National Institute of **Standards and Technology Gaithersburg Campus**



Signage and Wayfinding Design Standards and Guidelines





















National Institute of Standards and Technology Gaithersburg Campus Signage and Wayfinding Design Standards and Guidelines

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Executive summary

The National Institute of Standards and Technology (NIST) headquarters is in Gaithersburg, Maryland, on a 579-acre campus of rolling terrain dotted with trees and wooded areas. There are 62 buildings and structures, totaling over 3.6 million gross square feet of space and housing approximately 4,000 personnel. Many buildings were constructed in the 1960s, and the campus is eligible for listing on the National Register of Historic Places as a Historic District because of its significance to the history of science and its striking mid-century modern architecture.

Campus signage has been added and modified over time, and now varies by location, building and age. NIST requires a coordinated signage program that is visually cohesive and enhances wayfinding. In addition to staff, NIST is host to thousands of visitors each year including conference attendees, contractors, and guest researchers. The signage system must simultaneously guide people, reflect NIST's innovative position in advanced measurement research, and respect the mid-century modern aesthetic of the campus historic district.

This *Signage and Wayfinding Design Standards and Guidelines* document is an executable program of signs for the entire campus. It was developed in concert with NIST's Capital Asset Management and Facilities Planning Group, as well as a focus group representing various NIST Organizational Units and NIST senior leadership. The Maryland State Historic Preservation Officer and the NIST Architectural Design Review Board were also consulted during the development of the design concept.

Campus context

One of the primary challenges of the signage program is guiding people around a campus with 62 buildings and multiple parking lots. The Gaithersburg campus has six gates, four of which are operational at this time. Varied operations egress only, deliveries, conference entrance, etc.—mean that perimeter signs must be very clear and tailored for each entrance. Today visitors and conference-goers typically arrive by car, either at the main Gate A or at Gate F, and must be guided to buildings and parking lots they are permitted to use. Security changes and master plan initiatives will change the entrance and screening patterns and hence the wayfinding patterns.

A hallmark of the original design is the series of fully glazed, often multi-storied, corridors or "breezeways" that serve to connect the central research and administration buildings. While most visitors are accompanied, signage and architectural cues would assist wayfinding for newcomers, guest researchers, the distracted, and staff because of visual similarity of these corridors. Signage on these corridors should not only address identification and wayfinding, but also address differentiated access.

The functional objectives addressed in the Design Standards and Guidelines include:

• Visibility—Increase the visibility of signs through size, location, and orientation. Eliminate obstructions.

- Consistency—Create uniformity through a hierarchy of typography, color, messages, and materials.
- Clarity—Reduce overload and clutter to create order and simplicity.
- Accessibility—Accommodate diverse user groups.

Signage and wayfinding program

The design team considered the campus-wide circulation system, interior and exterior, in developing the Guidelines. The document includes recommendations for each decision point in the wayfinding trail to (and from) a destination: identification of entrance gates; direction on streets; where to park; identification of buildings; directions in hallways within, and among, buildings; locations of specific laboratories and rooms.

Signs included in the NIST Signage and Wayfinding Design Standards and Guidelines are divided into three major categories: Exterior, Interior, and Specialty, reflected in the organization of the Guidelines document.

The variety in conditions, information and location are tied together by standard design features:

Consistent nomenclature using the nomenclature system approved during the project (Appendix B): numerals of buildings listed first, followed by building names spelled out. Standard type on all messages is flush left, ragged right (rather than centered or justified), a standard for typesetting developed in the 1960s and considered modern (then and now). This will help make the visual appearance of signs consistent with the mid-century modern period of significance for the campus historic district.

Compatible materials for the signs were chosen to match details of the site's mid-century modern architecture that incorporates "white" metals (silver-colored aluminum, steel, etc.), evident in the unpainted, aluminum-framed doors and window frames of most buildings.

Blue color used as an accent on signs—called NIST Blue in this document—is a standard established on NIST's website and other publications.

NIST Logo and Identifier is used in a consistent manner.

Exceptions

The signage provider may request NIST to make exceptions to these standards and guidelines if there are exceptional circumstances. These exceptions may cover suggested materials as well as design elements. These requested exceptions must be reviewed and approved by the NIST Contracting Officer's Representative (COR) on a case-by-case basis.

Executive summary, continued

Signage designs

A range of signs within a specific design framework has been developed. The signage program follows these rules:

- Signs are composed of layered metal panels in two colors – NIST blue, plus aluminum or aluminumcolored to match metal architectural details of midcentury modern buildings on the campus.
- The amount of blue predominates on large signs, reduces to a branding accent on medium-sized signs, and disappears on small signs—which will help new small signs blend in with existing signs inside buildings.
- 3. 2-sided signs have blue cores; 1-sided signs have blue back panels.
- 4. Messages in white on blue panels favor permanent, non-changeable information, including directions.
- 5. Sign messages in black on aluminum panels favor changeable messages and allow those panels to be replaced without re-manufacturing entire signs.
- 6. All signs must meet minimum requirements of the most current Architectural Barriers Act (ABA) Standards and the Americans with Disabilities (ADA) Act. To the extent possible, the designs shall also meet the minimum requirements of the most current Uniform Federal Accessibility Standards (UFAS). If there are conflicts with the provisions of this document and the minimum requirements of the ABA, ADA and UFAS, the NIST COR will review such conflicts and provide guidance.

- 7. Braille shall comply with 703.3 and 703.4 of the Architectural Barriers Act (ABA) Standards. The braille shown in some of the sign illustrations in the following pages are not to scale; in all instances, ABA Standards for braille shall prevail.
- 8. Raised characters shall comply with section 703.2 of the Architectural Barriers Act (ABA) Standards. In particular, such characters must be 1/32" above their background, and 5/8" to 2" tall in height.

Using these guidelines

The drawings of sign types in this document include dimensions, panel configurations and sample messages:

- Design standards for sign elements—components of the signs such as color, typeface.
- Design standards for exterior signs—designs/drawings for site identification, building identification and directional signs.
- Design standards for interior signs—designs/drawings for building/room identification and directional signs.
- Design standards for specialty signs—designs/drawings for signs identifying historic features and other messages.
- Landscape guidelines for exterior signs—guidance on placement and landscape enhancements.
- Fabrication and installation guidelines—requirements for the signage providers.

Design standards for sign elements





Color palette

NIST Blue aluminum, natural anodized aluminum, cast-inplace concrete and Carderock stone cladding are the primary colors and materials to be used for all signs.

Fabricator to supply pricing and samples of powder coated aluminum, porcelain enamel, other recommended finishes.



rgb: 18, 101, 156 cmyk: 92, 60, 15, 2 Benjamin Moore 2065-30 Brilliant Blue Natural anodized aluminum

Cast-in-place or precast concrete

Stone cladding

Typeface

1950s typeface DIN was originally designed for technical uses and has samewidth numerals, allowing 3-digit building numerals to align vertically as shown in example below.

101 235 309 414

DIN Regular abcdefghijklmnopqrstuvwxyz ABCDEFGHIJKLMNOPQRSTUVWXYZ 0123456789

DIN Medium abcdefghijklmnopqrstuvwxyz ABCDEFGHIJKLMNOPQRSTUVWXYZ 0123456789

DIN Bold abcdefghijklmnopqrstuvwxyz ABCDEFGHIJKLMNOPQRSTUVWXYZ 0123456789

DIN Black abcdefghijklmnopqrstuvwxyz ABCDEFGHIJKLMNOPQRSTUVWXYZ 0123456789

Logo, identifier, icons, arrows

Digital files of NIST-approved logo, identifier, icons, arrows, to be provided to NIST sign fabrication vendors.



NIST logo, designed in 1988, to be used throughout, as required, per current guidelines from NIST Public Affairs.

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NIST identifier, composed of logo plus supplemental type, to be used throughout, as required, per current guidelines from NIST Public Affairs.



Arrow stem equals width of a DIN Bold typeface capital (upper case) letter "H" vertical stroke.

Arrow may be used in up, left, right positions.





Perimeter signs location key plan





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Sign type 1.1 Site identification, primary, Gate A Elevations

Base

Carderock stone cladding. See landscape guidelines for other details.

Main sign structure Fabricated aluminum, NIST Blue.

Illumination

LED ground-mounted fixture. See landscape guidelines.

Panel 1

NIST identifier message panel: fabricated anodized aluminum mechanically fastened to main structure.

Panel 2

Gate A message panel: fabricated anodized aluminum mechanically fastened to main structure.

Messages

NIST logo and identifier: individual, fabricated, dimensional aluminum letters from provided art.

NIST Blue logo and Gate letter; black Identifier.

Typefaces

Gate letter: DIN Black. Address and "Gate": DIN Medium. 14





Looking east

Sign type 1.1 Site identification, primary, Gate A Dimensions



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Sign type 1.1 Site identification, primary, Gate A Dimensions, continued



Sign type 1.1 Site identification, primary, Gate A Dimensions, continued





Sign type 1.1 Site identification, primary, Gate A Dimensions, continued





Sign is composed of one back panel and four message panels mechanically fastened to a concrete base with Carderock stone cladding and a 9" reveal.

Sign is installed perpendicular to street.

Scale 1/2" = 1'-0" width x height x depth

Back panel

One 152"x51"x7" fabricated aluminum pan, NIST Blue front, back, and all returns.

Identifier panels

Two 135-1/2"x51"x3" fabricated anodized aluminum identifier pans. Two 16"h x 3" d NIST logos, fabricated aluminum, NIST Blue. Two 5"h x 1-1/2" d NIST identifiers, fabricated aluminum letters, black, mechanically fastened to panels.

Message panels

Two 40-1/2"x46"x3" fabricated anodized aluminum pans. Messages are 1-1/2" deep fabricated aluminum letters, mechanically fastened to pan.

Identifier and message panels mechanically fasten to back panel with spacers and align front to back.

Base

One 152"x18"x17" cast-in-place concrete base with Carderock stone cladding.

Reveal

One 94″x9″x7″ fabricated aluminum reinforced pan, gray front, back, and all returns.

Sign type 1.2 Site identification, location 3 and secondary, Gates B, C, F Elevation

Illumination

LED ground-mounted fixture. See landscape guidelines.

Messages

Include gate letters, and secondary message(s), if any, at gates.

Non-gate perimeter signs (e.g., at site location 3, Muddy Branch Road near I-270) have NIST logo and identifier, only.

Typefaces

Gate letter: DIN Black. "Gate" and additional message: DIN Medium.



Location 3

Gates B, C, F

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Signs are composed of one back panel and two message panel mechanically fastened to a concrete base with a 2" reveal.

Signs are installed perpendicular to street.

Scale 1/2" - 1'-0" width x height x depth 20

Back panel

One 42″x86″x6″ fabricated aluminum pan, NIST Blue front, back, and all returns.

Two 8-1/2" h x 3" d fabricated anodized aluminum NIST logos mechanically fastened to two sides of back panel.

Message panels

Two 40"x70"x2" fabricated anodized aluminum pans.

Messages are etched and paint-infilled black. Gate identification is etched and paint-infilled NIST Blue.

Message panels mechanically fasten to back panel with spacers. Front and back message panels align left to right.

Base

One 47"x10"x15" cast-in-place concrete base with 1" concrete mowing strip extending 12" all four sides.

Reveal

39"x2"x8" fabricated aluminum reinforced pan, gray front, back, and all returns.

Sign type 1.2 Site identification, secondary gates, location 3, Gates B, C, F Dimensions, continued



Sign type 1.3 Site identification, perimeter sign, location 1 Elevations

Base

Stone-clad concrete with 1" high apron on four sides. See landscape guidelines for other details.

Main sign structure

Fabricated aluminum in NIST Blue.

Illumination

LED ground-mounted fixture. See landscape guidelines.

Panel

NIST identifier message panel: flat anodized aluminum mechanically fastened to main structure.

Messages

NIST logo and identifier: individual, fabricated, dimensional aluminum letters from provided art. Logo in NIST Blue; Identifier in black.





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Sign type 1.3 Site identification, perimeter sign, location 1 Dimensions



Sign type 1.3 Site identification, perimeter sign, location 1 Dimensions, continued



Sign is composed of one back panel and one message panel mechanically fastened to a stone-clad concrete base with a 4" reveal.

Sign is installed perpendicular to street.

Scale 1/2" - 1'-0" width x height x depth 24

Back panel

One 148"x54"x10" fabricated aluminum pan, NIST Blue front, back, and all returns.

Message panel

One 148"x54"x3" fabricated anodized aluminum pan.

One 16"h x X"d fabricated anodized aluminum NIST logo mechanically fastened to one side of message panel.

Identifier is 6"h x X"d fabricated aluminum letters, black.

Base

One minimum 136"x18"x6"cast-in-place concrete base field measured to grade with Carderock stone cladding.

Reveal

96"x 12"x 6" fabricated aluminum reinforced pan, gray front, back, and all returns.

Sign type 1.3 Site identification, perimeter sign, location 1 Dimensions, continued





Sign type 1.4 Site identification, perimeter sign, location 2 Elevations

Base

Sign fabricator to re-use/adapt existing vertical posts for support. Re-clad existing posts with fabricated metal sleeves painted a color to be determined. Posts mechanically fastened to back side of blue main sign structure. Fabricator to verify all measurements in field and modify sign as necessary.

Note: sole sign in program to reuse existing structure.

Main sign structure

Fabricated aluminum in NIST Blue.

Illumination

LED ground-mounted fixture. See landscape guidelines.

Panels

Two NIST identifier message panels: flat anodized aluminum mechanically fastened to main structure.

Messages

NIST logo and identifier: individual, fabricated, dimensional aluminum letters. NIST: in NIST Blue from provided art. NIST identifier: in black, from provided art.

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Sign type 1.4 Site identification, perimeter sign, location 2 Dimensions



Sign is composed of two back panels and two message panels mechanically fastened to existing wood posts to be reclad in aluminum.

Back panels

Two 132"x60"x4" fabricated aluminum pans, NIST Blue front, back, and all returns.

Message panels

Two 132"x60"x2" fabricated anodized aluminum pans.

Two 18"h x 3" d fabricated aluminum NIST blue logos mechanically fastened to one side of message panels.

Identifiers are $7^{\prime\prime}h\,x\,1^{\prime\prime}d$ fabricated aluminum letters, black.

Base

Signs mount to existing wood posts re-clad with metal sleeves. Color to be determined.

V-shaped sign is installed facing the street.

Scale 1/2" - 1'-0" width x height x depth



Sign type 1.4 Site identification, perimeter sign, location 2 Dimensions, continued



Sign type 1.4 Site identification, perimeter sign, location 2 Dimensions, continued



Sign type 1.4 Site identification, perimeter sign, location 2 Dimensions, continued







NIST

Sign type 1.5 Directional, primary Elevations

Messages

Maximum three destinations per panel.

Back panel: street names, arrows, building numerals.

Front panel: building names.

Typefaces

Street names and building numerals: DIN Black. Building names: DIN Medium.

Arrow From provided art.



Sign type 1.5 Directional, primary Dimensions



Signs are composed of two back panels and two message panels mechanically fastened to a concrete base with a 2" reveal.

Signs are installed parallel to street.



Back panels

Two 40"x74-1/2"x4" fabricated aluminum pans, NIST Blue front, back, and all returns.

3-3/4" cap height anodized aluminum street names, building numerals and arrows mechanically fasten to one side of back panel.

Message panels

Two 35"x66"x2" fabricated anodized aluminum pans with building names etched and paint-infilled black.

Message panels mechanically fasten to back panel with 1" spacers.

Base

One 97"x10"x7" cast-in-place concrete base with 1" concrete mowing strip extending 12" on all four sides.

Reveals

Two 38-1/2"x2"x4" fabricated aluminum reinforced pan, gray front, back, and all returns.

Sign type 1.5 Directional, primary Dimensions, continued



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Sign type 1.5 Directional, primary Dimensions, continued



Sign type 1.5 Directional, primary Dimensions, continued






Panels

post.

Messages

per panel.

Typefaces

Arrow

numerals: DIN Black.

From provided art.



Scale 1/2" - 1'-0" width x height x depth 38

Sign type 1.6 Directional, secondary Dimensions, continued



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Sign type 1.7 Directional, pedestrian Elevations

Pylons

Available in four configurations, 1-panel to 4-panels. 4-panel pylon has optional LED lighting between lid and top of pylon. Solar panels are mounted on top.

Messages

One or two destinations per panel. Distances expressed in metric units.

Typefaces

"Gate A": DIN Bold, Messages: DIN Regular.

Arrow, walking figure, diagrams From provided art.



NIST

Sign type 1.7 Directional, pedestrian Dimensions, 2-panel configuration



Signs are composed of one, two, three, or four panels mounted to concrete base with a 1″ reveal.

Signs are installed at path intersections.

Scale 1/2" - 1'-0" width x height x depth 42

Panels

16"x55"x 1/8" to 1/4" flat aluminum panels, NIST Blue front, back, and all returns.

One, two, three, or four panels formed together at right angles.

Additional 14"x11"x1/8" to 1/4" flat anodized aluminum panel with water jet cut walking icon may be fastened to blue panel with 1/8" spacers as required.

Messages

Messages are etched and paint-infilled white.

Base

One-panel signs has 16"x4"x4" precast concrete base. All other signs have 16"x4"x16" precast concrete base.

Reveal

14″x1″ fabricated aluminum reinforced pan, gray front, back, and all returns.

Mowing strip

1"h mowing strip extends 6" beyond all four sides.

Sign type 1.7 Directional, pedestrian Dimensions, 3-panel configuration



Sign type 1.7 Directional, pedestrian Dimensions, 4-panel configuration



Four panel signs have the addition of LED lights in the reveal between the top and message panels below.

Scale 1/2" - 1'-0" width x height x depth 44

Sign type 1.8 Directional, parking lot Elevation

Panels

One- or two-sided.

Messages

Back panel: arrow, building numeral and name, optional parking icon.

Front panel: maximum three lines of destinations.

Brief wording, as needed, in one or two weights of typefaces.

Typefaces

Building numeral: DIN Black. Building name, destinations: DIN Medium.

Arrow, parking icon From provided art.



Sign type 1.8 Parking lot identification Dimensions



Signs are composed of one back panel and one or two message panels mechanically fastened to square metal post.

Signs are installed at street intersections.

Back panels One 36"x22"x1/4" flat aluminum panel, NIST Blue front, back, and all returns.

One or two 3"h street name and arrow or 2-1/4"h building name etched and paint-infilled white.

Message panels

One or two 30"x18"x1/4" flat anodized aluminum panels with 2-1/4" cap building messages etched and paint-infilled black.

Message panels adhere flush to back panel.

Post

One 104"x4"x4" square metal post set into concrete footer, depth below grade to be determined.

Mechanism of attaching signs to post to be determined by fabricator.

Scale 1/2" - 1'-0" width x height x depth **46**

Sign type 1.8 Parking lot identification Dimensions



Sign type 1.9 Identification, parking space or area Elevation

Scale

1/2" = 1'-0" width x height x depth

Panels

One-sided.

Messages As needed, brief.

Typefaces

DIN Bold and/or DIN Medium.



Reserved parking

One 18"x24"x1/8" flat metal panel, NIST Blue front, back, and all returns. Message is 2-1/2" height capital letters, upper and lower case, cut white vinyl. 2"

One 2"w x 2"d x 70"h square metal post set into concrete footer. Sign panel mechannically fastens to metal post.

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National Institute of Standards and Technology

Sign type 1.10 Building identification, free-standing Sign type 1.11 Building identification, vinyl numerals Overview

Free-standing sign located near sidewalk, perpendicular to street.

White vinyl numerals adhered to glass transom above entry doors.





Fluid Mechanics Sign type 1.10 Building identification, free-standing Elevations

Panels

Two-sided.

Messages

3-digit building numeral; spelled out, full building name.

Typefaces

Building numerals: DIN Black. Building names: DIN Medium.



Sign type 1.10 Building identification, free-standing **Dimensions** 3"



Signs are composed of one back panel and two message panels mechanically fastened to a concrete base with a 1" reveal.

Signs are installed perpendicular to street.

Scale 1/2" - 1'-0" width x height x depth

Back panels

One 30"x61"x4" fabricated aluminum pan, NIST Blue front, back, and all returns.

Two 6"h x 1"d anodized aluminum building numeral adhered flush to two sides of back panel.

Building name panels

Two 30"x49-1/2"x1" flat anodized aluminum panels with 3-1/2" cap building names etched and paintinfilled black.

Message panels mechanically fasten to back panel with 1" spacers.

Base

One 33"x6"x6" cast-in-place concrete base with 1"h concrete mowing strip extending 12" all four sides.

Reveal

27"x1"x6" fabricated aluminum reinforced pan, gray front, back, and all returns.

Sign type 1.11 Building identification, vinyl numerals Elevations

Message 3-digit building numeral.

Typeface DIN Black.



Sign type 1.11 Building identification, vinyl numerals Dimensions



Signs are cut, white 3M vinyl.

Signs are installed on second surface of glass transom.

Scale Not to scale

Building numerals on glass

One set of white, cut vinyl numerals applied to second surface of glass transom.

Size of numerals is 60% of height of glass transom, centered left to right, top to bottom.

Building numerals on tall glass transom

When the glass transom above the entry doors is very high, building numeral to match the width of the glass part of door.

Sign type 1.12 Building identification, cut numerals Elevations, large buildings

Cut metal numerals

Individual, flat water-jet cut aluminum, colored to match building metal, per provided palette to match vocabulary of building materials. Pin-mount with adhesive to building at top.

Typeface

DIN Black.

Note

Not all buildings will receive cut numerals.

Size, color, material, location and installation to be site specific based on building facade details but method of attachment must be readily reversible.

On historic brick-faced buildings, or any building where penetration of the exterior membrane is not desired, numerals may be affixed to facades using 3M VHB adhesive products, or by hanging the numerals from the top of the building.



National Institute of Standards and Technology

Sign type 1.13 Gate regulatory signs Elevations

Panels

One- or two-sided, as needed depending on locations at gates.

Messages

Federal regulations for site, as needed.

Typefaces DIN Black and DIN Medium.



Sign type 1.13 Gate regulatory signs Dimensions



Signs are composed of one fabricated pan mechanically fastened to a concrete base with a 1" reveal.

Signs are installed parallel to street.

Scale 1/2" - 1'-0" width x height x depth



Pan

One 24"x48"x3" fabricated anodized aluminum pan.

Messages

24"x5"x3" top band is NIST Blue front, back, and all returns with 1-1/2" cap etched and paint-infilled message.

Message on anodized lower portion is direct digital print in black and red.

Messages appear on one or two sides of sign.

Base

One 24"x5"x3" cast-in-place concrete base with 1"h concrete mowing strip extending 12" on all four sides.

Reveal

20"x1"x3" fabricated aluminum reinforced pan, gray front, back, and all returns.

Sign type 1.13 Gate regulatory signs Dimensions, continued



Design standards for interior signs

Sign type 2.1 Directional, overhead Elevations

Panels

One- or two-sided.

Messages

Destinations listed numerically with arrow first, building numeral second, building name third. Maximum three destinations per direction.

Typefaces

Building numerals: DIN Black. Building names: DIN Medium.

Arrows

From provided art.



IBC 1003.3.1 Headroom

Protruding objects are permitted to extend below the minimum ceiling height required by Section 1003.2 where a minimum headroom of 80" is provided over any walking surface.

Sign type 2.1 Directional, overhead Dimensions



Signs are composed of one back panel and one or two directional panels mechanically fastened flush to ceiling.

Back panel

One 58"x14-1/2"x"x1/8" flat anodized aluminum panel, NIST Blue front, back, and all returns.

Directional panels

One or two 56-1/2"x12-1/2"x1/8" flat anodized aluminum panels with 2" cap building numerals and 1-3/4" cap building names etched and paint-infilled black.

Message panels adhere flush to back panel.

Installation

Sign mounts flush to ceiling with bottom of sign not less than 80" AFF.

Bottom of sign to be not less that 80" AFF.

Scale 1/2" - 1'-0" width x height x depth



Sign type 2.2 Directional, wall-mounted Elevation

Messages

Destinations listed based on order of approach. Maximum five destinations per panel.

Typefaces

Building numerals: DIN Black. Building names: DIN Medium.

Arrows

From provided art.



Sign type 2.2 Directional, wall-mounted Elevation, Dimensions



Signs are composed of one back panel and one directional panel mechanically fastened flush to wall.

Back panel

One 18"x28"x1/8" flat aluminum panel, NIST Blue front, back, and all returns.

3" cap building numeral and floor designation are etched and paint-infilled white.

Directional panel

One 18"x24[°]x1/8" flat anodized aluminum panel with 2" cap messages and 2-1/2" cap arrow etched and paint-infilled black.

Message panel adhere flush to back panel.

Installation

Sign mechanically mounts flush wall 6" minimum from door jamb.

Scale 1/2" - 1'-0" width x height x depth



Sign type 2.4 Directional, concourse doors Elevations

Doors

Right-hand door: painted NIST Blue (front side, only). Left-hand door: painted white (front side, only).

Messages

Building numerals at top, followed by floor designation, concourse designation, directions to other buildings, other messages.

Maximum three building destinations per door.

Floor graphic

Red circle with white arrow adhered to floor in front of right-hand door.

Typefaces

Building numerals (both sizes), "Pull": DIN Black. Floor designation, other words: DIN Medium.

Arrows From provided art.



Sign type 2.4 Directional, concourse doors Dimensions



Signs are composed of a painted door and cut vinyl messages.

Door

 ${\sf Paint\,right\,hand\,door\,NIST\,Blue,\,front\,side\,only.}$

Paint left hand door white, front side only.

Building numeral, floor level and arrow 5"h cut white vinyl building numeral, floor designation and arrow.

Building numeral, floor designation and arrow adhere flush to door with VHB adhesive.

Destinations

2-1/2" cap cut white vinyl building numerals, "Pull" and additional information applied directly to painted blue door.

Scale 1/2" - 1'-0" width x height x depth



Wall

Corridor wall segments at corners of concourses: painted NIST Blue floor to ceiling.

Directional arrows: cut vinyl, white.

Panel

One flat, digitally printed vinyl panel, mounted flush to wall.

Messages

3-digit building numeral and floor designation letters, arrows.

Messages and U.S. Federalstandard icons on metal panel.

Typefaces

Building numeral: DIN Black. Floor designation: DIN Medium. Other words: DIN Bold.

Arrows, icons From provided art.



Sign type 2.5 Directional, corridor painted wall Dimensions



Signs are composed of a painted wall, cut vinyl messages, and one white vinyl sheet with direct digital printed messages.

Scale 1/2" - 1'-0" width x height x depth

Wall

Paint wall NIST Blue, floor to ceiling, 3'-0" from corner of wall to edge of blue.

9"x1/4" building numeral, 4-1/2"x1/8" floor designation and 3"x1/8" arrow cut vinyl, white, applied flush to wall with VHB adhesive.

Changeable message panel

28"x72" white vinyl sheet with black digitally printed messages applied directly to painted wall. Art for messages to be supplied.

National Institute of Standards and Technology



Sign type 2.6 Directional, concourse corner walls Elevations

Panels

90[°] angled back panel: flat aluminum, NIST Blue.

Message panel: flat anodized aluminum.

Layers separated by spacers.

Messages Maximum three destinations per panel. **Typefaces** Building numerals, both sizes: DIN Black. Floor designation, other words: DIN Medium.

Arrows From provided art.

220
Floor 1220
Floor 1Corridor B
←Corridor A
→
224
225
226





IBC 1003.3.3 Horizontal projection Projection from the wall shall not exceed 4".

Sign type 2.6 Directional, concourse corner walls Positioning Guidelines



Sign type 2.6 Directional, concourse corner walls Dimensions



Signs are composed of two back panels and one directional panel mechanically fastened flush to wall.

The two blue back panels meet at a 90° right angle at the corner.

Scale 1/2" - 1'-0" width x height x depth

Back panel 1

One 12"x28"x"x1/8" flat aluminum panel, NIST Blue front, back, and all returns.

3" cap building numeral, 2-1/4" arrow, 2" cap floor designation and 1-3/4" cap additional information are etched and paint-infilled white.

Back panel 2

One 18"x28"x"x1/8" flat aluminum panel, NIST Blue front, back, and all returns.

3" cap building numeral and floor designation are etched and paint-infilled white.

Directional panel

One 18"x20"x1/8" flat anodized aluminum panel with 2" cap messages and 2-1/2"h arrow etched and paint-infilled black.

Message panel adheres flush to back panel.

Installation Sign mechanically mounts flush wall.

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Sign type 2.7 Identification Elevations

Panels One- or two-sided.

Typeface Messages: DIN Bold.

Arrows From provided art.





IBC 1003.3.1 Headroom Protruding objects are permitted to extend below the minimum ceiling height required by Section 1003.2 where a minimum headroom of 80" is provided over any walking surface.
Sign type 2.7 Identification Dimensions



Signs are composed of one back panel and one or two directional panels mechanically fastened flush to ceiling.

Bottom of sign to be not less that 80" AFF.



Back panel

One 44″x12″x1/8″ to 1/4″ flat aluminum panel, NIST Blue front, back, and all returns.

4" h x 1/2" d cut white acrylic arrow adhered flush to back panel.

Directional panels

One or two 40"x9-1/2"x1/8" to 1/4" flat anodized aluminum panels with 3-1/2" cap message etched and paint-infilled black.

Message panels adhere flush to back panel.

Installation

Sign mounts flush to ceiling with bottom of sign not less than 80" AFF.

Sign type 2.8 Room and door sign Elevations

Panels

Flat, anodized aluminum.

Messages

U.S. Federal conforming raised characters and Grade 2 Braille. Tactile numbers/letters and pictograms/icons to be raised at least 1/32" above sign surface.

Typefaces

Building and room numbers, room names: DIN Medium. Employee names, titles: DIN Regular. Grade 2 Braille.

Signs mount flush to wall at latch side of door, 5'-0" above finished floor (AFF).





Changeable office signs are composed of one plaque with Grade 2 Braille and U.S. Federal conforming raised messages, and one changeable frame adhered to one back panel.

Fire Fighter ID signs have one plaque with U.S. Federal conforming raised messages.

Top panel

One 9" x 3 3/8" x 1/8" flat anodized aluminum plaque with 1"tall tactile characters raised 1/32" minimum above their background, painted black and accompanying Grade 2 Braille.

Changeable insert frame

One 9" x 7" x 1/8" anodized aluminum frame with changeable insert window.

Assembly

Top panel and changeable insert frame permanently adhere to 9" x 10 3/8" x 1/8" anodized aluminum back panel.

Installation

Changeable office sign mounts at 60" AFF on wall 3" from latch side of door.

Fire Fighter ID signs mount near the floor, directly beneath room ID sign.





Typical Room and Door signs are composed of two plaques with Grade 2 Braille and U.S. Federal conforming raised tactile messages adhered to one back panel.

Top panel

One 9" x 3 3/8" x 1/8" flat anodized aluminum plaque with 1" tall tactile characters raised 1/32" minimum above their background, painted black and accompanying Grade 2 Braille.

Message panel

One 9" x 7" x 1/8" anodized aluminum plaque with 1" tall tactile characters raised 1/32" minimum above their background, painted black and accompanying Grade 2 Braille.

Assembly

Top panel permanently adheres to 9" x 10 3/8" x 1/8" anodized aluminum back panel. Message panel magnetically fastens to back panel, changeable as room message changes.

Installation

Sign mounts at 60" AFF on wall 3" from latch side of door.



Restroom and Mother's room signs are one 9" x 15 3/4" x 1/8" flat anodized aluminum plaque with Grade 2 Braille and U.S. Federal conforming raised messages and icons.

An etched and black infill painted horizontal line separates the segments from one another.

Top segment

9" x 3 3/8" with 1" tall tactile characters raised 1/32" minimum above their background, painted black and accompanying Grade 2 Braille.

lcon segment

9" x 9" with 5 1/2" tall icons/pictograms, painted black, raised a minimum of 1/32" high.

Message segment

9" x 3 3/8" with tactile characters raised 1/32" minimum above their background, painted black and accompanying Grade 2 Braille. See drawings above for specific dimensions.

Installation

Sign mounts at 60" AFF on wall 3" from latch side of door.





Permanent Room and Door sign is one plaque with Grade 2 Braille and U.S. Federal conforming raised messages adhered to one back panel. **Plaque** One 9" x 9" x 1/8" flat anodized aluminum plaque.

Message

1" tall tactile characters raised 1/32" minimum above their background, painted black and accompanying Grade 2 Braille.

Installation

Sign mounts at 60" AFF on wall 3" from latch side of door.





0.5"

1.5

B 1

....

2

0.3"

LEVEL 2

Stair and Elevator signs are one 9" x 15 3/4" x 1/8" flat anodized aluminum plaque with Grade 2 Braille and U.S. Federal conforming raised messages and pictograms/icons.

Segments are separated by etched horizontal lines, infill painted black.

Top segment

15.75"

9" x 3 3/8". 1" tall tactile characters raised 1/32" minimum above background, painted black and accompanying Grade 2 Braille.

lcon segment

9" x 9" (stair) and 9" x 7" (elevator). Centered black tactile pictogram (see dimensions above), raised at least 1/32" high.

Bottom Message segment

9" x 3 3/8" with 1" tall black tactile letters and numbers, raised at least 1/32" above surface, with accompanying Grade 2 Braille.

Additional Message segment (Elevator)

9" x 2" with .5" tall tactile characters raised 1/32" minimum above background, painted black and accompanying Grade 2 Braille.

Installation

Sign mounts at 60" AFF on wall 3" from door frame.

Sign type 2.9 Building directory, dynamic Elevation, Example

NIST 222 Chemistry



Communications Technology Laboratory

Communication Technology Laboratory Office 0000

National Advanced Spectrum and Communications Test Network (NASCTN) 0000

Public Safety Communications Research Division 0000 RF Technology Division 0000 Wireless Networks Division 0000



Physical Measurement Laboratory

Physical Measurement Laboratory Office 0000 Applied Physics Division 0000 Microsystems and Nanotechnology Division 0000 Nanoscale Device Characterization Division 0000 Quantum Electromagnetics Division 0000 Quantum Measurement Division 0000 Quantum Physics Division 0000 Radiation Physics Division 0000 Sensor Science Division 0000 Time and Frequency Division 0000 Weights and Measures 0000

12:47pm

O Search by Name, Organization, Room, Function

Electronic content of dynamic directory to be coordinated with NIST IT department.



Information Technology Laboratory

Information Technology Laboratory Office 0000 Advanced Network Technologies Division 0000 Applied and Computational Mathematics Division 0000 Applied Cybersecurity Division 0000 Computer Security Division 0000 Information Access Division 0000 Software and Systems Division 0000 Statistical Engineering Division 0000

MML Material M

Material Measurement Laboratory

Material Measurement Laboratory Office 0000 Applied Chemicals and Materials Division 0000 Biomolecular Measurement Division 0000 Biosystems and Biomaterials Division 0000 Chemical Sciences Division 0000 Materials Measurement Science Division 0000 Materials Science and Engineering Division 0000 Office of Data and Infomatics 0000 Office of Reference Material 0000

Emergency, dial x222

3300

NIST- Printed

Plans/Content

30"x22"

G-1

NIST- Printed

Plans/ Content 8 ½" x 11"

Sign type 2.10 Emergency Elevation

Size

Large evacuation sign: 33"w x 32" h Small evacuation sign: 22"w x 25.5" h Shelter in place sign: 9"w x 12 3/8" h Area of Refuge sign: 9"w x 12 3/8"h

Typeface

All: DIN Medium, all caps

Grade 2 Braille on Shelter in Place and Area of Refuge signs.







Sign type 2.10 Emergency Evacuation Signs - Dimensions





Panels

Signs are each composed of: one 1/8" thick back panel (NIST Blue front, back, all returns); and one 1/8" thick message frame panel (anodized aluminum), mechanically fastened flush to the wall. Dimensions shown on drawings above.

Back Panel Message

Din Medium, all caps, 2 3/8" tall letters, etched and in-fill painted white.

Front panel frame, top segment

4" tall band with 2" tall letters/numbers, Din Medium, painted black, raised a minimum of 1/32" high. Front panel fram, bottom segment Anodized aluminum frame with dimensions as shown above, constructed with pockets for NIST printed inserts.

Segments are separated by an etched horizontal line, infill painted black.

Installation

Sign mounts flush to wall vertically centered at 60" AFF.

Sign type 2.10 Emergency Shelter and Refuge Signs - Dimensions



Signs are composed of a single plaque, 9" x 12 3/8" x 1/8" thick, anodized aluminum. The Shelter in Place sign is painted yellow/gold front, back, all returns.

Top segment

9" x 3 3/8" with 7/8" tall tactile characters raised 1/32" minimum above background, painted black and accompanying Grade 2 Braille.

Segment separated from message segment by etched horizontal line, infill painted black.

Message segment

9" x 9" with black tactile pictograms, centered in field and raised at least 1/32" above background. Dimensions shown in drawings above.

Assembly/Installation

Attach flush to wall vertically centered at 60" AFF, in proximity to room identification sign.

Design standards and rectinology Design standards and rectinology for specialty signs

Sign type 3.1 Interpretive Elevations

Size Width determined by content.

Typefaces Title: DIN Medium. Building names: DIN Regular.





Sign type 3.1 Interpretive Dimensions



Signs are composed of one back panel and one interpretive panel mechanically fastened to cement base with a 1"reveal.

Signs are installed parallel to object.

Scale 1/2" = 1'-0" width x height x depth

Typical back panel

One 26"x53"x4" fabricated aluminum pan, NIST Blue front, back, and all returns.

Title of panel is etched and paint-infilled white. Size of type to be determined by length of title.

Typical message panel

One 26"x43"x1" fabricated anodized aluminum pan.

Image is direct color print. Message is etched and paint-infilled black, size and content to be determined.

Message panel mechanically fastens to back panel with 1" spacers.

Base

One 28-1/2"x6"x13" precast concrete base.

Reveal

23-1/2"x1"x6" fabricated aluminum reinforced pan, gray front, back, and all returns.

Landscape guidelines for exterior signs

States - 2



Plant palette Plants for abundant manicured landscape

At the primary entrance to the NIST Gaithersburg Campus (Gate A), the landscape character is formalized and well-manicured, with a planted center median and an allee of canopy trees. This type of landscape is described in the Campus Master Plan as "Abundant Manicured" and is defined by mown lawns, structured plantings of shrubs and flowering plants, and groupings of canopy trees.

Landscape enhancements for the primary entrance sign at Gate A should reflect the Abundant Manicured aesthetic while incorporating a palette of perennials and shrubs to provide year-round interest with less reliance on annual plantings and heavy pruning.



Abundant Manicured plantings at Gate A

Abundant Manicured Plant Palette Flowering Perennials and Shrubs





4579@N08/35433009646

Fothergilla gardenii



Nepeta 'Walker's Low'



Salvia farinacea

Perovskia atriplicifolia

Hydrangea quercifolia



arllewis/1569754553: Carl

Stachys byzantina

Plant palette Plants for pastoral meadow landscape

Large areas of formerly mown lawns have been transformed in recent years into less manicured and more naturalistic meadows, producing a pastoral aesthetic, particularly when viewed from the outer edges of campus. This type of landscape is described in the Campus Master Plan as "Pastoral Meadow" and is characterized by naturalistic plantings of meadow grasses and perennials punctuated with informal arrangements of shrubs and small trees.

At all secondary site identification and entrance signs, landscape enhancements should incorporate plantings from the Pastoral Meadow palette.



Example of Pastoral Meadow plantings

Pastoral Meadow Plant Palette Grasses and Grasslike Plants





om/photos/john_d

Carex pensylvanica

Helictotrichon sempervirens

Schizachyrium scoparium

sesleria autumnalis



Matt Lavin (flickr.com/photo: plant_diversity/6123791753)

Drew Avery (flickr.com/photc 33590535@N06/3485053382



Juncus effusus

Festuca ovina glauca



Maja Dumat (flick blumenbiene/444

Yucca filamentosa

Plant palette Plants for pastoral meadow landscape, continued

Pastoral Meadow Plant Palette Flowering Perennials and Shrubs



F.D. Richards (flickr.com/photos/ 50697352@N00/47995039596)

Cornus sericea

Nepeta 'Walker's Low'

Pastoral Meadow Plant Palette Small Trees





cultivar413 (flickr.com/photos/ 131880272@N06/48861631907



Ryan Somma (flickr.com/pho ideonexus/6087287461)





Perovskia atriplicifolia



Salvia ferinacea

Materials palette Sign bases

Sign base materials will vary with sign design, location, and landscape. A Carderock stone-clad base, referencing the historic stone gate posts relocated, with a bluestone cap, from the National Bureau of Standards (NBS) Headquarters, should be used for the primary entrance signs at Gate A and perimeter location 1. Secondary site identification and entrance signs should be mounted to simpler, cast-in-place textured concrete bases. Similarly, pedestrian and primary directional signs should be mounted to precast or cast-in-place concrete bases set in mown grass.

All sign bases mounted within mown grass should be surrounded by a 6- to 12-inch wide cast-in-place concrete apron 1 inch above finished grade, to prevent mower damage to sign bases and eliminate the requirement for edging.

Primary and secondary site identification signs should be illuminated. Wide LED lights are appropriate for Gate A, while narrow LED lights are appropriate for secondary site identification and entrance signs. In locations where electrical power is not available, solar LED lighting is suggested.

Examples of market products



Wide LED Light KIM Lighting 4300 Series PicoPrism™ LED hubbell.com/kimlighting



Narrow LED Light KIM Lighting Compact Floodlight hubbell.com/kimlighting



Historic stone gate post from NBS Headquarters in Washington, DC



Sign type 1.1 Site identification, Gate A Existing conditions

As the primary entrance to the NIST Gaithersburg campus, Gate A features an Abundant Manicured center median and an allee of canopy trees lining the drive.

The visitor center features stone cladding at its base, evoking the historic stone gate posts relocated from the NBS Headquarters in the District of Columbia.



Gate A





Visitor center with stone cladding

Sign type 1.1 Site identification, Gate A Proposed enhancements

A new primary entrance sign should be located on the center axis of the planted median that leads to the visitor center, where it is most visible from the intersection of West Diamond Avenue and Bureau Drive.

The sign should be mounted to a low, Carderock stone-clad base extending from the median plantings and illuminated with groundlevel LED flood lights. The base should step up to short wall aligning with the mid-point of the steel sign panel, creating a landmark element.

Plantings from the Abundant Manicured palette should surround the stone-clad base, with low-growing flowering perennials planted in front of the sign and taller shrubs and flowering perennials planted along the short wall.



Sign type 1.2 Site identification, secondary, location 3, Gates B, C, D, E, F **Existing conditions**

No secondary sign exists at location 3. There is broad visibility from Muddy Branch Road to the proposed sign location.

Secondary Gates B through F have high visibility either from Quince Orchard Road along the western edge of campus or from Muddy Branch Road along the eastern edge of campus. At all secondary entrances, broad, mown lawn areas separate the road from the perimeter fence.

Each secondary gate location is relatively flat, except for Gate F, where deep drain swales are present on both sides of the gate. Gate F also is characterized by tall metal guard rails and an abundance of regulatory signage.





Gate B



Gate D



Gate F



Gate C



Google Earth

Google Earth (sign relocated afte this image was captured)

Gate E



Location 3

Sign type 1.2 Site identification, secondary, location 3, Gates B, C, D, E, F **Proposed enhancements**

Gate B

New secondary signs for location 3 and Gates B through F should be mounted to a textured concrete base and illuminated with ground-level LED flood lights.

When funding is available, plantings should be selected from the Pastoral Meadow palette, with low-growing perennials planted in front of the sign and taller shrubs planted toward the perimeter fence.





National Institute of Standards and Technology

Sign types 1.2, 1.3 Site identification, location 1 Existing conditions

The existing sign at location 1 sits high on the slope at the intersection of West Diamond Avenue and Quince Orchard Road. The sign is partially hidden behind a row of cherry trees and between dense evergreen shrubs.



Location 1



New sign location

Pastoral Meadow

West Diamond

Cherry tree

(to remain)

Existing sign location

Shrub (to be removed)

Perimeter fence

planting area

Sign type 1.3 Site identification, location 1 **Proposed enhancements**

A new sign should be installed forward of the existing location, lower on the slope. The sign should be mounted to a Carderock stone-clad base and illuminated with ground-level, solar-powered LED flood lights.

Two obstructing cherry trees and all shrubs should be removed. The cherry trees could be relocated to an area behind the new sign, and new cherry trees could be planted to replace those previously removed for construction of the bicycle path. When funding is available, new plantings should be selected from the Pastoral Meadow palette, with low-growing perennial grasses planted in front of the sign and taller grasses and shrubs planted between the sign and the perimeter fence.



Cherry tree

Cherry tree -

Mown

grass

(to be removed)

(new or relocated) cherry tree

Sign type 1.5 Directional, primary Sign type 1.7 Directional, pedestrian Proposed enhancements

Pedestrian and primary directional signs should be mounted to low, precast or cast-in-place concrete bases with mowing strips.

These directional signs are intended for mown lawn areas, either along pathways or near building entrances, and do not require lighting or additional planting.



Fabrication and installation guidelines

General standards/requirements for providers

1. Applicable to All Signs - Exterior, Interior and Specialty.

- A. Quality. The materials, products, workmanship and installation must be of superior quality and conform to industry best practices.
- B. Field Evaluation. The provider must evaluate existing conditions and validate feasibility of installation of the sign/s being procured by NIST. Evaluation must consider structure, electrical infrastructure, data/communication distribution networks, potential encumbrances on security infrastructure (e.g. blocking security cameras), and general locational and placement attributes.
- C. Permitting. NIST adheres to a 'good neighbor policy' and to the extent possible, follows the applicable local regulatory requirements. The provider must review compliance with all applicable regulatory requirements and notify NIST if any aspect of the sign/s in question are not in conformance. The provider shall be responsible for procuring required permits and obtaining variances (where needed).
- D. Shop Drawings: The design standards and specifications noted in Design Standards chapter are indicative of design intent. The provider shall prepare and submit shop drawings to NIST ahead of installation. The shop drawings must address conditions assessed as part of the field evaluation but follow the design intent to the maximum intent feasible. Cost, durability, ease of maintenance and performance overtime must be considered along with original design intent. Any deviations to the original design intent must be called out and will require explicit approval of the NIST contracting officer's technical representative. Foundation drawings must be stamped by a licensed structural engineer.
- E. Structural: The provider must assess structural requirements for the signs as part of the field evaluation. For exterior signs, wind loads, snow loads, soil conditions, etc. must be taken into consideration. For interior signs, wall types, blocking requirements, power and data provisions will need to be assessed. Both exterior and interior sign installations must consider potential structural impact on historic resources.
- F. Finish. Joints between various portions of signs that are not welded nor sealed, must have a tight, hairline-type appearance, without gaps. Exposed welded joints must be filled and ground smooth so that there is no seam visible. All pieces must be fastened and fabricated such that there is no looseness, racking, or movement. All fasteners shall be concealed unless otherwise specified.

2. Exterior Signage

A. Location and Placement.

- a. General. The location and placement of exterior signs proximate to vehicular roads must ensure that visibility of motorists or other users are not impacted. In particular, the recommendations on site triangles noted in the latest version of "A Policy on Geometric Design of Highways and Streets" published by the American Association of State Highway and Transportation Officials (AASHTO) shall be followed. It is preferred that perimeter signs are not placed within the public rights of way or within required setback distances. The signs shall also be compliant with the City of Gaithersburg Ordinance in general and applicable requirements of Sections 24-208 through 24-213 in particular. Preferably, the visibility of all of these signs shall also be considered in conjunction of vegetation that may encumber the visibility of the signs and/or sight triangles.
- b. Primary Gate Sign: The sign for Gate A is on a fully signalized intersection. Section 9.5.3 Intersection Control of the AASHTO Policy on Geometric Design of Highways and Streets categorizes such intersections as Case D. For such intersections, the Policy states that "...the first vehicle stopped on one approach should be visible to the driver of the first vehicle stopped on each of the other approaches. Left-turning vehicles should have sufficient sight distance to select gaps in oncoming traffic and complete left turns. Apart from these sight conditions, there are generally no other approach or departure sight triangles needed for signalized intersections." See location plans. The primary gate sign shall be oriented perpendicular to the roadway frontage.
- c. Secondary Gate Signs. Two of the secondary gate signs (at Gate B and Gate F) are at fully signalized intersections and will be categorized as Case D under Section 9.5.3 Intersection Control of the AASHTO Policy on Geometric Design of Highways and Streets. Gates C, D, and E are not controlled by signals. Contingent of whether exiting traffic will have a yield control or a stop control, these gates will be categorized either as Case B, Intersections with stop control on the minor road, or as Case C, Intersections with yield control on the minor road. It is recommended that where possible, the signs be located to the right of the exiting traffic for clear visibility of oncoming traffic. The secondary gate sign shall be oriented perpendicular to the roadway frontage. Note that Gate C currently operates as entrance only and gates D and E are not routinely operational.
- d. Intersection Signs. The locations of these signs generally do not have much impact on the visibility from a vehicular traffic safety standpoint as long as they

are placed outside of the respective rights-of-way. The intersection signs shall be oriented to maximize visibility from adjacent streets.

- e. Primary Directional Signs. These signs are located at or before the first intersection upon entering the campus. Generally, signs shall be located outside of vehicular sight triangles noted in Section 9.5.3 Intersection Control of the AASHTO Policy on Geometric Design of Highways and Streets.
- f. Secondary directional signs. Secondary directional signs shall comply with the requirements/standards of the latest edition of the Manual on Uniform Traffic Control Devices. In general, no portion of the signs shall encumber within 2'-0" of the curb and shall have a minimum of 7'-0" clearance from the immediate grade.
- g. Free-standing Building identification signs. Free-standing Building Identification Signs should reference the plan/map and schedule that is being produced. The freestanding building signs shall be located near to the primary campus road serving the respective building perpendicular to the road, at least two feet inside the sidewalk or 6 feet from the curb, whichever is greater. These signs shall be located proximate to the pedestrian walkway leading from the road to the primary entrance to the building. Where a building does not have a transom identification sign or, a roof hung identification visible from the road, and where the primary building entrance is more than 150 feet from the primary campus road serving the building, a secondary identification sign may be placed perpendicular to the road.
- h. Roof hung Building identification signs. Roof hung building identification signs shall be placed to maximize visibility from the primary access road/s serving the building.
- i. Pedestrian signs. Pedestrian signs shall be placed at intersections of sidewalks and trails that are not served by a primary or secondary directional sign. Pedestrian signs are also recommended for long stretches of trails (~300 feet) where directional signs are not visible.
- B. Vandalism. Perimeter signs must be fabricated and installed in a fashion that can withstand severe abuse and resist vandalism.
- C. Weatherproofing. Sign cabinet seams shall be sealed to ensure they are watertight. Finishes shall be free from fading, peeling or cracking. Inconspicuous drain holes shall be provided as needed to prevent water accumulation within signs. Drainage must not occur onto signs or other surfaces that can cause staining. Provide color-coordinated insect screening over drain holes.
- D. Illumination. The provider shall be responsible for electrical design for illumination of signs. Designs must be certified by a licensed electrical engineer and shall be fabricated and wired to be compliant with current UL® listing requirements, and shall be UL® certified
- E. Landscape. The provider may be responsible for completing the landscape work associated with the sign type identified in the scope of work. Confirm with NIST. Unless otherwise approved by the NIST Contracting Officer's Representative, the landscape design must be included in the shop drawings and adhere to the landscape guidelines noted in the Landscape Enhancements chapter.

- 3. Interior Signage
 - A. Location and Placement.
 - a. General. Directional signs shall preferably be located at all decision points within the concourse system and buildings with multiple corridors. Directional signs are also needed where level changes are required or available to allow movement along the concourse and/or crossovers. Overhead signs shall be compliant with the clearance requirements required by the latest edition of the International Building Code at the time of installation. While placing signs relative location of all security (such as CCTV cameras) and life safety devices (such as alarms and exit signs) must be considered and any conflicts must be discussed with NIST Contracting Officer's Representative for a resolution prior to development of shop drawings. Reference location plans.
 - b. Overhead Directional Signs. These directional signs must ensure that adequate clearance is available. Placement shall maximize visibility and minimize confusion.
 - Wall mounted directional signs. These signs are to be installed at angular or T- decision points as well as where ceiling height limitations do not allow installation of overhead directional signs.
 - d. Concourse door directional signs. These signs shall be placed on all concourse doors.
 - e. Corner directional signs. These signs are to be primarily located at the corridors leading to the General Purpose Laboratories (GPLs) from the concourse system.
 - f. Building Directory. Power and data connectivity must be considered while determining placement of Building Directory Signs. Building directory signs shall be located proximate to the primary building entrance.
 - g. Specialty Signs. Specialty signs shall be located such that the signs' users are able to get close enough to read the signs. Ambient lighting shall be considered to ensure legibility of these signs under daylight conditions. The NIST Contracting Officer's Representative may require the provider to consider external illumination for these signs on a case by case basis.
 - B. Raised characters and Braille. Interior identification signs shall have raised characters and braille in accordance with sections 703.2, 703.3 and 703.4 of the Architectural Barriers Act (ABA) Standards. The NIST COR may require additional signs to have braille as deemed necessary.
 - C. Illumination. To the extent possible, sign placement shall be such that ambient light (from natural or artificial light sources) is adequate for the sign to be legible for users. If other placement restrictions prevent legibility of sign using ambient lighting, the provider must provide external illumination options based on the field inspection for review and selection by NIST Contracting Officer's Representative.
 - D. Power and Data. Power and data connectivity must be considered for all electronic signs. Power connectivity must also be considered for signs that require external illumination.

City of Gaithersburg Sign Ordinance, select sections

The following is a selection of the applicable Gaithersburg Ordinance related to signs as of March 2020. Please note, the provider must refer to all applicable and any updated sections of this Ordinance related to signs; the following selection is intended to provide a snapshot of the relevant sections only.

Section 24-210 (a) Area computation for signs:

- (2): All sides of a sign which are visible from any one vantage point shall be measured in determining the area of a sign, except that only one side of a sign shall be measured if the two (2) sides thereof are back-to-back or separated by an angle of forty-five (45) degrees or less. In the latter case, if the two (2) sides are not equal size, the larger side shall be measured.
- (3): Addresses for any building or tenant may be excluded from the allowable signage for that building or tenant so long as the address letters or numbers do not exceed six(6) inches in height.

Section 24-210 (c) Height:

- (1) Unless otherwise specified by a subsection of this chapter, signs not attached to a building shall not exceed ten (10) feet in height. The height shall be measured from the finished grade of the property at the base of the sign.
- (2) The planning commission may approve a sign exceeding the height prescribed herein pursuant to subsection 24-213A(f) upon a finding that an unnecessary hardship will result due to topographic or other physical conditions relating to the property.

Section 24-210 (a) (e) Lighting:

The light source intended to illuminate a sign shall be shaded, shielded or directed so that the light intensity or brightness shall not adversely affect surrounding or facing premises, nor adversely affect safe vision of pedestrians or operators of vehicles moving on public or private streets, driveways or parking areas.

Section 24-210 (g) Placement or location:

- (1) No sign shall obstruct any door, fire escape, stairway or any opening intended to provide ingress or egress to or from any building or structure.
- (2) The lowest point of any sign which extends over an area intended for pedestrian use shall not be less than eight (8) feet above the finished grade below it. The lowest point of any sign which extends over an area intended for vehicular use shall be not less than fourteen (14) feet above the finished grade below it.

(3) Unless otherwise indicated in this section of article IX, signs shall be permitted within any yard and/or building restriction line setback area.

Section 24-210 (h) Public right-of-way:

- (1) Except as to noncommercial signs specified in subsection three (3) of this section or otherwise provided in this article, no sign shall be placed in any city, county or state right-of-way except signs erected by a public agency and identification signs for a community development or subdivision project defined in subsection 24-211(g) of this article on a residential primary or secondary street within or abutting the community; provided, that such identification sign shall not be located so as to constitute a hazard to the safety of motorists and pedestrians, shall be subject to the approval of the city manager, or designee, and erected pursuant to a revocable sign permit, the issuance of which is conditioned upon removal of the sign at no cost to the city at such time as the city manager, or designee, may direct.
- (2) No signs, except signs erected or authorized to be erected by a public agency, shall be attached to utility poles, public traffic control signs, or placed in median strips.
- (3) No sign shall be placed in any area designated as a proposed right-of-way on the most recent approved and adopted master plan of the city, except signs issued pursuant to a permit, the duration of which shall expire prior to the initiation of construction within said right-of-way, including signs located on industrially or commercially improved property, real estate signs, directional signs, or signs advertising a civic, religious or charitable event; provided, however, the city planning commission shall, in the case of permanent signs, first review said sign as to its compatibility and traffic safety and make recommendations to the city manager prior to a revocable permit being issued by the city manager, or designee. Permits issued hereby are to be conditioned upon removal of the sign at no cost to the city at such time as the city manager, or designee, may direct.

Section 24-210A Prohibited signs and sign devices.

- (e) Internally lit box signs: Internally lit box signs are not permitted unless the background is opaque where only the letters or logos are illuminated, with the exception being signs under five (5) square feet. Avoiding white background will reduce glare and improve readability. However, the color white may be used for the letters and logos. Any existing internally illuminated box sign that has a white background may remain until it is replaced, at which time it must conform to this article.
- (i) Portable or movable signs: Portable or movable signs which are not firmly attached to a structure are prohibited, except as provided in subsection 24-212(a). Portable and

movable signs shall include signs carried, waved or otherwise displayed by persons either in public rights-of-way or visible from public rights-of-way for the purpose of drawing attention for commercial sales.

- Section 24-211 (g) Signs permitted in all zones. Permanent identification signs.
 - (1) On-site signs of a permanent nature, setting forth the name of a church, community, development, center or other like projects, shall be permitted. Such signs shall be deemed to include community bulletin boards.
 - (2) Such signs may be freestanding or may be attached to a building wall or a decorative wall; provided, however, where such sign is a part of a decorative wall, only the message area shall be calculated toward the total signage permitted.
 - (3) Any such sign shall not impair site distance to safe egress from the property and shall not exceed twenty-four (24) square feet in area; provided, however, that the planning commission may approve such an identification sign in excess of twenty-four (24) square feet in area upon a finding that the proposed sign, by nature of its purpose and location, and the nature of the project it identifies justifies such larger area, and that such larger sign will not affect the health, safety and welfare of the general public, nor be a hazard to traffic, vehicular or pedestrian.
 - (5) Places of worship, schools, public parks and public buildings with approval of the planning commission shall be permitted to have electronic message boards, subject to the following regulations:
 - a. An electronic message display board must not have any distracting appearance of motion, flashing, blinking, or shimmering, and must not constitute a safety hazard by distraction of drivers. The display shall remain static for a minimum of six (6) seconds with instantaneous change of the display; i.e., no "fading" in/out of the message.
 - b. No more than one sign with one electronic message display board is permitted per lot of record.
 - c. An electronic message display board may not be located so that its message is visible from any controlled-access highway or ramp.
 - d. Individual letter height shall not be less than five (5) inches.
- Section 24-212 Commercial and industrial signs.
 - (a) A-frame signs: One A-frame sign is permitted for each business and must comply with the following regulations:
 - (1) Must not exceed three (3) feet in width and four (4) feet in height.
 - (2) Must be located within twenty (20) feet of the entrance.
 - (3) Must be removed daily at the close of business and during periods of inclement weather.
 - (4) Must not impede the flow of pedestrians or vehicles, nor cause any safety problem related thereto.
 - (5) Must have a permit which may be revoked at any time for violations of this article.
 - (6) Must be of sturdy, heavy duty material.

- (7) The total area of any A-frame sign shall be counted toward the total allowable signage for any one tenant or business.
- (8) Unless specifically permitted by the city manager, or designee, an A-frame sign shall not be placed in the public right-of-way.
- (c) Building signs:
- (1) The total area of signs for any building, except in the R-B, CBD, and CD Zones, shall not exceed ten (10) percent of the total square footage of the facades of a building holding the signs and shall have a maximum size of one hundred (100) square feet for any individual sign. Provided, however, that signage is limited to only those sides of a building that face a public street or have a public entrance, unless approved by the planning commission. This provision shall not apply to incidental signs as defined in section 24-209 of this Code.

(m) Monument signs:

- (1) One freestanding monument sign facing each public street frontage, not exceeding ten (10) feet in width and eight (8) feet in height from grade at the base of the sign is permitted for each lot or parcel containing a building, with a maximum total of two (2) signs exclusive of theater marquee or service station signs. If two (2) such signs are allowed, the sign locations and orientation must not allow both signs to be read in the same view shed.
- (2) Monument signs in excess of eighty (80) square feet and higher than eight (8) feet but not more than twelve (12) feet may be approved by the planning commission upon a finding that the proposed sign, by nature of its purpose and location, and the nature of the project it identifies, justifies such larger area and height, and that such larger sign will not affect the health, safety and welfare of the general public, nor be a hazard to vehicular or pedestrian traffic as per subsection 24-213A(f).
- (3) Channel letters and halo-style letters are permitted on monument signs. Neon lighting is not permitted on monument signs.
- (4) Internally lit monument signs are permitted if only the letters or logos are illuminated. White backgrounds are to be avoided to reduce glare and improve readability. However, the color white may be used for letters and/or logos.
- (5) Individual letter height shall not be less than seven (7) inches and not more than twelve (12) inches.
- (6) The inclusion of electronic message boards as defined in section 24-209 must be approved by the planning commission.
- (7) All monument sign permits shall include a base landscape design and lighting plan, if lighting is proposed.

Section 24-213A Permits

- (a) Sign permit required
- (1) Except as specifically excluded from the provisions of this ordinance, it shall be unlawful for any person to post, display, substantially change, or erect a sign in the city without first having obtained a sign permit. The city manager, or designee, may seek

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the advice of the planning commission in connection with any application for such a permit.

- (2) The duration of a sign permit corresponds to the type of sign allowed under section 24-211 of this article.
- (3) Where a sign will also require a building, electrical or other related permit under the provision of this Code, the city manager, or designee, shall have discretion with respect to the duration of such permits and is authorized to establish conditions for the issuance thereof.
- (b) Sign permit application requirements: Applications for sign permits shall be filed by the sign owner or his agent in Planning and Code Administration upon forms furnished by said office. The application, which may be modified from time to time, shall describe and set forth such information as to fulfill the requirements of this article and shall generally include the type, size, location, and materials of the sign and its supporting structure; the name(s) and address(es) of the owner(s) of the real property upon which the subject sign is to be located, and written consent of the owner, or his agent, granting permission for the placement or maintenance of subject sign.
- (c) Compliance with codes: All signs shall comply with relevant requirements of the city building code, the Maryland High Voltage Line Act, and if they contain electrical components, shall additionally comply with the requirements of the city electrical code.

Appendices

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Content of guidelines document supersedes any matter in Appendices.



Appendix A: Glossary of acronyms

Occupants

- ADIIS Associate Director of Innovation & Industry Services
- ADLP Associate Director for Laboratory Programs
- ADMR Associate Director for Management Resources
- CNST Center for Nanoscale Science and Technology
- CTL Communications Technology Laboratory
- EL Engineering Laboratory
- HMEP Hollings Manufacturing Extension Partnership
- ITL Information Technology Laboratory
- MML Material Measurement Laboratory
- NCNR NIST Center for Neutron Research
- DO Director's Office
- OFPM Office of Facilities and Property Management
- OFRM Office of Financial Resource Management
- OHRM Office of Human Resources Management
- OISM Office of Information Systems Management
- OSHE Office of Safety, Health and Environment
- OSY Office of Security, Dept. of Commerce
- PML Physical Measurement Laboratory

Other

- AASHTO American Association of State Highway and Transportation Officials
- ACHP Advisory Council on Historic Preservation
- ACSL Advanced Chemical Sciences Laboratory
- AML Advanced Measurement Laboratory
- ATL Advanced Technology Laboratory
- BRT Bus Rapid Transit
- CCF Central Computing Facility
- CCT Corridor Cities Transitway
- CHP Combined Heat and Power
- CMS Concrete Material Storage
- DAS Distributed Access System
- GPL General Purpose Laboratory
- EO Executive Order
- EPA Environmental Protection Agency
- ESD Environmental Site Design
- FCI Facility Condition Index
- FML Fluid Mechanics Laboratory
- HRSG Heat Recovery Steam Generator
- IB Industrial Building
- ISC Interagency Security Committee
- LEED Leadership in Energy and Environmental Design
- LOS Level of Service
- MARC Maryland Area Regional Commuter Train Service
- MDE Maryland Department of the Environment
- MHT Maryland Historical Trust
- MNCPPC Maryland National Capital Parks and Planning Commission
- MWCOG Metropolitan Washington Council of Governments
- NCPC National Capital Planning Commission
- NEPA National Environmental Policy Act
- NPDES National Pollutant Discharge Elimination System
- NRHP National Register of Historic Places
- OSM Office of Systems Management
- 0U Organizational Unit
- PML Physical Measurement Laboratory
- RPS Radiation Physics Storage
- SHPO State Historic Preservation Officer
- SL Sound Laboratory
- SPL Special Projects Laboratory
- SWM Storm Water Management
- SWPPP Stormwater Pollution Prevention Plan
- TAZ Traffic Analysis Zone
- TDM Traffic Demand Management
- UVIS Under-vehicle Inspection System
- WSSC Washington Suburban Sanitary Commission

Appendix B: Naming schedule Approved building names for site directional signs (Sign types 1.5, 1.6) and exterior building identification signs (Sign type 1.10): words spelled out, no acronyms, no "building"

BUILDINGS Building

bunung		
number	Building name	Exception
101	Administration	
103	Visitor Center	
202	Engineering Mechanics	
203	Standard Reference Materials	
205	National Fire Research Laboratory	On directional signs: National Fire Research Lab, if need shorter
205E	Emissions Control Electrical	
205M	Emissions Control Mechanical	
206	Concrete Materials	
207	Response Robotics Test Facility	On directional signs: Response Robot Test Facility, if need shorte
208	Net-Zero Energy Residential Test Facility	On directional signs: Net-Zero House
215	CNST NanoFab	
216	Advanced Measurement Laboratory East	On directional signs: AML East
217	Advanced Measurement Laboratory West	On directional signs: AML West
218	Advanced Measurement Laboratory Metrology East	On directional signs: AML Metrology East
219	Advanced Measurement Laboratory Metrology West	On directional signs: AML Metrology West
220	Metrology	
221	Physics	
222	Chemistry	
223	Materials	
224	Polymer	
225	Technology	
225	Building Research	
220	Advanced Chemical Sciences Laboratory	
230	Eluid Mechanics	
230	Industrial	
231	Sound	
233	NICT Conton For Neutron Dessareh	On redestring signer NCND
235	Created Projects	OII pedescriari sigris. NCNR
230	Special Projects	
237	Non-Magnetic	
230	Noll-Magnetic	
245	Radiation Physics	
301	Support Services	
302		
303	Service	
304	Instrument Fabrication Shops	
305	Cooling Tower	
3050	Switchgear	
306	Electrical Sub-Station	
307	Materials Processing Storage	
309	Grounds Maintenance	
310	Facilities Storage	
311	Grounds Storage	
312	Materials Processing	
313	Site Effluent Neutralization Backflow	
314	Backflow Preventer-East	
315	Backflow Preventer–North	
316	Electrical Service	
31/	Cooling Tower West	
318	Emergency Services	
319	Emergency Services Storage	
320	Child Care Center	
321	NCNR Storage Facility	
411	Temporary Office Facility	On directional signs: Temp. Office Facility
414	Janitorial Storage	
418	NCNR Storage 1	
420	OFPM Storage	
421	Radiation Physics Storage	
422	Concrete Materials Storage	
423	Indoor Air Quality Research House	On directional signs: IAQ Research House
425	NCNR Storage 2	
426	NCNR Trailer 2	
427	NCNR Trailer 1	
428	Facilities	

OTHER

Full name	Permitted shorter name
Gate A	
Gate A-Visitor Center	
Gate B	
Gate C	
Gate D	
Gate E	
Gate F	

West Diamond Avenue	W Diamond Ave
Muddy Branch Road	Muddy Branch Rd
Quince Orchard Road	Quince Orchard Rd

Bureau Drive	Bureau Dr
Center Drive	Center Dr
East Drive	East Dr
North Drive	North Dr
South Drive	South Dr
West Drive	West Dr
Research Drive	Research Dr
Service Drive	Service Dr
Sound Drive	Sound Dr
Steam Drive	Steam Dr

FUTURE BUILDINGS		
Building		
number	Building name	
000*	Research I	
000*	Research II	
000*	Research III	
000*	Research IV	
000*	Research V	
000*	Electrical Substation 2	
000*	Standard Reference Materials 2	
000*	AML Extension	
000*	Strong Floor Facility	
000*	Wind/Fire Facility	
000*	Commercial Vehicle Inspection	
000*	Shipping/Receiving	
000*	East Visitor Center	
*Numeral	s to be determined.	