretching, squeezing, tilting, outlining or shadowing.

Fabrications Specifications

1. All letterforms, symbols or graphics shall be reproduced either by photographic or computer-generated means. Hand-cut characters are not acceptable. Cutting shall be done in such manner that edges and corners of finished letterforms will be sharp and true. Letterforms with nicked, cut, ragged, rounded corners, and similar disfigurements will not be acceptable.

2. All letterforms shall be made from material and gauge as indicated on design intent drawings. Typefaces shall be replicated as indicated on the drawing.

3. Ligatures are to be turned off.

4. Apostrophes are to be used, not footmarks. Note that there is a difference in most fonts.

5. Silk-screened and vinyl copy is to match the sheen of the copy panel background (satin). Edges of letters shall be straight and corners sharp. Surface of letters shall be uniform in color finish, and free from pinholes and other imperfections.

6. Silk-screened images shall be executed with photo screens prepared from original art. No hand-cut screens will be accepted. Original art shall be defined as artwork that is a first generation reproduction of the specified art.

7. Silk-screening shall be highest quality, with sharp lines and no sawtooths or uneven ink coverage. Screens shall be photographically produced. Application of inks through screens shall consist of one flood pass and one print pass. Images shall be uniform in color and ink thickness. Images shall be free from squeegee marks and lines resulting from improper print stroke or screen off contact height. Signs shall be placed in adequate drying racks with minimum of 2 inches between racks for ample airflow. Sign racks shall have system of forced airflow between layers to provide proper drying and curing of inks. After signs have dried completely according to the ink manufacturer's time allowance, signs may be packaged.

8. The edges and corners of routed letterforms shall be sharp and true. Letterforms with nicked, cut, ragged, rounded (positive or negative) corners, and similar disfigurements will not be acceptable.

9. Letterforms shall be aligned so as to maintain a base line parallel to the sign format, with margins and layout as indicated on design intent drawings and approved shop drawings. Vertical strokes shall be plumb.

10. Mechanically fasten center of letters to acrylic plastic as described in the design intent.

11. Vinyl graphics and letterforms shall be computer-cut.

I. Permits and Variances

Fabricator shall be knowledgeable of relevant local code requirements and honor same in fabrication and installa-

tion. Where applicable, it is the responsibility of the Fabricator to secure any and all necessary permits for signage installation. It is the responsibility of the Owner to secure variances, should any be required. It is the Owner's responsibility to call the appropriate agency to have all underground utilities properly located and marked. Any damage to below-grade utilities or structures for which the Owner has provided adequate location information is the responsibility of the Fabricator.

J. Site Visit

Prior to installation of the signs, the Fabricator is to visit the proposed site to observe existing conditions and verify all signage required and its location with Owner. At this time the locations shall be staked using a non-permanent visible device such as spray chalk or non-permanent paint. Certain signs may be located on sloped grades and may require uneven footings for each post. Site-verify all locations to determine special requirements for footing templates, if required.

The final Sign Message Schedule and Sign Location Plan shall be consulted together and shall be approved by the Owner to determine the precise location for each sign. Any necessary adjustments will be made with the approval of the Owner.

K. Masonry/Footings

Any concrete bases for signage are to be poured in place and footings are to extend beneath the frost line, or deeper to meet local code. All footings or bases should be poured within a form and level with grade unless otherwise specified in the design intent drawings. Foundation/footings should be level with grade unless otherwise noted or as specified by state or local code. Foundation/footings should not extend above grade more than 2" and exposed edges should be finished with a bevel to prevent chipping. It's recommended that the concrete be floated by machine or hand before finishing in order to embed larger aggregates especially when part of the footing or base extends above ground. Concrete surface should have a smooth or brushed finish grade appearance. All concrete bases and footings should be edged to break any bond with the form and create a neat appearance. All forms should be removed once the concrete has properly cured. Concrete and reinforcement specifications shall be shown on shop drawing submittals. The Fabricator is responsible for the necessary templates, mounting plates and hardware for concrete and masonry bases.

All masonry (concrete block, poured concrete, brick, slab, veneer, mortar, etc.) is to be properly treated and protected to maintain the structural integrity of the masonry work with exposure to all environmental conditions found at the site. For exposed or visible masonry, this shall include the application of protective sealers or similar finishes to diminish the effects of close-proximity sprinkling or irrigation systems.

Signs are to be mounted on J-bolt footings, centered on the concrete base or footing, and engineered per code, unless otherwise specified in the design intent drawings.

L. Wind Load

Signs, banners and mounting devices shall be engineered to withstand a minimum 30-psf wind load normal to the sign, or greater as per local code, in addition to the weight of the sign. The Fabricator shall determine appropriate method of anchoring signs to the locations specified to meet these requirements as well as all local code requirements.

M. Mounting

All signs to be mounted level and true. All exposed hardware is to be touch-up painted on site as required. It is preferred that all bolts, nuts, washers, or other fasteners shall be stainless steel. However galvanized steel is acceptable, so long as all exposed surfaces are sealed.

While sign type drawings may specify or indicate possible mounting and/or mounting hardware details, the Fabricator will be able to substitute equal or better hardware and techniques, based upon their experience with similar mounting situations and as long as the visual appearance of the sign is not compromised from that shown in the design intent drawings.

All signage products must be installed such that there are no misalignments between visible components. Sign elements intended to be removable or changeable after installation must function as intended without binding, sticking or blocking. It will be the responsibility of the Fabricator to correct any installation misalignments at no charge.

Fabricator and their installers are expected to have knowledge of ADA mounting guidelines and city zoning codes, general sign locating practices, and any particular unique installations defined by Designer. It is the desire of the Owner that the Fabricator follow these guidelines as well as architectural cues in installing for the best visual placement, keeping a reasonable distance from protruding objects. Any signage that is improperly located is to be moved to the proper location by the Fabricator, and repairs to wall surfaces and signage are to be at the Fabricator's expense.

If the installers are unable to make a decision about any sign locations, they can contact the Designer, providing a graphic representation of the questionable area, or contact the Owner for on-site options.

N. Demolition

The Fabricator is responsible for the removal and disposal of certain signs as identified in the sign message schedule. In addition to the above grade sign removal the sign foundations, sign anchors and posts must also be removed. If there are electrical connections, they must be properly terminated.

O. Site Safety and Restoration

During the installation period, the Fabricator is responsible for their own safety, and are expected to maintain a safe environment for pedestrians. The Fabricator is to keep the

• repair and reinstallation of signage due to failed mountings.

Fabricator shall also extend in writing to the Owner all manufacturers' warranties for materials and components used within the signs. It is the Fabricator's responsibility to obtain extended 5-year manufacturer warranties on all paint and powder coat applications.

Owner's premises and the adjoining premises, driveways and streets clean and clear. The job site shall be left safe, neat and clean at the completion of each day's operation. The Fabricator is also expected to temporarily maintain old signs in order to continue their directional and identification functions, as well as to maintain signage that meets MUTCD standards during the installation period. At the completion of work, the Fabricator shall remove all rubbish, tools, equipment, and surplus materials, from and about the premises, and shall leave the site as originally found. The Fabricator shall be responsible for repairing or correcting damage to other contractors' work resulting from Installer's work.

P. Punchlist

It is required that the Fabricator complete a walk through with the Owner immediately following installation to identify any errors, such as construction or installation issues. Such errors are to be corrected in a timely manner, and to the satisfaction of the Owner.

Q. Signage Warranty

Fabricator is solely responsible for applying products (paints, finishes, components, etc.) according to manufacturers' specifications and validating the warranty. The Fabricator is to provide a written five (5) year full replacement warranty to the Owner that all signs will be free of defects due to craft work and materials including, but not limited to:

• bubbling, chalking, rusting or other disintegration of the sign panel, graphics or of the edges;

• corrosion appearing beneath paint surfaces of panels, brackets, posts or other support assemblies (except as an obvious result of vandalism or other external damage);

corrosion of fasteners;

• assemblies not remaining true and plumb on their supports;

• fading, chalking and discoloration of the colors and finishes within the vinyl and paint manufacturer's stated warranty period;

• peeling, delamination or warping ("oil canning"); and

R. Repair or Replacement

Without additional cost to the Owner the Fabricator shall repair or replace, including installation, any defective signs or hardware that develop during the warranty period and repair any damage to other work due to such imperfections. The Fabricator will be required to fully replace all signs that are in error relative to the working documents (sign message schedule and sign type drawings) that were submitted to the Fabricator upon award of contract.

COLORS



Graphic Processes

Direct Embed Coating Systems (*directembedcoating.com*) or equivalent Powder coating graphic transfer process

izone Imaging (izoneimaging.com) or equivalent High pressure laminate encapsulated graphics Fabricator is responsible for matching all colors and materials as specified and is required to provide color and material samples to NEMCOG for approval.

CAUTION!

CONSISTENT AND ACCURATE COLOR REPRODUCTION IN THIS DOCUMENT CANNOT BE ASSURED DUE TO THE LIMITATIONS OF COLOR PRINTING/COPYING VARIATIONS.

Shown here are approximations of the primary signage background colors and supporting accent colors. Actual color finishes on signage must be matte or low luster (not shiny or glossy unless otherwise noted).

COLORS & MATERIALS

The Coated Pantone Matching System®, Matthews and/or Akzo Nobel Paint system is used for specifying signage color matches. (In the absence of actual sign material color chip reference sets, actual specified product color swatches should be referenced for color matching.)

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SYSTEM FONTS

Breuer Text Regular

ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz 1234567890

Breuer Text Bold

ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz 1234567890

SYMBOLS







FONTS & SYMBOLS



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Sign Type

Trailhead Kiosk w/Roof

Scale

1/2" = 1'-0" (on an 11 x 17 sheet)

Color Legend

Stainless Steel
Silver
Wood
White
Dark Green
Medium Green
Light Green
Gold
Yellow
Off White
Brown
Bright Orange
Burnt Orange
Blue
Red

Notes

This drawing is design-intent only. Fabricator is responsible for fabrication and overall level of quality. Any changes in design, materials, fabrication method or other details must be approved by Corbin Design and Northeast Michigan Council of Governments (NEMCOG).

Date	Description
03.24.15	Design Intent
09.13.16	Revision

Project

Northeast Michigan **Council of Governments**

Department of National Resources Trail Wayfinding Signage

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Trailhead Kiosk Panel Mounting Details

Scale

1" = 1" (on an 11 x 17 sheet)

Color Legend



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States and is the protected intellectual property of the Architect.

I By



Trailhead Kiosk Rendering

Scale

Not to scale

Color Legend



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Prototype sign is located in Cheboygan MI on S Western Ave between W Lincoln Ave and Taylor St.



FOUNDATION AND MOUNTING TO BE ENGINEERED BY FABRICATOR

Sign Type

Trailhead Kiosk No Roof

Scale

1/2" = 1'-0" (on an 11 x 17 sheet)

Color Legend



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Small Trailhead Kiosk /interpretive kiosk

Scale

1/2" = 1'-0" (on an 11 x 17 sheet)

Color Legend

@1	Stainless Steel
@2	Silver
03	Wood
@4	White
05	Dark Green
66	Medium Green
07	Light Green
0 8	Gold
09	Yellow
10	Off White
11	Brown
12	Bright Orange
13	Burnt Orange
14)	Blue
15	Red

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Gateway Information/ Interpretive Kiosk

Scale

1/2" = 1'-0" (on an 11 x 17 sheet)

Color Legend

@1	Stainless Steel
02	Silver
03	Wood
@4	White
05	Dark Green
66	Medium Green
07	Light Green
0 8	Gold
09	Yellow
10	Off White
11	Brown
12	Bright Orange
13	Burnt Orange
14)	Blue
15	Red

Notes

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9.13.16	Revision

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Large Trail Guide

Scale

1" = 1'-0" (on an 11 x 17 sheet)

Color Legend



Notes

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Date	Description
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Message Panel Layout

Sign Type

Gateway Identification

Scale

1" = 1'-0" (on an 11 x 17 sheet)

Color Legend



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Date	Description
03.24.15	Design Intent
06.22.15	Revised

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FABRICATOR TO PROVIDE ENGINEERED SHOP DRAWINGS FOR ENGINEER/OWNER REVIEW AND ACCEPTANCE.

Small Trail Guide

Scale

1" = 1'-0" (on an 11 x 17 sheet)

Color Legend

@1	Stainless Steel
@2	Silver
03	Wood
@4	White
05	Dark Green
66	Medium Green
07	Light Green
08	Gold
09	Yellow
10	Off White
11	Brown
12	Bright Orange
13	Burnt Orange
14	Blue
15	Red

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Description
Design Intent

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Department of National **Resources Trail** Wayfinding Signage

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Trail Placard Post

Scale

1" = 1'-0" (on an 11 x 17 sheet)

Color Legend

@1	Stainless Steel
@2	Silver
03	Wood
@4	White
05	Dark Green
66	Medium Green
07	Light Green
08	Gold
09	Yellow
10	Off White
11	Brown
12	Bright Orange
13	Burnt Orange
14	Blue
15	Red

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Date	Description
03.24.15	Design Intent
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