WAYFINDING PROCESS MANUAL

NOVEMBER 2021

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
Prince George's County Planning Department

ABSTRACT

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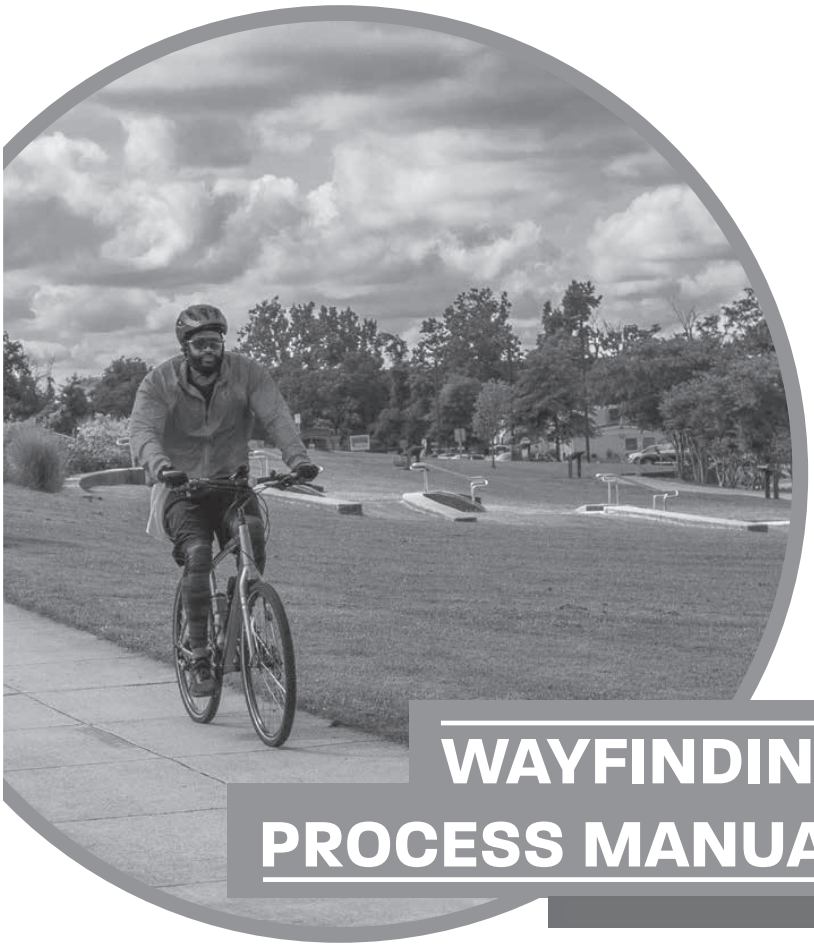
Abstract: Wayfinding has come to refer to the process of navigating from place to place and to the industry that produces the tools to help us find our way. This manual provides insight into the process of wayfinding to describe a system of tools that can be implemented to support navigation by motor vehicle, bicycle, or walking in Prince George's County. By using this manual as a resource, communities who want to implement wayfinding will have a better understanding of how coordinated, well-executed wayfinding projects can improve movement efficiency, encourage sustainable transportation, and raise awareness of places and attractions.



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Upper Marlboro, MD 20772

www.pgplanning.org

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The Maryland-National Capital Park and Planning Commission (M-NCPPC) is a bicounty agency, created by the General Assembly of Maryland in 1927. The Commission's geographic authority extends to the great majority of Montgomery and Prince George's Counties: the Maryland-Washington Regional District (M-NCPPC planning jurisdiction) comprises 1,001 square miles, while the Metropolitan District (parks) comprises 919 square miles, in the two counties.

The Commission has three major functions:

- The preparation, adoption, and, from time to time, amendment or extension of the General Plan for the physical development of the Maryland-Washington Regional District.
- The acquisition, development, operation, and maintenance of a public park system.
- In Prince George's County only, the operation of the entire County public recreation program.

The Commission operates in each county through a Planning Board appointed by and responsible to the County government. All local plans, recommendations on zoning amendments, administration of subdivision regulations, and general administration of parks are responsibilities of the Planning Boards.

The Prince George's County Planning Department:

Our mission is to help preserve, protect and manage the County's resources by providing the highest quality planning services and growth management guidance and by facilitating effective intergovernmental and citizen involvement through education and technical assistance.

Our vision is to be a model planning department of responsive and respected staff who provide superior planning and technical services and work cooperatively with decision makers, citizens, and other agencies to continuously improve development quality and the environment and act as a catalyst for positive change.

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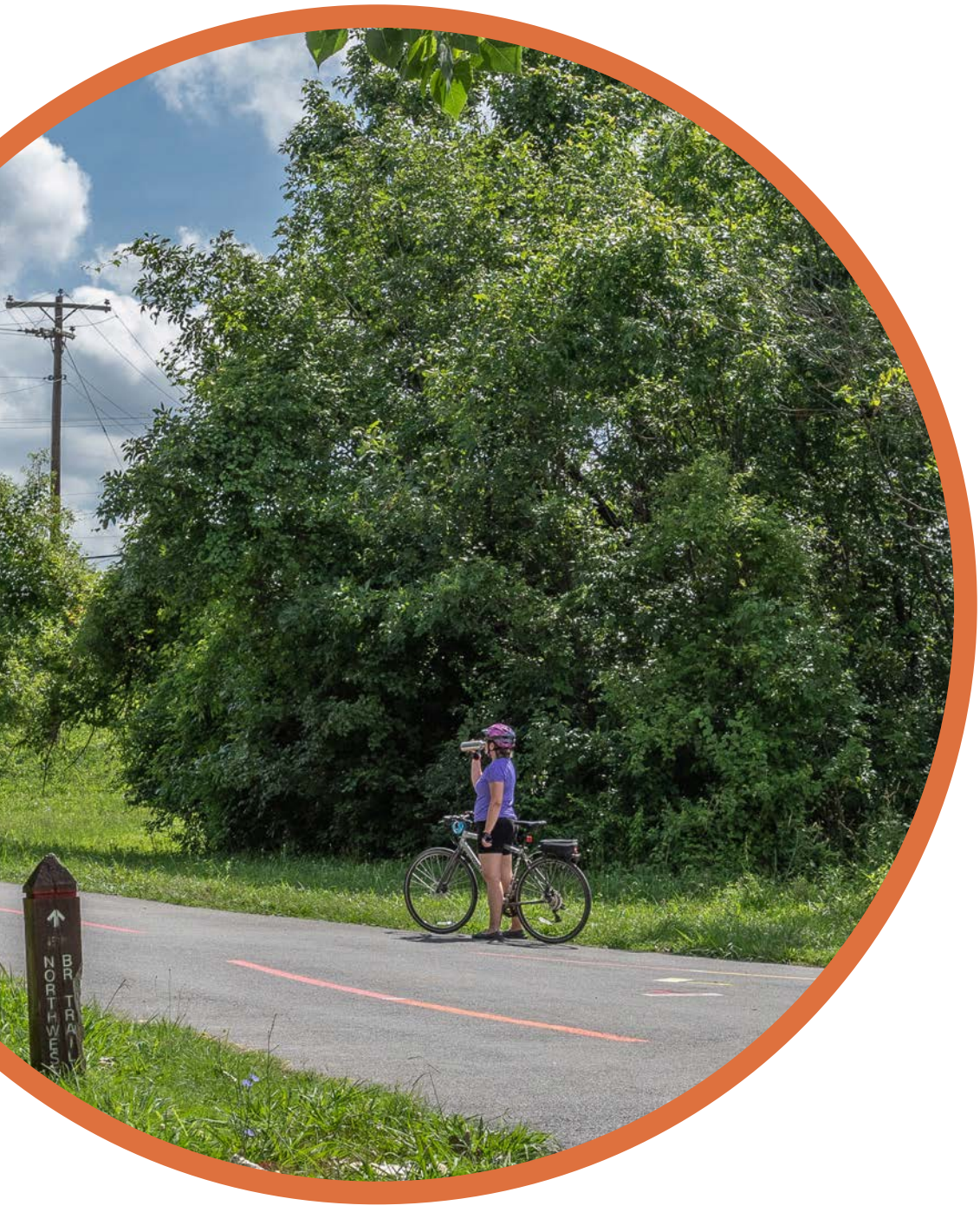
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Introduction

1.1 Background

Wayfinding has come to refer to the process of navigating from place to place and to the industry that produces the tools to help us find our way. This manual provides insight into the process of wayfinding to describe a system of tools that can be implemented to support navigation by motor vehicle, bicycle, or walking in Prince George's County. By using this manual as a resource, communities who want to implement wayfinding will have a better understanding of how coordinated, well-executed wayfinding projects can improve movement efficiency, encourage sustainable transportation, and raise awareness of places and attractions.

The Prince George's County Planning Department, part of The Maryland-National Capital Park and Planning Commission (M-NCPPC), has produced this manual to help communities understand the value of wayfinding systems, educate wayfinding sponsors within Prince George's County on the regulatory process regarding wayfinding, and encourage consistent approaches to preparing, planning, and designing these projects across the County.

This manual is the result of review and engagement involving regulators, local authorities, and stakeholders with interests in the County. The review process produced an Existing Conditions Report in October 2020, which was discussed at a workshop with stakeholders that included the Maryland Department of Transportation State Highway Administration (MDOT SHA), the Department of Public Works & Transportation (DPW&T), park and planning staff from M-NCPPC, municipalities, and interest groups. A second workshop, in March 2021, solicited feedback from key stakeholders regarding information that would be included in this manual to ensure maximum effectiveness. There is broad consensus that there is a need to document and communicate a framework for implementing community wayfinding projects, which provide economic benefits, in Prince George's County.

This manual assumes the reader has limited knowledge about wayfinding and the regulations and codes that apply. As a summary, the guidance provided should be read alongside official references, including the Maryland Manual on Uniform Traffic Control Devices (MDMUTCD), 2011 *Community-Based Guide Signing Guidelines*, and 2013 *Jurisdictional Gateway Signing Guidelines* produced by the Maryland Department of Transportation (MDOT) State Highway Administration (SHA). Other relevant references include guidance produced under the Americans with Disabilities Act (ADA) of 1990, the annotated Code of Maryland Regulations (COMAR), the American Association of State Highway and Transportation Officials (AASHTO), the National Association of City Transportation Officials (NACTO), and any standard already adopted by a municipality and DPR.

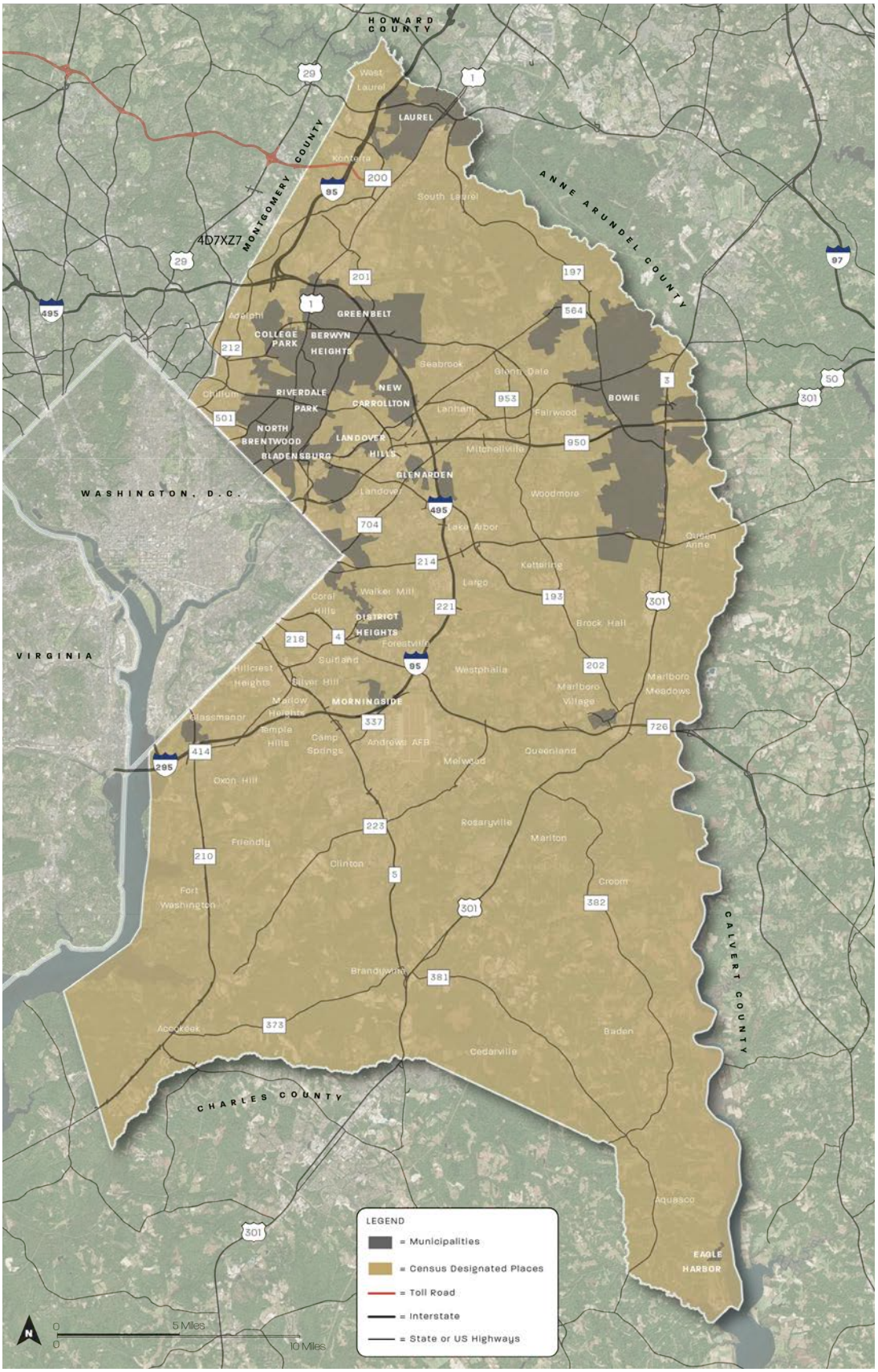


Figure 1. Prince George's County Overview Map

Prince George's County is Maryland's second largest county with a population of over 900,0000.

1.2 Prince George's County

Prince George's County is comprised of 27 incorporated municipalities, 55 census-designated places, and a number of unincorporated communities. This manual was developed to educate those communities about the implementation of wayfinding projects. It will help communities navigate a complex web of stakeholders, design criteria, and regulatory approvals imposed by multiple, sometimes-overlapping, transportation-focused agencies charged with the oversight of Prince George's County's multimodal transportation network. These include, but are not limited to:

- Federal Highway Administration (FHWA)
- National Park Service (NPS)
- MDOT SHA
- Washington Metropolitan Area Transit Authority (WMATA)
- Maryland Transit Administration (MTA)
- DPW&T
- Prince George's County Department of Permitting, Inspections, and Enforcement (DPIE)
- Prince George's County Department of Parks and Recreation (DPR)
- Public works departments within individual municipalities
- Prince George's County Planning Department

Most of the listed agencies maintain specific wayfinding regulations that control the process and design of implementation on their respective networks. This manual attempts to untangle the jurisdictional web so that safe, effective, compliant wayfinding systems are installed as quickly as possible.

1.3 Purpose

This manual includes descriptions of best practices and a simplified guide to the preparation of wayfinding projects. It primarily refers to the regulatory systems for road, street, shared-use path, and trail signage as it applies to Prince George's County, and presents opportunities to supplement signs with markings, gateways, and identity elements that can improve effectiveness and relevance.

The manual is set out in three sections:

1. **Principles** – This section explains what wayfinding is, the value of good wayfinding projects, and wayfinding types that could be implemented in the County.
2. **Wayfinding in Prince George's County** – This section provides an overview of how wayfinding is used and regulated in the County and what resources exist to support new projects.
3. **Preparing a wayfinding project** – This section provides information intended to simplify the process of preparing wayfinding projects in Prince George's County and to inspire communities to be creative.

The purpose of this guide is to help municipalities and other entities who seek to plan, design, and implement wayfinding systems that expand beyond the onroad MDMUTCD standard sign packages. This guide acknowledges where standard MDMUTCD signage should be used, including multiple wayfinding programs administered by the State of Maryland. Non-SHA roadways, trails, shared use paths, and downtown areas are examples of locations where specific MDMUTCD standards should be followed, but present opportunities to employ community wayfinding creativity. Examples of this approach in Maryland can be found in areas such as downtown Frederick, Baltimore City, and along the Anacostia Tributary Trail System. The guide's purpose is not to refute nor to repeat the MDMUTCD, rather to provide those wishing to implement wayfinding systems with the tools to understand where standard MUTCD signage is required and where creativity may be acceptable.

2

Principles

2.1 What is Wayfinding?

Subconsciously or not, we make travel decisions based on location, changes in direction, and recognition. These decisions are informed by the legibility of the built environment, the availability of information, and our learned experience.

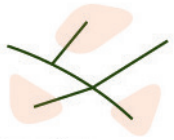
Our decisions are made subconsciously in places we know well, leading to easy navigation. In places we recognize only generally, such as a library or a train station, we may require additional information to complete our trip, especially if we are not frequent visitors. In places we do not know at all, such as a new city, wayfinding can become a very conscious activity where we actively look for physical clues and explicit information. These problems are normally just a temporary inconvenience, but being disoriented or lost can be a stressful experience leading to missed opportunities, wasted time, or even negative memories.

When we are new to an area, we instinctively look for features that help us organize and structure the place. Humans possess evolved survival skills, like rapid pattern recognition, that allow us to focus on shapes and colors before we see details. These instincts mean we will recognize landmarks, viable travel routes, and edges first, and we then combine these with memorable details such as the decorative style of a neighborhood or the activity in a public square. Understanding how we recognize and process physical factors allows us to design information where it is absent or weak.

Based on research in several areas of science, including cognition and psychology, as well as the process of design development, several principles for wayfinding information have been established. While wording varies between references, core design principles can be summarized as follows:

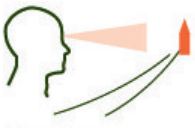
Wayfinding design principles

1. Connect places
Ensure information supports real navigational needs.

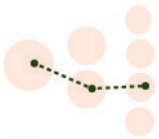


2. Create memories
Highlight place identity and use landmarks to punctuate journeys.

3. Show the way
Use sight lines, viewpoints, and maps to support the cognitive process.



4. Build confidence
Create supported networks and decision points to support exploration.



5. Be predictable
Use consistent terminology and codes, and locate information reliably.

6. Manage the information load
Progressively disclose information detail along the journey.

7. Design for all
Make wayfinding accessible through information design, location, and media.

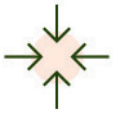


Figure 2. Wayfinding design principles

These principles indicate that effective design requires several preparatory steps. To incorporate the principles, it is important to:

1. Research the needs and perceptions of users, being aware of the differences in how they currently travel and how they could travel in the future.
2. Evaluate the relative legibility of the environment in terms of the presence and strength of landmarks, class of roads, paths, edges, districts, and nodes.
3. Plan a manageable, well-structured system of core elements, system rules, and application types with the system manager (a system manager is the agency, municipality, or other group that is committed to owning and maintaining a wayfinding system).

2.2 Why invest in wayfinding?

We desire wayfinding information in our travels because the built environment can be too large to navigate instinctively. Wayfinding information is essential for navigating by driving and transit and is increasingly needed for walking and cycling. Forms of information include a variety of sign types, maps, and diagrams, as well as initiatives that support instinctive wayfinding such as creating landmarks with public art. Wayfinding information also includes personal reference tools such as visitor guides, smartphone applications, and GPS devices. Technology can be especially useful to people requiring nonvisual communication or information in their native language.

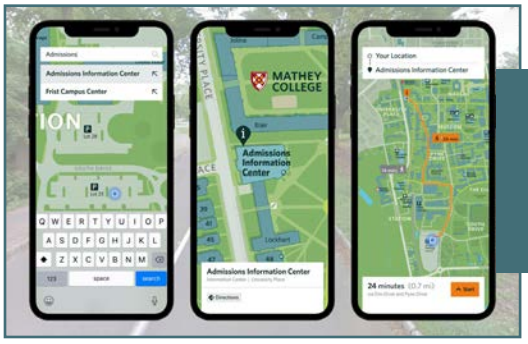
In some instances, wayfinding is a necessary part of systems like the highway or transit network. Wayfinding may also help people navigate complex buildings such as hospitals or airports. In other circumstances, wayfinding is used to stimulate simple changes in behavior or to solve problems. Simple wayfinding systems can include directing motorists to available parking or signing a preferred bike route to the Metro station. In the past two decades, however, wayfinding has also been used in more strategic and sophisticated ways as part of city or regional plans for transportation, stimulating economic growth, and revitalizing transitional communities.

Strategic wayfinding projects coordinate systems across various communities and different modes of transportation. These systems use a consistent approach to design, terminology, and placement to connect different places and integrate transportation options. The consistency may extend across different forms of information so that signs, identity, and online tools are a recognizable part of a seamless approach. This systematic approach allows wayfinding to support bigger goals such as encouraging active transportation, integrating a new development district with its existing surroundings, or promoting a city to tourists and business travelers.

Wayfinding information comes in many forms:

A directional sign informs the user of the correct path toward a destination.

A map can show landmarks and districts that citizens might want to explore in a way that mimics how they imagine the world.



A mobile application can give a turn-by-turn route description that augments or replaces decisions.

IMAGE CREDITS: APPLIED WAYFINDING

To illustrate the potential role of wayfinding beyond just navigation, the following summarizes three strategic themes that are relevant to many communities:

CONNECTED COMMUNITY

Wayfinding can help people understand their transportation options. Studies by the regional transit authority for Metro Vancouver in Canada found that the possibility of making a journey by transit is more important in influencing non-users to try transit than the cost of the journey or the service type. They also found that new local area maps improved people's ability to make onward connections by 69 percent.

DESTINATION COMMUNITY

Wayfinding can improve visitor experience and encourage exploration. Tourism agency Positively Cleveland found that 76 percent of leisure and 78 percent of business travelers felt that ease of getting around was important in the decision to visit. In Edmonton, Canada, the city found that 83 percent of respondents said pilot wayfinding signs would improve the image of the city to visitors.

HEALTHY COMMUNITY

Wayfinding can remove a barrier to people who are interested but concerned about taking up active transportation (biking or walking). In London, UK, 62 percent who were surveyed about a pilot wayfinding project called Legible London said the signs would encourage them to walk more. In areas where Legible London was later implemented, researchers found that walking represented 5 percent more of all trips than in other areas. On the other side of the world, a wide-ranging Australian study in 2010 found that a lack of knowledge about the existence of safe bicycle routes was a critical reason why noncyclists thought cycling was dangerous.

2.3 Wayfinding types

Wayfinding systems used in the public realm can be divided into three groups: standard, enhanced, and nonsign-based and digital wayfinding. Standard forms of wayfinding include the familiar systems of signs for navigating roadways and paths. These tend to be primarily for guiding people from place to place efficiently. Implementation of these systems is successful when the user complies with wayfinding directions and navigates to their desired destination.

Nonstandard wayfinding systems are a broader group that uses custom-designed signs and other tools and clues to enhance a sign's look and feel and emphasize intuitive navigation. In this manual, this type of wayfinding is called enhanced wayfinding; there is not a commonly accepted industry name for this type of nonstandard wayfinding.

Wayfinding tools include heavily regulated standard traffic signs and individual design solutions

This enhanced wayfinding group adopts the principles that underpin standard wayfinding but applies them creatively according to the character and specific needs of the situation. Enhanced wayfinding projects offer opportunities to individualize design to incorporate brand identity, history, culture, and art, and goes beyond simple traffic signs to meet the specific needs of users like pedestrians and people with disabilities.

Enhanced wayfinding is successful when it achieves both navigation and the objectives of the system.

2.3.1 Standard wayfinding

Standard wayfinding serves to:

- Provide directions to destinations ahead of a decision point, allowing road and shared-use users to safely maneuver along the route towards their desired destination.
- Reassure road users that they have made the proper turn and understand upcoming navigation.

These address the main navigational questions of "Where am I?", "Which way do I turn?", and "Am I still going the right way?", and provide a standard set of simple tools for guiding someone from place to place.

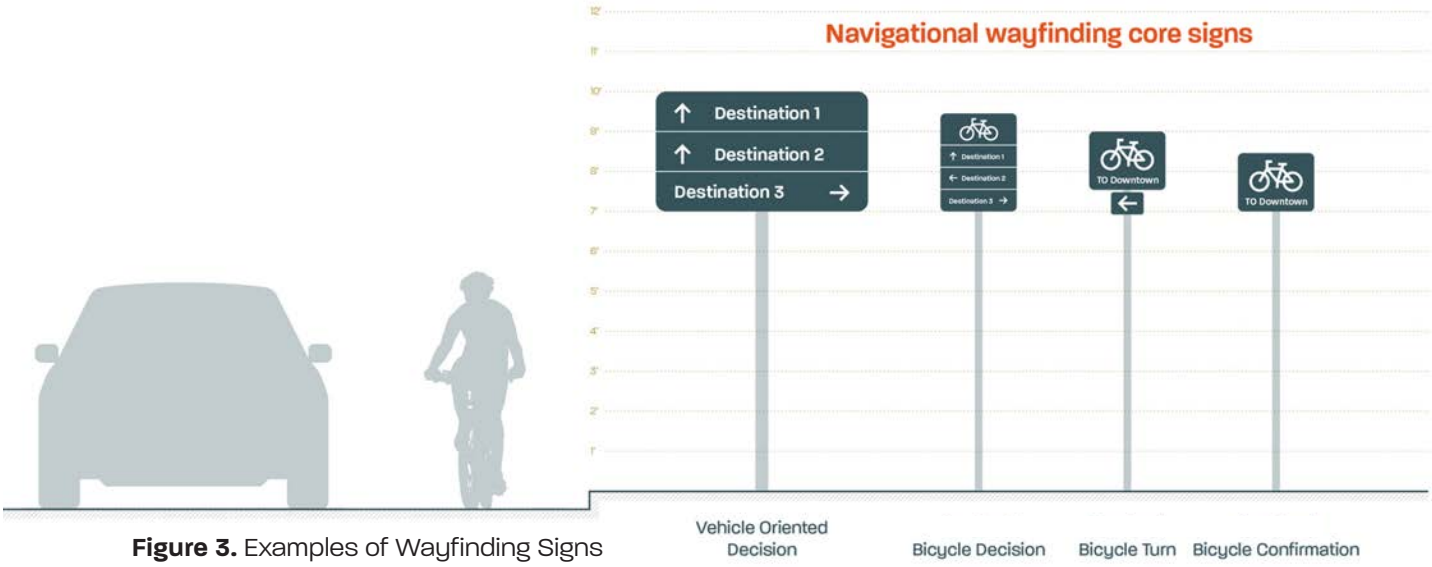


Figure 3. Examples of Wayfinding Signs

The main reference for standard forms of wayfinding is the system of signs and other devices used to control vehicular traffic. The Manual on Uniform Traffic Control Devices (MUTCD) is a federally-legislated standard that covers all traffic control devices installed on any street, highway, bikeway, or private road open to the public. In Maryland, the MDOT SHA has opted to write an approved variation of the MUTCD, known as the Maryland Manual on Uniform Traffic Control Devices (MDMUTCD) to better suit the needs within the State of Maryland.

IMAGE CREDITS: MDMUTCD

The MDMUTCD provides directions to maintain safety, uniformity, consistency, and efficiency, including:

- Size, shape, color, and overall design of the sign for recognition.
- Simplicity of message and number of destinations.
- Text size, typeface, spacing, and capitalization for legibility.
- Placement, height, retroreflectivity, and angle of sign face to oncoming traffic.
- Details of face designs for certain signs as described in the Standard Highway Signs and Markings book, which supplements the MUTCD

Some sign types, like directional signs and mile markers, are included in both standard and enhanced wayfinding systems, but their appearance may vary.

The MDMUTCD also provides guidelines that allow some modification of signs along local roads, directed towards road users, to include expressions of local identity. These community wayfinding signs allow, within defined limits, different background colors, distinct color coding for directions, and the addition of an enhancement marker to customize the shape of the sign. The enhancement marker can also include a place name and pictograph. Additional information on community wayfinding signs can be found in Section 2D.50 in the MUTCD.

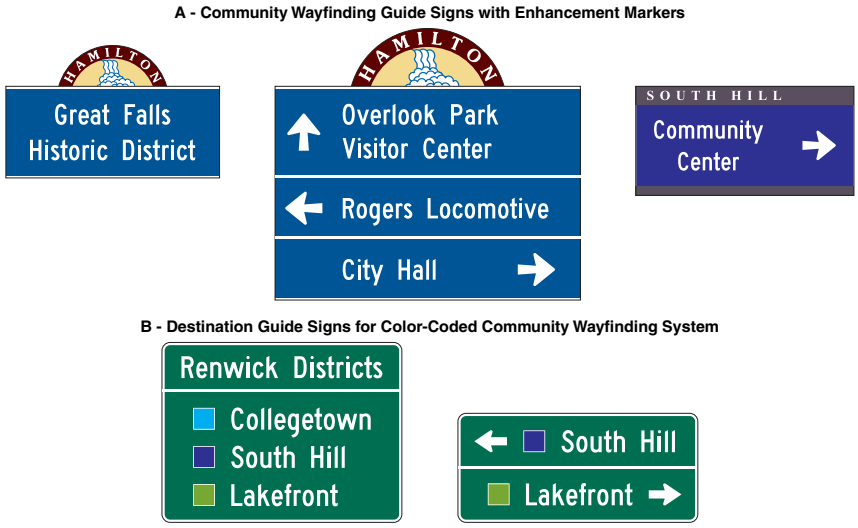


IMAGE CREDITS: MUTCD

The MDMUTCD applies to onroad bicycle facilities because bicycles are considered vehicular traffic under Maryland law. However, there may be flexibility to deviate from MDMUTCD standards when a bicycle facility is located off of the state or County highway network.

Direction and confirmation signs for bicycle routes utilize principles similar to those of guide signs for motorists. General differences include the use of a bicycle pictogram, route name or symbol, and placement to avoid confusion with motorist signs. A significant difference lies in the text sizes on signs. Bicycle guide sign text is generally 2 inches, which allows for smaller overall signs. For example, the standard size for a bicycle sign that lists three lines of destinations is 18 inches high by 30 inches wide.

ABOVE LEFT: MDMUTCD BICYCLE TURN SIGNS. ABOVE RIGHT: MDMUTCD BICYCLE CONFIRMATORY ROUTE MARKERS.

Examples of bicycle wayfinding from standard to enhanced.

For additional information and additional examples of standard bicycle signs, refer to the MDMUTCD. Community wayfinding guidelines from the MDMUTCD do not apply to bicycle signs in Maryland. In other states, different approaches have been taken by the respective state's department of transportation, including allowing greater flexibility in the design of bicycle guide signs to promote this growing means of transportation and advance the understanding of wayfinding developed specifically for bicyclists.

2.3.2 Enhanced wayfinding

Community wayfinding allows opportunity for creativity and flexibility. In many communities around the country bicycle wayfinding signs have been allowed to deviate from strict vehicular signage or MUTCD standards. This suggests the opportunity to expand standard wayfinding as a platform to improve user experience and achieve other broader objectives.

Enhanced wayfinding systems that encourage walking and target pedestrians have grown in popularity. Walking is the most flexible, inclusive form of transportation—one where people are most influenced by the nuances of the environment. Walking occurs over shorter distances and can be affected by directness of travel, visual aesthetics, perception of personal

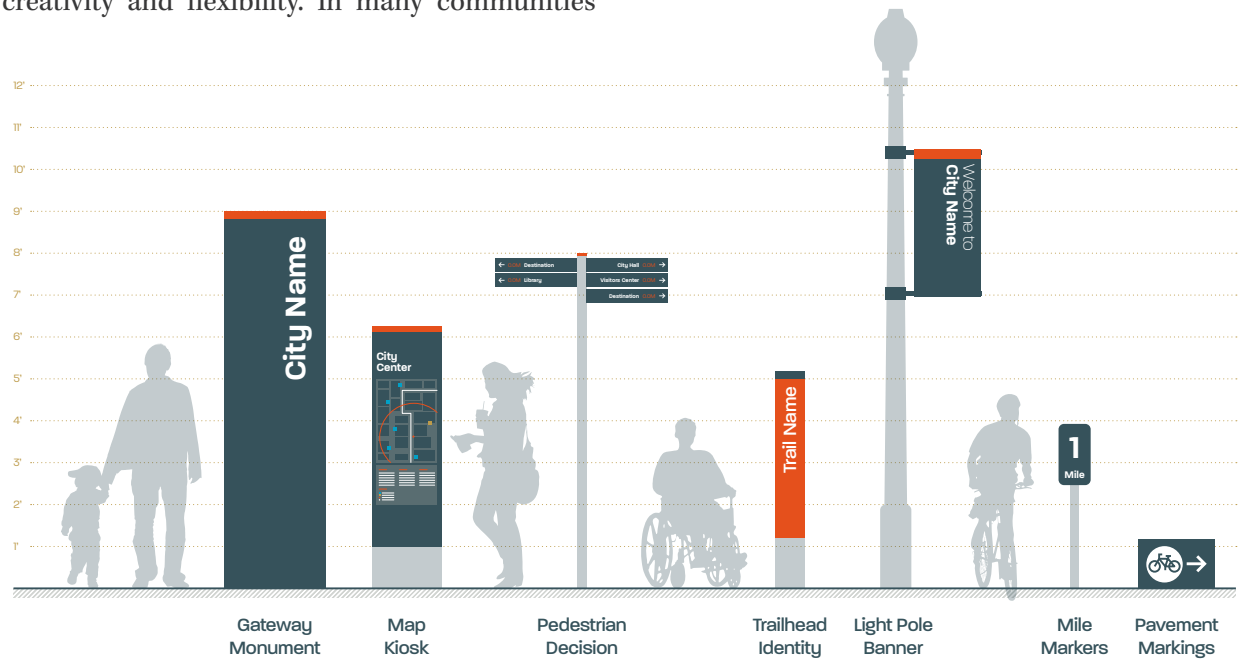


Figure 4. Typical wayfinding elements associated with an enhanced wayfinding system. These can be completely customizable for criteria like color, branding, audience, and accessability. An enhanced wayfinding system may include some or all of these sign types.

safety, topography, detours, and weather much more than other forms of transportation. Wayfinding decisions while walking are less confined by fixed infrastructure like roads and includes different factors such as an individual's physical or sensory abilities; an effective pedestrian-focused enhanced wayfinding system needs to account for these differences.

Enhanced wayfinding includes signs as a primary directional element, but also other tools such as maps, markings, urban design, art, and gateways. These can incorporate or supplement standard wayfinding in larger information families that accommodate the particular needs of people walking in urban environments, on paths, and along trails.

Examples of enhanced wayfinding include:

JURISDICTIONAL GATEWAYS

These are used as confirmation signs to welcome visitors at city limits or to differentiate one jurisdictional boundary from another. They range from simple signs to monumental installations. Successful gateways avoid over-complicating the design to prevent distraction and prioritize the legibility of the name.

Installations along state- and county-maintained roads may have design constraints due to motorist safety concerns.

MAP KIOSKS

Map kiosks vary from rustic trailhead information to custom-designed city maps, which may include lighting, digital screens, and real-time data. Designed specifically to support walking, map kiosks provide a survey view of a walkable area. Successful execution of map kiosks considers map scale to walking details, aligns map orientation to the viewer (orientated so that "ahead" for the walker is located toward the top of the map), uses a "You Are Here" marker, indicates grades and steps, and gives distance in average walking time rather than in miles.

As map kiosks are intended to be used by pedestrians, including dismounted bicyclists, care must be taken that map kiosks are placed so they do not block sidewalks, shared-use paths, or natural surface trail passersby.

BANNERS AND FLAGS

The simple addition of objects from light poles to artworks can be used to provide awareness of the entrance to, or extent of, an area, or to create a landmark highlighting a particular place. Banners provide a sense of place and can be used to convey welcoming messages, provide safety information and promote temporary and seasonal events. Successful execution of banner installation ensures that placement avoids obstructing views and are simple to read. Installation of banners require coordination with the jurisdictional authorities and community stakeholders.

"CONFIDENCE" AND MILE MARKERS

These range from a simple arrow plate to confirm direction to posts and poles that provide information about the route distances, accessibility, and conditions. Successful use of these elements considers operating conditions, modular construction, and uses simple learnable codes. These markers can be modified to accommodate accessibility features like tactile surfaces and Braille.

PAVEMENT MARKINGS

While the MDMUTCD provides specific direction on the use of pavement markings on roadways, pavement markings present additional opportunities for navigation and branding when used as part of enhanced wayfinding systems.

Linear pavement markings, symbols, and graphics are widely used to supplement signs. On sidewalks and trails, they could be used as creative landmarks or mile markers. Effective use of pavement markings considers the durability of the material on the surface, the application process (especially for multiple colors) and utility in adverse weather. When considering pavement markings, understand how often the project sponsor repaves the surface on which they will be applied. Regular resurfacing will necessitate reapplication of the wayfinding pavement markings. For additional information on standard pavement markings (in the event they are being considered for enhanced wayfinding system), reference Part 3 of the MDMUTCD.

2.3.3 Nonsign-based and digital wayfinding

In some instances, the best solution to wayfinding through a challenging space is to re-engineer the physical environment. Not only can this approach remove the issue of sign clutter in sensitive places, but it can also influence navigation more intuitively. Best practices consider how the physical form of the environment can provide self-location, infer directionality, and create memorable landmarks.

FURNITURE

Some routes, especially trails, are furnished with items such as bollards, benches, kiosks, and trash cans. Distinctive and consistent colors, materials, and design help to confirm the route, and the managing agency.

LIGHTING

Distinctive, continuous, and environmentally sensitive lighting can be used to mark a route after dark and has the added advantage of increasing comfort and safety. As with other furniture, distinctive design of lighting also offers a landmarking and route-following opportunity during daylight hours.

SURFACE MATERIALS

Decisions about the color, materials, and their ability to provide directions can convey subconscious information about the route. Surface treatments work especially well for pedestrians and bicyclists because those users travel at low speeds, have lower sight lines, and can utilize their increased sense of "feel". Additionally, surface materials present the opportunity to accommodate people with low vision or blindness by allowing them to use senses other than vision.

PUBLIC ART

Public art can add to the identity, enjoyment, and legibility of a route. Large-scale art can function as a landmark and a mile marker. Art with a consistent theme or style can also assist users to mark long-distance routes and highlight them in their surroundings.

URBAN DESIGN

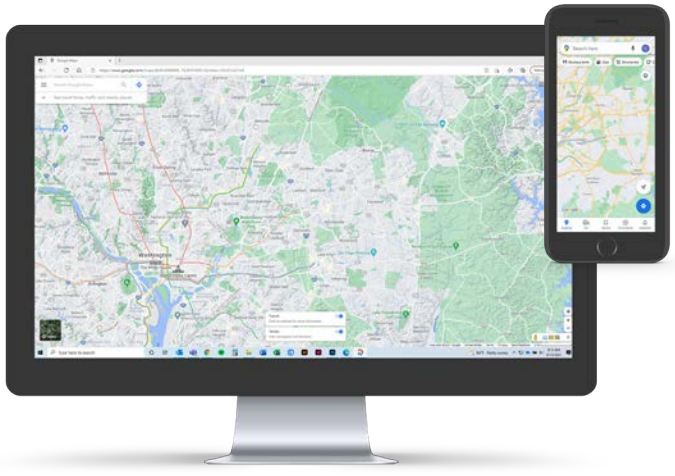
The design and layout of buildings and outdoor space can improve sightlines, reinforce edges and paths, and create urban parklets as memorable stepping stones. Adding non-sign based wayfinding elements to urban design objectives, like defining a sense of place, can reduce the need to add signage.

In addition to physical tools, standard and enhanced wayfinding can also be provided digitally. There is an enormous range of digital wayfinding applications that augment physical wayfinding or provide functions that are not possible using static signs and graphics.

Digital wayfinding can be used at home and while traveling. GPS-enabled software can provide turn-by-turn instruction to drivers, cyclists or pedestrians and display a map centered on the user that moves in real time. Travelers can use digital wayfinding programs to plan upcoming vehicle, bicycle, walking, or public transportation trips.

Using live data information, digital wayfinding programs can recalculate routes based on current traffic conditions, update service schedules during unexpected interruptions, or prompt the user with facts about nearby places. Despite their advantages, digital wayfinding systems present disadvantages like battery lifespan and cell tower dead zones that may limit functionality.

Digital kiosks are also being used increasingly, especially in areas with high pedestrian traffic. They offer functionality that previously didn't exist in wayfinding. Kiosks, similar to the one pictured below, present digital screens containing maps, weather, attractions, and live information, like traffic information and transit schedules. They can have the ability to provide free, fast, secure WiFi, make outgoing nationwide and emergency calls, and charge electronic devices. They can even fund themselves through use of digital advertising or generate municipal revenue. However, their infrastructure needs are more intensive than traditional wayfinding, including the need for engineered foundations, power supply, and connected data feeds. Extensive coordination with these vendors and municipal approval is encouraged.



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3

Wayfinding in Prince George's County

3.1 Policy

Wayfinding is referenced in several County plans (Countywide Master Plan of Transportation, DPR Strategic Trails Plan, Bicycle and Pedestrian Program) and 2013 *Formula 2040: Functional Master Plan for Parks, Recreation, and Open Space* primarily as a supporting component of infrastructure. These plans and programs promote the need for, and importance of, coordinated wayfinding on transportation networks, especially those that cross municipal boundaries and connect to other jurisdictions beyond the County.

Wayfinding is important to the integration of new infrastructure in the County and for communities and districts undergoing revitalization and redevelopment. The Purple Line will provide a new transit link that can help reduce traffic congestion and increase accessibility if people understand how it can meet their travel needs and can access it easily. The Purple Line Corridor Access Study (CAST), led by M-NCPPC, includes plans for customer information and wayfinding at transit stops but is unclear about support for last-mile connections to communities on local streets. This manual includes information on implementing additional transit wayfinding above and beyond what is included in the Purple Line project.

Beyond the standard wayfinding applications for place-to-place connectivity, County policy also alludes to the potential for enhanced forms of wayfinding. Specifically, the County's 2014 *Plan Prince George's 2035 Approved General Plan* (Plan 2035) includes guiding principles that aspire to "create choice communities" and "connect our neighborhoods and significant places." Wayfinding is specifically referenced as an approach toward green, prosperous, and healthy communities in the County's 2019 *Transportation Action Guide for Urban Communities*. This reflects the evidence from Section 2, that wayfinding can contribute to strategic goals for transportation choice, active healthy travel, and economic development objectives.

Wayfinding has been used by several communities in and around Prince George's County to encourage active transportation (Berwyn Heights), as part of community development (Northern Gateway), and to attract visitors (Hyattsville). They are, however, predominantly individual initiatives limited to municipal boundaries. MDOT SHA and DPW&T are

among the largest government agencies in the County that have major signage responsibility that is primariliy focused on standard wayfinding for motorists. MD SHA and DPW&T also control comprehensive onroad bicycle signing in the County. However, there are a small number of agencies (i.e., ATHA) working on projects with enhanced wayfinding elements that cross jurisdictions. For example, the Prince George's County Department of Parks and Recreation has authority to provide improved directional signs along its extensive shared-use path and natural surface trail network. This can result in improved understanding by path and natural surface trail users of how these nonmotorized facilities connect communities and major activity centers both within and beyond the County's boundaries. Integration of the shared-use path, natural surface trail, and roadway network increases opportunities for additional travel options for pedestrians and bicyclists.

These initiatives have introduced ideas of coordination that have helped develop County interest in creating this manual.

3.2 Practice

Projects within the County and throughout Maryland include examples of standard and enhanced wayfinding. In terms of quantity, most wayfinding in the County consists of standard MDMUTCD guide signs designed for motorists. This wayfinding system has been expanding gradually for decades. This expansion, and the fact that MDOT SHA, DPW&T, and individual municipalities have the right to install signs on their own roadways, has led to a variety of applications that largely coordinate under the long-term framework provided by the MDMUTCD and the management of destination content provided by:

- AASHTO, who maintains the list of control cities for use on interstate highways.
- MDOT SHA Traffic Engineering Design Division (TEDD), who maintains a list of Maryland's control cities.
- DPW&T, who is "responsible for the installation, maintenance, and replacement of all traffic control devices on County roadways."

(A control city is a predefined major destination that is approved to be used on interstate highway signing. They are selected by individual states and contained in AASHTO manuals.)

In coordination with the County and municipalities, MDOT SHA also maintains a range of supplementary and special wayfinding-related sign programs described in the MDMUTCD and described in Section 3.4 below. Some of these initiatives cross into the wider realm of enhanced wayfinding, like their guidelines for community wayfinding (2011) and jurisdictional gateways (2013).

Community wayfinding projects can be placed into one of three categories:

1. **Partnership initiatives:** These include geographically bounded or network projects that seek to use wayfinding to help people navigate the area or routes and present it in a coordinated way. The

Example of city-led wayfinding in Baltimore, MD.

coordination aspect can include promoting an identity such as the Northern Gateway CDC, implementing agency standards such as for WMATA or the National Parks Service, or thematic standards like those linked to promoting historic Maryland by the Anacostia Trails Heritage Area. These projects often require enlisting the support of municipal or private landowners to adopt the initiative in a capital funding and maintenance partnership.

2. **City initiatives:** Some municipalities have produced local projects that build off partnership initiatives, such as local trail building, or local objectives in downtowns or visitor attractions. There are relatively few examples of these in Prince George's County and those that do exist tend to be for shared-use paths or pedestrians. These examples are not typically required to follow the MDOT SHA regulations, can exhibit more creativity, and generally require the use of an experienced wayfinding consultant to achieve the desired results. While there are few city-led wayfinding projects, there are many examples of "welcome"-type signs, known formally as jurisdictional gateways. Maryland's Jurisdictional Gateway Program is a combined effort of SHA's Office of Traffic and Safety, Office of Environmental Design, and the District Offices. MD SHA must approve gateway signage where it is proposed on state routes, and DPW&T must approve signage on County roads. Examples of this type of community wayfinding are along County or municipal right-of-way and display a wide range of designs and content.

3. **Community initiatives:** Wayfinding also appears frequently in relation to specific municipal or private destinations. This does not refer to the numerous commercial signs that appear on private land for advertising purposes, which are not considered wayfinding. These community signs direct the traveling public, usually vehicular traffic, to locally determined community destinations using a range of simple turn and confirmation signs. Many are placed in the public right-of-way and have been designed with similar features to the MDMUTCD guidelines. Often, however, they are not in full compliance with regulations. Others are located on park, civic, or private land, but are visible from the roadway. While it must be assumed that these signs have originated from an identified need and through local coordination, design problems have been identified such as inadequate text sizes, confusing messaging, poor layout, and inappropriate application of MDMUTCD guidelines. These design issues detract from their authority and usefulness.

3.3 The Regulatory Framework

The feedback from stakeholder outreach, conducted for this manual, confirms some confusion and knowledge gaps concerning how wayfinding principals and the MDMUTCD apply to wayfinding initiatives. The community initiatives are usually aimed at promoting local identity, facilitating navigation to visitor attractions, and supplementing shared-use path and pedestrian-focused projects. It is common for these types of projects to desire enhanced wayfinding ideas that do not fall under the jurisdiction of the MDMUTCD. This has led some communities to experience problems when their plans encounter the existing regulatory framework in the County.

There is a hierarchy of agencies responsible for highways in Prince George's County. The variety of regulations, guidelines, and code they produce and oversee forms a regulatory framework for wayfinding. This framework is necessary for coordinating maintenance and ensuring safety; it should be carefully understood for its relevance to and implications on any wayfinding project by

a municipality or unincorporated community. This will minimize the chance of incompatibility, unexpected costs and delays, or legal liability. These existing regulations do not prevent local input but they will minimize the chance of unexpected costs, delays, or liabilities.

Responsibility for highways, and the associated traffic signs and other control devices, is divided between a range of authorities in Prince George's County as illustrated below:

- The **MDOT SHA** is responsible for most of Maryland's interstate, US, and state-numbered highways.
- The **DPW&T Division of Traffic** is responsible for county roadways including those in unincorporated communities.
- The **County's municipalities** are responsible for streets within their respective city limits other than County and state routes.
- A range of other agencies, such as the National Parks Service, Prince George's County Department of Parks and Recreation, other local parks departments, and educational institutions, also own routes open to the public that have large wayfinding systems.

These agencies are bound by the MDMUTCD but have developed other related policies and

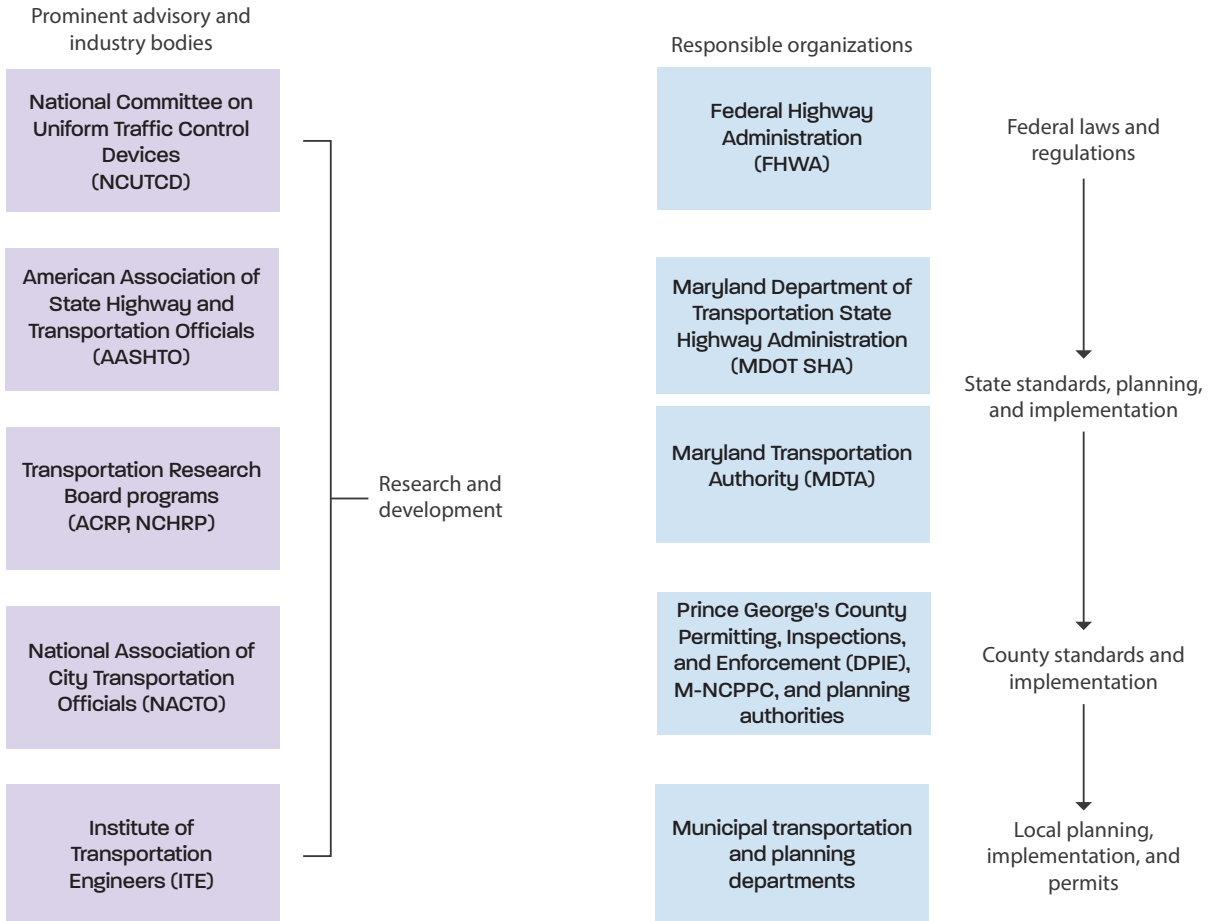


Figure 5. Governing and Advisory Bodies Related to Wayfinding Signage

procedures and are subject to federal, state, and local ordinances. Their standards are reviewed and updated on a regular basis to ensure they reflect best practices and policies.

As described in Section 2, the MDMUTCD is the key reference for signs and markings used to control and guide traffic. The MDMUTCD is maintained by MDOT SHA and includes standards for different classes of signs, including warning, regulatory, informational, and guide. Guide signs provide the standard wayfinding function or place-to-place navigational support.

Application of the MDMUTCD is also guided by a range of other documents provided by MDOT SHA, the industry, and advisory bodies, as illustrated in Figure 5. For wayfinding projects, two key references are the latest editions of the MDOT SHA Standard Sign Book and Traffic Control Devices Design Manual. These cover graphic standards, sign layout, and fabrication specifications, as well as the design process administered by MDOT SHA.

In addition to the regulatory references for standard wayfinding described in the MDMUTCD, other requirements are described by national standards and by local codes.

The American Disabilities Act (ADA) is a wide-ranging civil rights law that provides the basis for the 2010 *ADA Standards for Accessible Design*. While these standards are not specific for wayfinding in the right-of-way, they provide guidelines for interior directional signing that represent good practices, and should be referenced for wayfinding intended for pedestrians on shared-use paths and used in campus settings like malls, office parks, regional parks, and universities.

Wayfinding projects that go beyond standard wayfinding may also need to consider the Zoning Ordinance of Prince George's County and some parts of the local building codes. The ordinance does not apply to any sign required by federal, state or County law, which includes most conventional guide signs installed by the MDOT SHA, the DPW&T, or municipal transportation teams. However, they should be considered for projects that are intended to include pedestrian wayfinding and for any sign intended to be located on a right-of-way owned by another agency. Some municipalities regulate outdoor signage through their zoning code. Requirements will vary by municipality, but it is possible that wayfinding signs will be required to follow these local codes. The MDMUTCD prohibits commercial content on any traffic control device and the lack of commercial content on signs may exempt the wayfinding system from these local requirements.

3.4 Guidelines and Programs

The regulatory standards that govern wayfinding are supplemented by many guidelines and programs intended to provide more details on topics, simplify the process, or assist communities in achieving their goals. MDOT SHA is the largest provider of guidelines and programs for wayfinding in Prince George's County. The following is a list of guidelines and programs pertinent to this manual. Further information is available from the MDOT SHA website or district office.

GUIDELINES

- **2011 MDOT SHA Community-Based Guide Signing Guidance:** Guidelines for community-based guide signing (community wayfinding) is included in section 2D.50 of the MDMUTCD. These guidelines describe acceptable colors, typefaces, pictographs, and sign shapes. Although the MDMUTCD includes bicycle guide signing, the community wayfinding guidelines do not apply to bike facilities.
- **2013 MDOT SHA Jurisdictional Gateway Signing Guidelines:** Applies to signs placed along conventional roads owned by MDOT SHA. It provides

Examples of MDOT SHA TAC Signs

Wayfinding on the Anacostia River Trail

guidance on preferred formats, permitting, and maintenance agreements required to apply for permission.

- **2015 MDOT SHA Bicycle Policy and Design Guidelines:** Describes engineering standards and good practices for Maryland including reference to signage standards.
- **MDOT SHA Bicycle and Pedestrian Design Guidelines:** Includes guide signing in Chapter 5. This guidance encourages use of wayfinding that includes distance and destination, not just the standard bike route and arrow plate assembly. It also provides advice on the use of shared-path signs and interstate routes and trails, which often have branded signage.

PROGRAMS

- **MDOT SHA supplemental sign programs:** MDOT SHA administers several statewide special signing programs. These programs may include applications or coordination through the district office with communities or operators. Programs include:
  - » ***General and Specific Service Signs*** are located along freeways and eligible roadways that use generic symbols and logos to direct motorists to services such as gas, food, lodging, and camping. The Specific Services Sign Program is administered by the MDOT SHA Office of Traffic and Safety.
  - » ***Ag-Tourism*** is a program run by the Maryland Department of Agriculture and MDOT SHA's Office of Traffic and Safety. The program provides signage for eligible ag-tourism facilities along the state highway nearest to the facility.
  - » ***Farmers Markets*** signs are run by the MDOT SHA District offices.
  - » The ***Scenic Byways Program*** is a combined effort of MDOT SHA Architectural Historians and the Office of Planning and Preliminary Engineering with the Maryland Historical Trust under the guidance contained in MDOT SHA's 2006 *Context Sensitive Solutions for the Maryland Historic National Road Scenic Byways*.
  - » ***MDOT SHA Tourist Area and Corridor (TAC)*** is a statewide program offering a system of supplemental guide signs that can be installed along any roadway—SHA or municipal owned. An application process determines eligible attractions that are primarily recreational, historic, or cultural. TAC sign projects may replace other vehicular wayfinding, but can coexist with pedestrian wayfinding. This program is administered by the Office of Traffic and Safety.

- **Recreation Trail Program** is administered by MDOT SHA. This federal grant program is eligible for local projects like strategic trails. The grant provides up to 80 percent federal funding, with the remaining 20 percent provided through county, municipal, or other funds. Eligible projects can include signage improvements.
- **MDOT SHA Transportation Enhancement Program (TEP)** is a grant-matching program that allows MDOT SHA to participate in innovative projects led by the community to improve livability, safety, and other transportation-related objectives. The broad scope of the TEP could include wayfinding as part of a larger initiative.
- **MDOT SHA Sidewalk Retrofit and Bicycle Retrofit Programs** are focused on improving accessibility by walking and biking. Associated MDOT SHA guidance for improving sidewalks and bicycle facilities refer to the value of wayfinding for supporting these modes. While these programs are focused on traffic engineering, sign-based wayfinding can be included in the scope of work.

Prince George's County also has two significant roles in how signage and wayfinding is planned and delivered:

1. As highway authority for nearly 2,000 miles of roadways under DPW&T.
2. As the planning authority (M-NCPPC) providing leadership on active transportation networks.

Relevant references include:

- **Countywide Master Plan of Transportation Bikeways and Trails**
- **DPW&T's County Bicycle and Pedestrian Program**
- **Department of Parks and Recreation's Trail Program Wayfinding Sign Guideance for M-NCPPC Park Trails**

These initiatives enable direct delivery of wayfinding and signage by DPW&T and coordination with municipalities to provide continuous routes.

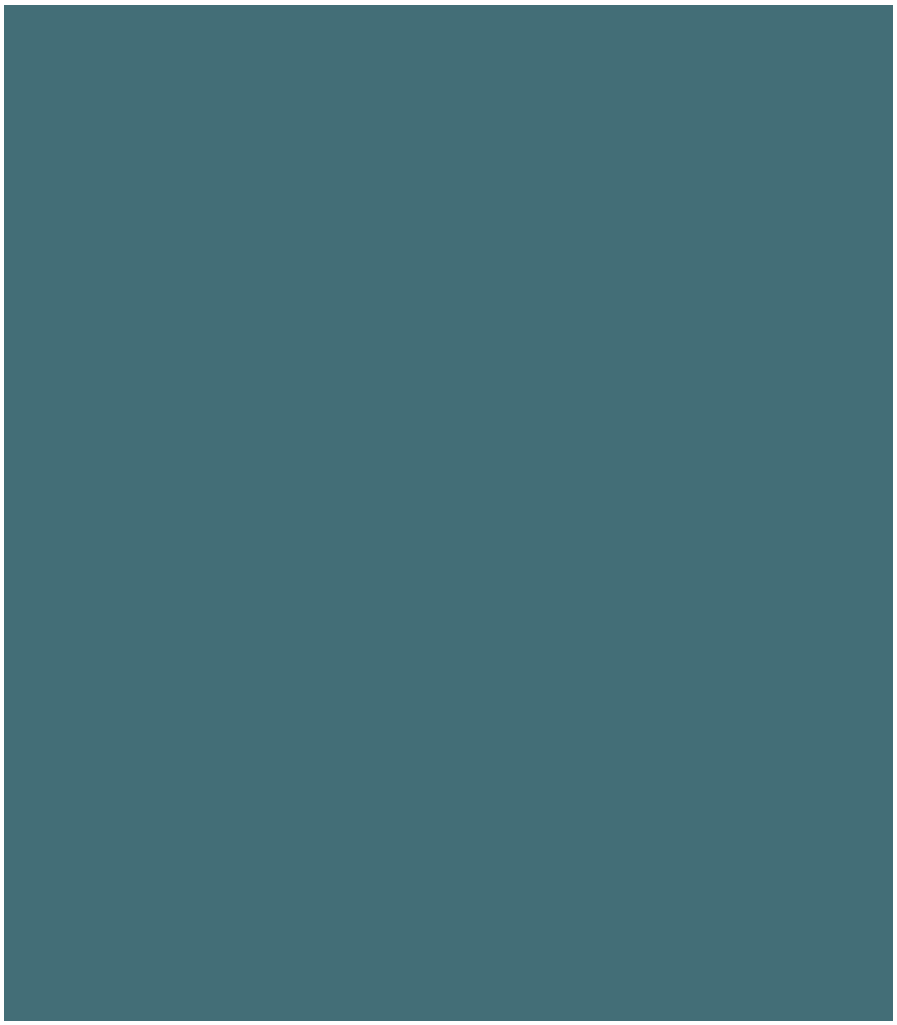
Examples of Bicycle Route Signs

4

Preparing a Wayfinding Project

4.1 Processes

This section packages the context of the manual into a set of processes that will assist communities within Prince George's County to prepare, plan, and design wayfinding projects that successfully navigate State of Maryland and local regulatory frameworks in order to deliver local objectives.



4.1.1 Process Flowcharts

The following process flowcharts show the major steps, decisions, and input required to develop a wayfinding project. These charts represent a typical project development process once funding has been allocated and may not include all stages, nuances, and considerations associated with a real project. Wayfinding projects can be led by any number of public agencies or private organizations, each with their own budgeting process. The key considerations illustrated by the flow charts include the following:

- Devote time and energy to preparation. This includes defining the project objectives and target audience(s), the area it will cover, who owns the right-of-way within the area, where funding may come from for implementation and long-term maintenance, and the need for community engagement.
- Be thorough and strategic in project planning. The following considerations will lead to a more robust, flexible project:
    - Determine which modes of travel will be served.
    - Establish criteria to determine destinations.
    - Define a signed network of routes.
    - Consult with relevant agencies.
    - Engage consultants (engineers or wayfinding specialists, depending on the type of project) to prepare the design and submissions.
- Be clear about the intent of design. Diverging from MDMUTCD standards for traffic signs is not advised without coordination with, and agreement from, MDOT SHA. Other approaches for gateways, pedestrian, and offroad wayfinding may be possible on municipal right-of-way, but divergence includes a responsibility to understand, interpret, and apply the principles of wayfinding design.

Project preparation

The following flowchart describes the process of project preparation from initial idea of wayfinding through development of a project resource report. The development of a project resource report is a best practice in wayfinding; the report is used to document and summarize this planning phase. The flow chart is intended for project sponsors who are in the earliest stages of wayfinding project development (e.g., home owners associations, civic associations, BIDs, business associations, hybrid committees, and nonprofit organizations). By following this flow chart, sponsors will develop and document project goals, targets, and project limits. Secondly, this process will allow sponsors to account for key considerations and stakeholders, and identify the regulatory environment that will govern.

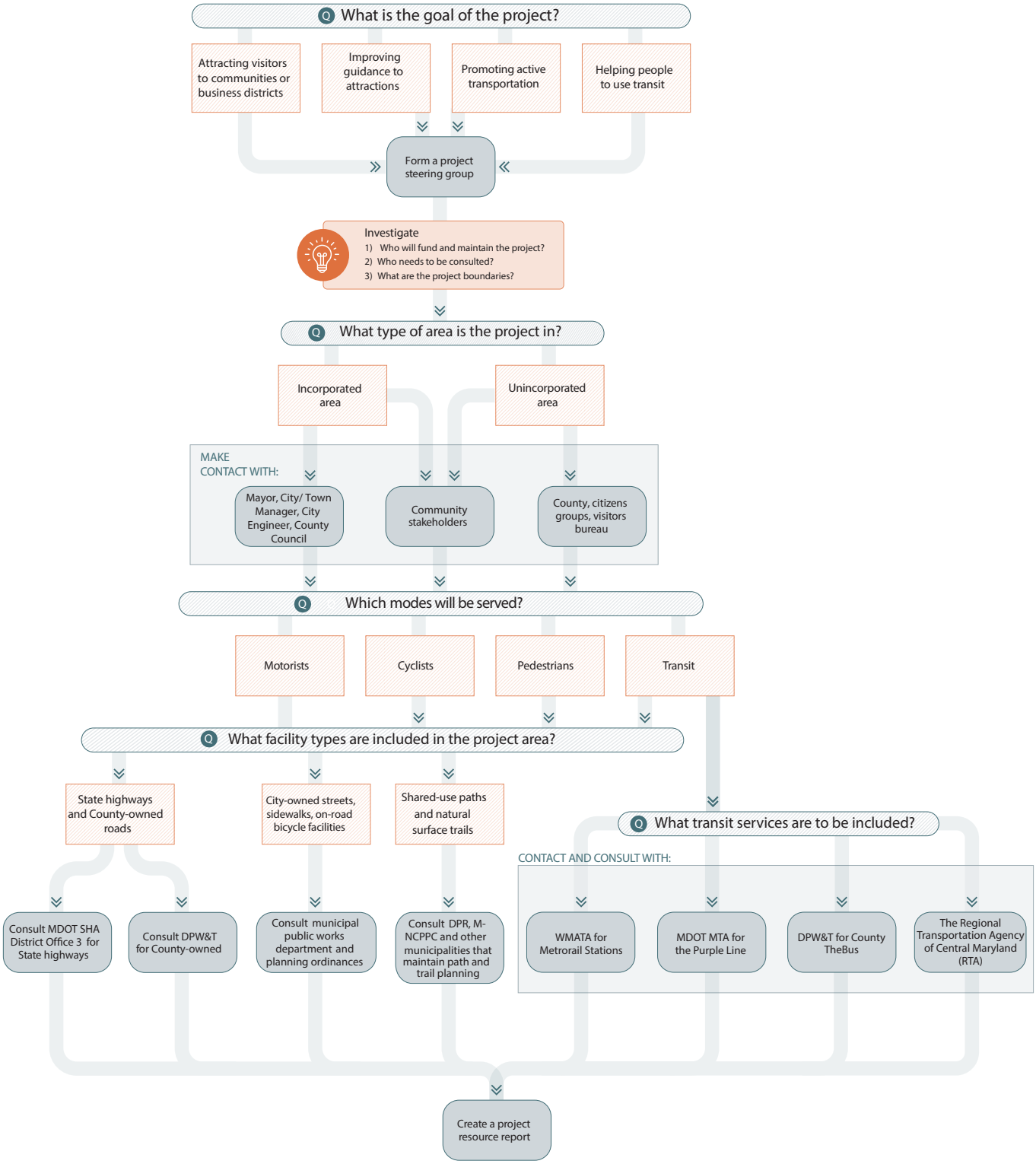


Figure 6. Project preparation flowchart

Information planning

The Information Planning phase of the wayfinding project implements the information found in the Project Preparation phase. This flow chart is intended for project sponsors who have developed a defined project, performed project research, and engaged key stakeholders. This phase of the project is the preliminary design of the wayfinding system, which relies heavily on project preparation.

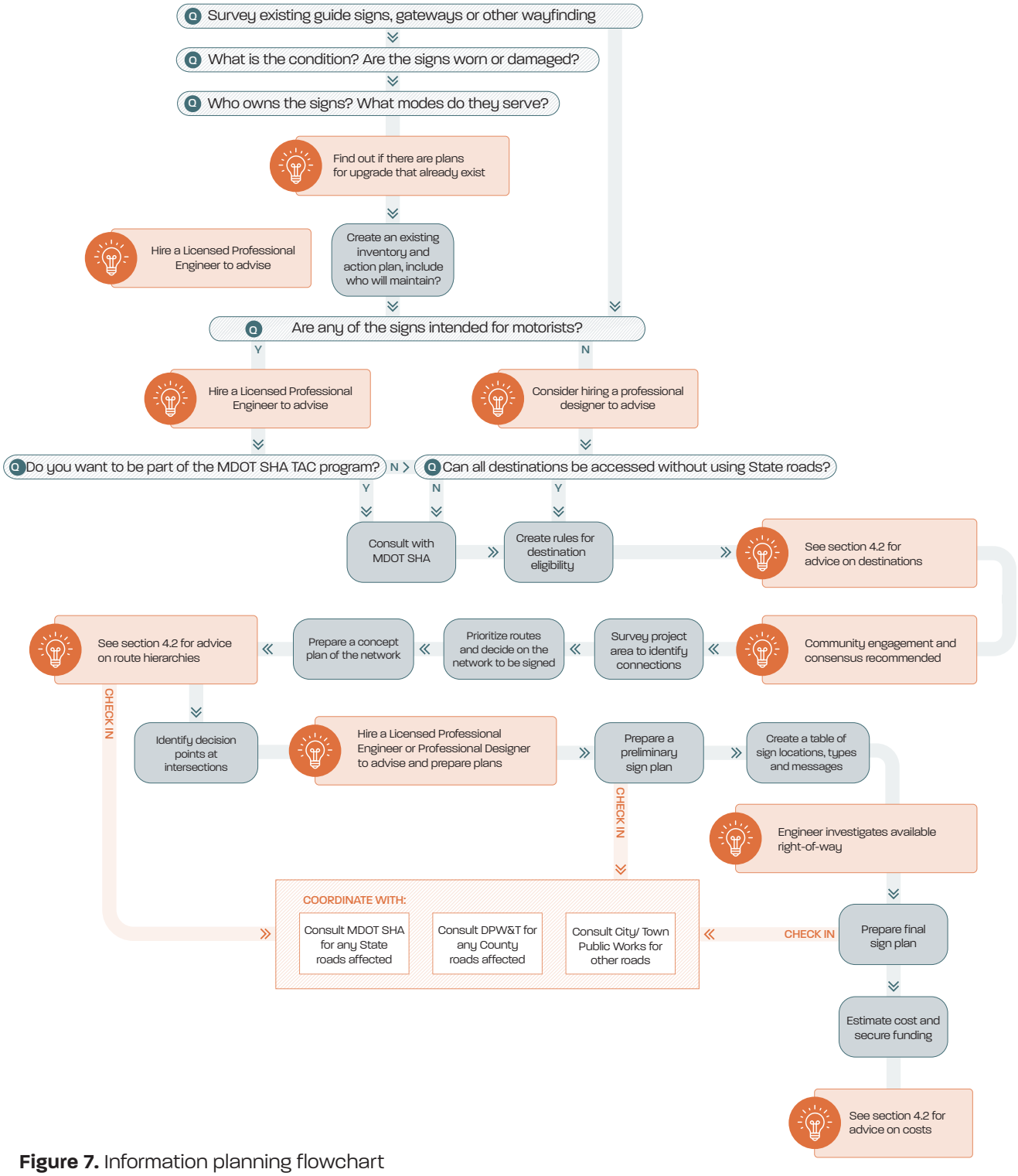


Figure 7. Information planning flowchart

Design development

Design Development is the culmination of the two previous phases. This phase includes the final design of the wayfinding family, the plans and details that document the precise location of each wayfinding element, and all information needed to contract with a fabricator to perform the installation. This phase includes obtaining all appropriate approvals, bidding, construction, and initiation of the maintenance agreement that will dictate the proper maintenance and operation of the wayfinding system.

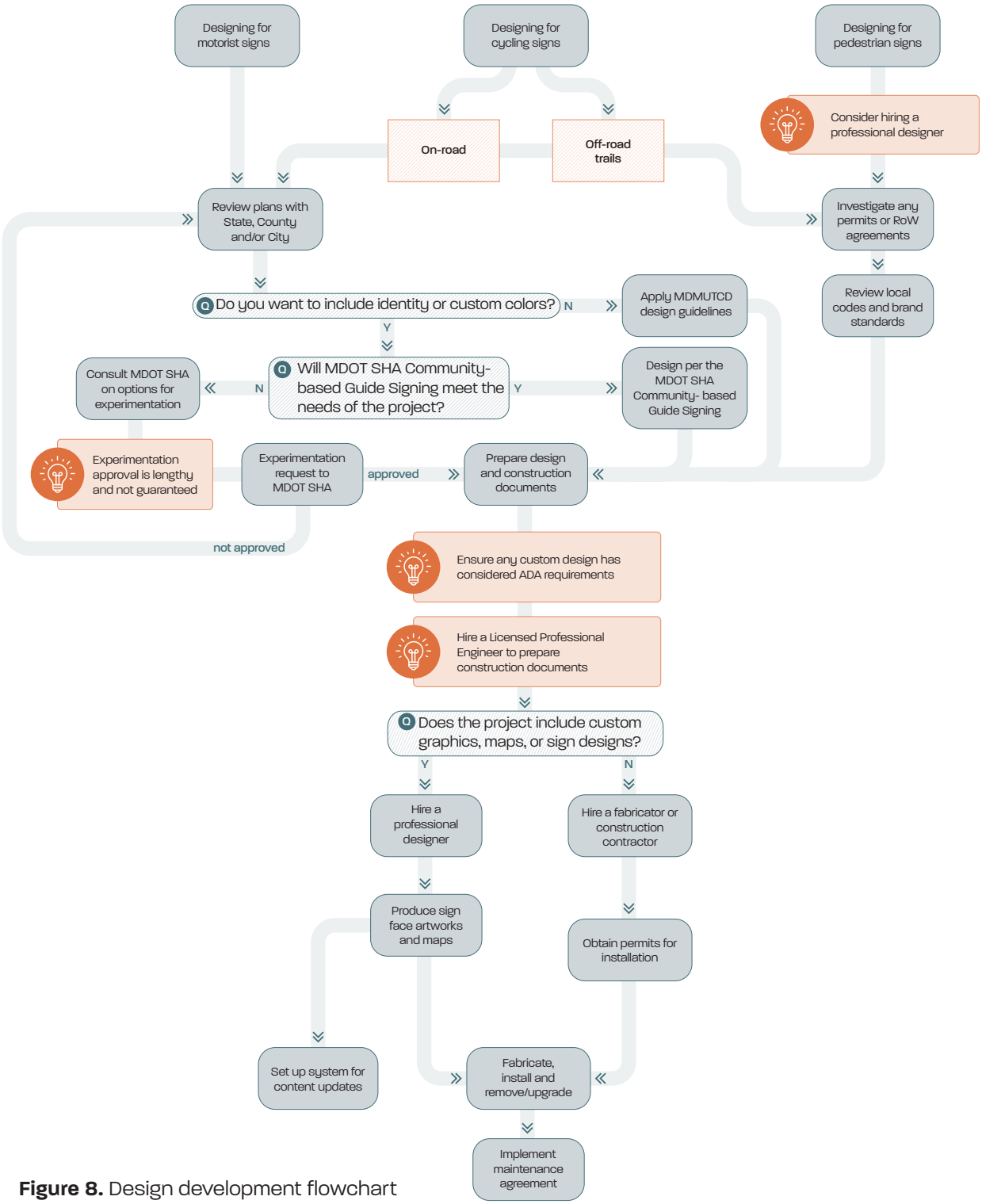


Figure 8. Design development flowchart

4.2 Advice and Best Practices

The process charts shown in Section 4.1 include direction and answers to frequently asked questions in relation to development of community-led wayfinding projects. This section provides considerations and best practices from professionals who have delivered similar projects.

4.2.1 Hiring the right professionals

Objective

Standard wayfinding projects will typically require a professional civil engineer to prepare project reports and sign design plans for government approval. A licensed engineer is also required to prepare construction specifications if the project does not use standard details published by the MDOT SHA Standard Sign Book and Traffic Control Devices Design Manual. A wayfinding designer or other professional may be required for any enhanced wayfinding project including branding, maps, graphics or nonsign elements. National or local wayfinding industry groups, like The Society for Experiential Graphic Design (SEGD), can assist with finding the right wayfinding professional. Proximity to, or knowledge of, the project area may be a factor in selecting the right professional. As a reminder, wayfinding is a broad term—be sure to select a professional that brings experience delivering similar projects.

Considerations

There is an industry of professionals dedicated to providing services for wayfinding projects in buildings, campuses, transportation networks, and cities. The industry includes planners, graphic designers, product designers, and fabricators. There are also professionals in related disciplines that can be useful to wayfinding projects such as urban designers and architects.

Selecting the right professionals for the project depends on the objectives, the degree of creativity expected, the approval processes required, and the expertise available to the project sponsor. Ensure that the project budget can support the use of the desired consultants. Be honest about the skills, time, and experience available within the project or steering group.

If plans need to be submitted to state, County, city, or other agencies for approval, it is likely they will require a professional engineer to prepare submissions. This is to ensure accountability for any liability and is non-negotiable in most circumstances. If the intent of the wayfinding project is to brand guidelines or represent the identity or character of a community, a professional designer will likely be needed to provide creative direction.

Good practices

If a professional designer is deemed appropriate, there are several ways this can be done. If the project includes public funding, it is likely that a competitive procurement process will be necessary. The project sponsor should check with the County or respective municipality to see if they have a preapproved vendor list or can provide advice on the procurement process. Projects funded privately have more freedom to procure professional services directly, but it is a good practice to obtain at least three estimates to thoroughly understand the expected design fee.

To obtain estimates of procurement bids, it is necessary to prepare a descriptive brief or scope of work expected of the professional. This should include certain items to allow for competitive estimates, including:

- The objectives of the project (to encourage visitors, to connect to new transit services, to sign a trail network, etc.).
- The study area and any details about the network or place.
- The types of wayfinding expected. Will the wayfinding program be directed to

INTRODUCTION TO WAYFINDING EXPERIENCES

The development of the manual included informal conversations with officials from neighboring communities to understand their experience implementing and overseeing wayfinding systems in Maryland. This effort was a direct result of early stakeholder coordination that recommended discussions with these communities to allow and encourage them to share wayfinding successes, challenges, and lessons learned. These conversations present an opportunity to learn from three communities who wanted to achieve wayfinding goals similar to those presented in this manual. These wayfinding experiences can be found throughout this section.

WAYFINDING EXPERIENCE #1

One of the towns that was interviewed retained a top wayfinding consultant to lead their wayfinding planning and implementation through a public procurement process in accordance with the town's policies. Although the consultant was not from the area or familiar with the town, the final product was widely recognized as a success and the town official was pleased with the final product and the consultant performance. The consultant was able to look at the town and their goals without bias and was able to objectively apply wayfinding principles focused on the town's goals of promoting visitors to an urban core.

Numerous interviewees indicated that if they were to engage a wayfinding consultant, they would look to neighboring agencies, towns, or nonprofits to seek a recommendation. Each wayfinding sponsor should evaluate the anticipated project needs and their own procurement policies to determine how and who best to engage for professional services.

vehicular traffic, shared-use-path users, or pedestrians in an urban core?

- What sort of consultation should be expected? For example, understand how the organization delivers projects. Determine the number of meetings that will be required for the consultant, when the meetings might occur through the design process, and the consultants' roles.
- How collaborative will the design process be? Will the consultants have free reign to plan and design the program or will frequent progress meetings be required? What are the expectations for community engagement and who will lead the engagement efforts?
- What outputs are required? For example, will the project require preliminary plans for state or County meetings, engineer stamped designs, and final plans for fabrication?
- The overall schedule expectations should be developed prior to engaging consultation, including deadlines for the project and any important milestones, such as Council meetings.

It is good practice to screen consultants by reviewing previous, similar work and following up with references. Vet consultants by reviewing their website. Many of the top wayfinding firms present extensive project examples across wayfinding markets. Be aware that a local graphic design studio or sign shop may know the area well but may not have all the skills needed to plan a wayfinding project for an urban area. Consult with other communities who have delivered similar projects or approach an industry group such as SEGD (https://segd.org/) for recommendations.

4.2.2 Engaging the community and stakeholders

Objective

Involving the community will help ensure the project understands the wayfinding problems experienced by residents and visitors. The project will benefit from local knowledge about places and movement. Engaging the organizations who have, or will have, a material interest in the success and ongoing management of the project is important to ensure the project is coordinated across various stakeholders.

Considerations

There are many individuals and groups who may have a conceivable interest in, or value to, a wayfinding project. Thorough engagement will consider:

- How people travel through the project limits.
- How directions are given informally through conversation.
- Typical problems and common questions from visitors.
- Preferred destinations.
- Goals and priorities of adjacent jurisdictions and overlapping stakeholders (i.e., a local university located in a town may have different wayfinding priorities from the town).

Soliciting stakeholder feedback and understanding priorities early in the process is critical. Early collaboration with stakeholders allows the project team to establish an agreed-upon project framework that can lead to a mutually beneficial wayfinding system.

Getting community engagement right can be a challenge, but the upside is worth the effort. There is often less interest in discussions about planning wayfinding than commenting on design, but input during planning stages can be more helpful to a successful project than attempting to design by committee. When planning wayfinding projects, consider how best to solicit feedback.

Options include, but are not limited to:

- Small meetings to target similar businesses, industries, or audiences.
- Individual meetings with larger or more sensitive organizations.
- Large public meetings, either in person or virtually, using platforms and web-based engagement tools like surveys, polls, or online maps.

Good practices

The expectations for any engagement process may be described in local policies. It is important to consider the time and cost of engaging with the community and stakeholders. Typical groups include:

- Residents associations
- Business associations
- Seniors and groups representing people with disabilities
- Native, cultural, and other self-identified community groups
- Transportation advocates such as transit, cycling, walking, and hiking user groups
- City, County, and state transportation, planning, tourism, and economic development staff

Equitable engagement is good practice to ensure diverse feedback. Valuable input may require translation services, meeting with community leaders, meeting outside of normal office hours, repeated meetings, and providing options for feedback to maximize involvement. For example, does the engagement offer ample opportunities for involvement from low-income communities or will specific groups be unconsciously excluded? When planning public engagement, use methods that are inclusive to all groups.

Combining different groups can be a good way to reduce cost and increase knowledge exchange. Interactive sessions that encourage people to draw simple maps from memory, debate the names of places, identify important routes through the area, and to agree on priorities can add significant insight and quality to project outcomes.

When engaging with government agencies or those tasked with operations and oversight, carefully consider the input from officials who may

WAYFINDING EXPERIENCE #2

One city expressed the importance of comprehensive stakeholder coordination throughout the life of a wayfinding project by offering a "lessons learned" tip. A major public institution resides within the boundaries of the city and, despite a good working relationship under normal conditions, the city and institution were not able to agree easily on preferred routing and destinations. It was clear that the goals and brands of the city and the institution differed. After multiple meetings, conversations, and wayfinding drafts, the city and institution agreed on a preferred plan. The lesson here is that achieving consensus often takes more effort than expected.

be approving budgets for implementation, as well as front line staff such as customer service agents, bus drivers, police, and security, who often have direct experience of what visitors ask directions to or are interested in finding. Consulting staff who will maintain the wayfinding system is critical in understanding maintenance capabilities. For example—can DPW&T fabricate a replacement sign or will a damaged sign need to be fabricated by a specialty sign shop?

4.2.3 Selecting and managing destinations included on wayfinding

Objective

It is not possible to use signs for directions to and from everywhere. A system for selecting and maintaining what destinations are included on wayfinding signs is essential to prevent excessive or illegible sign content or an excess number of signs and overinformation. Rather than excessive signs, consider using maps to present areas where many destinations are clustered.

Considerations

The destinations included in a wayfinding system may be predetermined or constrained by regulation or policy. As mentioned previously, destinations for standard vehicular guide signs are regulated for consistency across the highway network by federal-, state-, and County-maintained lists of city destinations and important attractions.

However, municipalities can apply to MDOT SHA programs, such as TAC, or elect to produce separate community wayfinding for local vehicular traffic. When considering these projects, remember these critical criteria:

For SHA programs:

- State guidance stipulates that guide signs can only contain three destinations
- Commercial content is prohibited

For community wayfinding:

- Should be confined to a local area as determined by the project sponsor

Enhanced wayfinding for pedestrians or trail users may be able to use designs that diverge from the MDMUTCD based on best practices for wayfinding, provided that the routes are not along or adjacent to SHA-controlled roadways. For these projects, users travel at lower speeds than roadway traffic for which the regulations have been developed.

Because of the reduced approach speed and increased ability to stop or slow, the wayfinding system can utilize smaller text heights, which allows for more destinations per sign. However, it is important to avoid creating a list that requires excessive dwell time, which is the time that a user is required to view the sign in order to properly process the information. The more destinations that are included on each sign, the more complex the task of keeping them up to date and connected across the system.

A critical principle of destination signing is that, once included on a sign, the destination must be shown at all following decision points until it is reached. This introduces a consideration for how information is managed across the network of signs to prevent overloading any one sign and to avoid gaps in the continuity of directions.

Good practices

A successful system for managing directional signage includes three key steps:

STEP 1

Determining a priority list of destinations and rules for how this list is updated

The process involves research and discussion to reach consensus on key destinations and services. It is a good idea to classify these criteria by importance or type. For example;

- Major attractions that are a destination.
- Local attractions that could be grouped together (i.e., Downtown).
- Ancillary destinations that include services and points of interest that may be indicated by an icon, such as a park, restroom, or transit facility.

Once the attractions and destinations have been identified and grouped, use the groupings to prepare rules for what defines them. Rules or criteria may include number of visitors, inclusion in state tourism guides, or inclusion in city plans. Avoid subjective criteria; poorly defined rules or criteria lead to dispute. For example, a rule like "include places of importance" is vague. Importance should be clearly defined.

STEP 2

Preparing sign message design standards

Signs have limited space for messaging, both in terms of what can be read on the move and the physical real estate needed to display long messages at the correct text height. Agreeing on the names of places is an important step and one that may require some consultation if there are common names or abbreviations for a specific destination. It is usually better to use the common name where possible; this is the one that residents would use in conversation. Document the final naming decisions and reasons for each decision. Destinations with long names can be difficult to include in their entirety. In this circumstance, avoid nonstandard abbreviations in favor of writing full names on two lines.

Use best practices when naming by using generic references or icons, such as shopping and dining, in lieu of naming specific business entities as this would be a violation of an MUTCD standard. It is also good practice to identify any natural districts (within a 10-minute walking radius) in pedestrian wayfinding projects for larger towns and cities. These districts can be named and can be included in directions or confirmation signs to establish a network of stepping stones that breaks down large districts into smaller areas that support walkability.

STEP 3

Creating a system to progressively disclose destination information on signs

Progressive disclosure is a set of simple rules used to ensure that the detail of the journey is revealed only when needed. This is good practice to prevent signs from being overloaded with irrelevant information. Progressive disclosure works by considering how to use two factors—the relative priority of the destination (from step 1 above) and the relative proximity of the destination. Alongside these factors, it is important to retain consistency of signing so that any destination included in signs is maintained on all signs until the destination is reached. The wayfinding team should be aware of this approach during Step 1 to ensure that a destination is not disclosed too early in navigation, which can have the unintended effect of limiting the overall list of destinations that can be included in the system.

WAYFINDING EXPERIENCE #3

Develop inclusion criteria to determine which destination/attractions are eligible to be included in the wayfinding system. A town in Maryland that sought to increase visitors to their downtown developed the criteria below. The destination had to meet the requirements of Part 1. The destination had to fall under one of the following categories (each category was defined during this development; the definitions have been removed for this manual):

- Airport
- Arena
- Cultural District
- College or University
- Courthouse or Government Building
- Fairground
- Golf Course
- Heritage Road or Historic Route
- Heritage Site
- Hospital
- Library
- Military Base
- Municipal Park
- Museum
- Public Pool
- Religious Site
- Shopping / Downtown District
- Theater
- Transit Center
- Visitor Information Center
- Winery

The destination must then meet the criteria of Part 2.

Individual Attraction Criteria

An eligible attraction must primarily provide amusement, historical, cultural or leisure activities to the public and meet or adhere to the following:

1. Must be primarily a noncommercial business
2. Must be open to random daily visitation
3. Must appeal to visitors from outside the area
4. Must be open at least four hours per day on days of operation
5. Must be open at least four days per week including a Saturday and/or Sunday
6. Must be open at least eight months per year (Seasonal attractions such as public pools or arenas may be exempt)
7. Must provide documentation of annual number of visitors
8. Must provide public access to parking and onsite access to restrooms and water

The above process met the needs of the town's specific wayfinding goals. It is highly recommended to develop a similar process tailored to the goals of each project.

4.2.4 Creating a route hierarchy for signs

Objective

Select certain routes to be signed in order to manage the number of signs within the system while concurrently maintaining an effective system of connections. This requires a process, rules, or criteria to determine which routes are signed and eventually updated.

Considerations

The planning flow chart shown in section 4.1 includes developing route hierarchies in order to identify natural decision points and, therefore, intuitive locations for wayfinding information. Hierarchies are commonly employed for managing the vehicular network but less common for cycling and walking. Hierarchies should be prepared for all modes; they help to avoid sign clutter and to determine an efficient network of connections for end users. The networks may vary by user to align with the characteristics and facilities for each mode.

WAYFINDING EXPERIENCE #4

Think strategically whether a wayfinding project should include a digital component. Digital wayfinding is increasingly being used as a flexible, tailored solution, especially in urban cores with high pedestrian volumes. It is a powerful tool that brings advantages and disadvantages. Notably, digital wayfinding allows destinations and attractions to be easily added to maps. They're scalable, able to be located in high traffic areas, and offer perks like free, fast, and secure WiFi, live traffic updates and transit schedules, and the ability to make emergency calls. However, they often require more extensive infrastructure like foundations, power, and data feeds and require the use of hardware and software experts.

One town is satisfied that their program did not include digital wayfinding. The decision to exclude digital wayfinding was made because it was deemed too expensive, required additional consultant involvement during planning and operations, and it was important to the town that visitors were confident of their current location by using physical signs in their environment.

Vehicular route hierarchies exist for higher status routes, such as those under the jurisdiction of the State or County. Municipalities will also often identify priority routes for traffic management purposes. These would form the framework of a community wayfinding hierarchy. Locally-owned roads could be added to form the lower order routes, which would then reveal key destinations.

A route hierarchy is a planning tool that considers connectivity, available facilities, and other features important to efficient movement and local planning priorities. Hierarchies are important for planning wayfinding but do not need to be debated or published unless community involvement is helpful to identifying and prioritizing local routes.

A hierarchy can be developed using multiple methods. Traffic or use data can be applied, if available. Alternatively, establish a hierarchy by assessing relative connectivity. In addition to assessing existing hierarchies, it is also possible to enhance or add routes to the hierarchy on the basis that they are planned for enhancement or important for local business or other reasons. Regardless of the method used to construct the hierarchy, it should generate a logical, connected but limited number of routes to be signed.

Good practices

Hierarchies should not be overly complicated or extensive and generally will only need to include up to three classifications:

- **Primary:** Strategically important routes with good-quality, separated facilities for the mode under consideration. Primary routes normally connect centers of activity rather than specific destinations
- **Secondary:** Important routes that provide connection to neighborhoods within a larger center or provide a scenic or convenient alternative to primary routes for some users.
- **Tertiary:** Locally important routes that provide final links to destinations or recreational routes that are treated as destinations. Tertiary routes are generally short, direct, and present few choices that require additional wayfinding.

A decision point likely exists where these routes intersect. Depending on the family of wayfinding elements selected, these elements can be allocated based on the priority of the decision point. For example, if two primary routes cross, it is appropriate to provide wayfinding that confirms location and provides directions to primary destinations. Alternatively, where a primary route intersects with a tertiary route, it is most likely that a direction to the specific destination(s) connected by the tertiary route is all that will be required.

When considering hierarchies for active transportation, it is important to consider the user's perception of safety and effort along the route as part of its attractiveness and utility. For example, evidence exists to suggest a cyclist will ride a considerable distance to avoid heavy traffic if a quieter, flatter, and more scenic option exists.

4.2.5 Designing for accessibility

Objective

All information included in a wayfinding system should be designed in such a way that it is inclusive and requires the minimal adaptation to allow universal use. Without conscious attention to accessibility, wayfinding systems tend to rely on visual information types. Accessible systems rely on more than just visual cues to provide navigation. Sounds, tactile materials, subtle elevation changes, and specific slopes can be used by those who cannot rely soley on visual markers. When planning a wayfinding system, a combination of information types should collectively form an accessible system.

Considerations

Standard wayfinding described by the MDMUTCD considers legibility in most conditions and is not generally an issue for accessibility. Consider the entire population that may use the system. Enhanced wayfinding for pedestrians or trail wayfinding may be used by a diverse set of people, including some with disabilities, who are visually challenged, or who consider the physical walking or trail conditions a barrier or hazard.

When designing enhanced wayfinding, consider the guidance provided under the ADA and seek the input of representatives from the community on problems encountered and ideas they may have.

An important consideration is the availability, access to, and appropriateness of technological supports for wayfinding by people with disabilities. Various commercial applications are available using specialized devices, such as haptic indicators and radar-type devices, but these are facing competition from a range of smartphone applications that can provide audible turn-by-turn directions, live links to an assistant using the phone camera, and other technologies. While these do not provide solutions to all needs and lack standardization, proprietary technology is a useful additional component of wayfinding systems.

Good practices

While the ADA does not provide specifications to apply to all areas of design, it sets out expectations for clarity, contrast, and readability of text and illustrations, including:

- Preference for sans fonts with even stroke widths and distinctive letter shapes used in title case (mixed upper and lower case letters) to provide the most legible options for signs.
- When custom colors are used, it is recommended to maintain at least 70 percent contrast between text or pictographs and background color to maintain legibility. It is also helpful to consider the various manifestations of color vision deficiency (color blindness) and low-light visibility. Software exists to test designs against these criteria.
- Icons and pictograms can reduce the need to understand language and help overcome barriers encountered by non-English speaking users and those with learning disabilities. Care should be taken when considering nonstandard icons and logos that may not be intuitive or widely known. When a custom icon is used, it is good practice to support it with simple descriptive text. For reference, the MUTCD has a list of approved symbols that can be used.
- The recommended letter height of text should increase relative to sign position and reading distance. Text height shall not be less than 14 point on maps or detailed information. Note that MDMUTCD guidance specifies a 2-inch minimum text height for cycling signs, which is a good practice for all normal directions on bicycle, pedestrian, and trail signs.
- Reading height for information, such as map kiosks, should consider the needs of someone sitting in addition to those who are standing. A general guide is to contain detailed information such as maps and directories within a window that is at least 3-foot, and no more than 6-foot, high.

- Braille and tactile information can be helpful to people trained to read it. Consider that Braille is a specific language defined by letter size, and the shape and height of the bumps in each letter cell. It is also important to allow for strict regularity of position of these features if used across a family of signs and in an area. Tactile text should also be printed in high contrast to assist in location. Finally, the height, orientation, and complexity of the message should all be carefully designed to minimize ergonomic barriers to reading.
- The Architectural and Transportation Barriers Compliance Board provides guidance on accessibility to avoid obstruction, including the maximum and minimum vertical clearance, minimizing protrusions, and clearance between physical structures.
- Wayfinding design can also provide information that assists everyone to make better directional decisions, especially people who have impaired mobility or use a mobility device. It is good practice to include overlooked information like grade of paths or steps, presence of steps or crosswalks, location of rest points, and public restrooms when designing maps and route information targeted to pedestrians. Similiarly, the material type and surface condition can be included, especially if the surface condition is subpar or non-ADA compliant. For reference, the MUTCD has a list of approved symbols related to accessibility.

4.2.6 Designing for Identity

Objective

Often referred to as creative placemaking, designing for identity involves the artistic expression of a community through a variety of avenues including public art, public spaces, developments, and use of logos, fonts, and colors for branding. While incorporating public art into the public realm is not a new concept, the traditional approach to public art installations might have the objective of completing a design for an isolated project such as a theater, mural, or outdoor venue. Creative placemaking, on the other hand, designs for a community's identity by relying on a decentralized process. Wayfinding can be an integral part of this process, and elements of a wayfinding system should not be designed in isolation; rather, they should be designed as part of a wider creative placemaking approach that integrates with the community's identity and any other placemaking efforts that might be underway.

Beyond being aesthetically pleasing, successful creative placemaking that includes thought-out wayfinding installations can provide significant benefits to communities over time. Possible benefits include making existing residents feel more connected to the community and their surroundings, attracting and retaining new residents, encouraging higher levels of activity outside and on the streets, drawing tourists that help support the local economy, and strengthening historic and natural preservation efforts by focusing attention on those assets.

Economic activity related to art and culture accounted for about $919.7 billion of the gross domestic product in 2019, and had increased by about 6 percent since 2017. While the economic impact is significant, those figures also help illustrate how much people value the artistic and cultural expressions that creative placemaking helps produce.

Considerations

Designing for identity through creative placemaking is usually decentralized and can therefore be less predictable than a typical planning or decision-making process. However, a wayfinding system can integrate into, and enhance, a community's expression of identity by asking the following questions:

- **Understanding Community Context.** What makes the community unique; how can the community's unique heritage be celebrated by an artistic or placemaking endeavor?
- **Reinforcing Sense of Place.** What types of art or expression can build upon the sense of

ROCKVILLE TOWN SQUARE, MD

The City of Rockville, MD created a Environmental Communications Master Plan for the new Rockville Town Center development—a 12-block, mixed-use area that includes a wide range of mixed-use residential, retail uses, offices, institutions, and a public plaza. The plan resulted in wayfinding signage and maps that integrated with creative placemaking elements such as murals, engravings, historic "vias," and gateway towers. Rockville Town Center originated with the City of Rockville's 2001 *Town Center Master Plan*, which was developed through nine months of community and stakeholder involvement.

The success of this wayfinding system's integration with nonsign elements and creative placemaking highlights the importance of building a wayfinding system that is directly informed by the community, guided by previous planning efforts, and complements an existing sense of place.

place that a community already has? What sort of nonsign wayfinding elements might be most appropriate

- **Local Implementation Framework.** What cultural, artistic, or creative placemaking programs exist today and how can this wayfinding effort support and integrate with those programs?
- **Arts and Cultural Programming.** While this consideration may not be as relevant to wayfinding, venues that reliably host participatory events like festivals, performances, or interactive classes and workshops could be important to include in the wayfinding system.
- **Defining the boundaries.** Think through physical limits, municipal boundaries, and property lines, but consider opportunities to extend placemaking to other communities, agencies, organizations, or demographics to reach a diverse identity.

In the context of a countywide wayfinding effort, an additional, crucial consideration would be to build consensus among the many local governments that would be implementing the wayfinding elements. Understanding the various community contexts of such a diverse area would be essential to designing a wayfinding system that could adapt to those contexts while maintaining a distinct overall identity. This requires cooperation and dialogue with local governments, community leaders, and stakeholders in each part of the County.

Paying attention to all considerations can help ensure that the wayfinding strategy is complementary not only to a community's context, but also supports and builds upon existing placemaking efforts while designing a unified identity.

Good practices

When it comes to designing and implementing wayfinding systems in a way that supports creative placemaking efforts, there are numerous practices to reference that can contribute to good outcomes. Among those practices are:

- **Consult the plans.** There may be existing placemaking initiatives, plans, or other efforts that could set the tone for the wayfinding system. Make sure those resources are consulted as necessary.
- **Bring together partners to establish goals, agree on values, and develop strategies.** Collaborate with project partners to develop the framework for the artistic content and style of the different elements of the wayfinding system. Planners and policymakers should not be the ones that are solely responsible for the design of those elements. Bringing together community partners to guide the process for creating the wayfinding system will help set the artistic direction. This is especially important if no placemaking plan or framework is already in place.
- **Effectively convey a sense of place.** One of the key considerations above involves reinforcing a sense of place, and a successful wayfinding system will convey that sense of place in various ways. Colors, fonts, types of installations, and the types of destinations that are highlighted or receive the most focus could all be components of conveying the sense of place.
- **Think beyond signs.** While a big component of most wayfinding system will be signage, nonsign elements may be just as important in some places. Banners, specifically designed street furniture, or place markers can support the creative placemaking aesthetic that has been established and help guide visitors and residents to destinations.
- **Ensure legibility and reasonable scales.** Whether sign or nonsign, a wayfinding system will communicate to a variety of users. Some will be in vehicles, some on foot, and some may be fluent in a language other than English. Take care to choose a combination of wayfinding elements that are usable for the groups that are expected to encounter them.
- **Use the right materials and technology.** Whether a sign or a nonsign element, like a decorative bench, everything must be durable enough to stand up to wear and tear. Selecting the right materials is important. It may also be beneficial to explore technologies such as lighting projections or interactive digital kiosks; however, these may be more expensive and less durable.

4.2.7 Estimating costs

Objective

It is important to consider and budget for study, capital, maintenance, and operational costs of wayfinding projects. While capital costs may align with the value of an awarded grant, operating and maintenance costs are invariably the long-term responsibility of the transportation agency, municipality, or business/community group that sponsored the project where the signs are located.

Considerations

Capital costs include:

- Planning and engineering fees for project plans and sign specifications
- Design fees for the system and design standards (if custom)
- Structural engineer design fee for larger signs and nonstandard foundations
- Design and construction activities
- Foundations for larger signs or difficult locations
- Artworking including custom sign face layouts and map production
- Sign fabrication
- Creation of master maps and cartographic design
- Content research and copywriting for interpretive signs
- Project management during planning, design, fabrication, and installation

Operating costs include:

- Management and oversight.
- Upgrades and modifications over the long term.
- Staff costs to update the system as needed.
- Changes as development and redevelopment takes place over time.

Maintenance costs include:

- Cleaning
- Vandalism and crash damage repair
- Repair of damaged signs
- Replacement of broken or missing signs

Good practices

There are relatively few references for costs available from normal sources because costs are usually confidential or commercially sensitive. Table 1 presents rough order-of-magnitude estimates that can be used during cost planning.

Type of wayfinding	Premium quality	Standard quality	Notes
Small guide sign (vehicle/ bicycle)	$700- $1,500	n/a	Varies by size/location, typically mounted on wood or 2-inch perforated steel posts
Pedestrian decision pole	$2,500	$1,200	Varies due to number of blades
Pedestrian kiosk	$20,000	$6,000	Usually custom
Marker post	$500	$200	
Gateway	$5,000	$1,000	Usually custom
Light pole banner	$400	$100	Depends on fitting
Pavement marker	$1,000	$100	Subject to size, colors, complexity

Table 1: Unit cost of typical wayfinding elements (values in 2020 US$ installed)

4.3 Sample Scenarios

The following section illustrates four likely scenarios of community-based wayfinding that could occur in Prince George's County. While every wayfinding program or initiative will be unique in their goals, footprint/geography, and regulatory involvement, the following four examples present likely scenarios, highlight their project delivery structure and opportunity, provide similar pictures, and present a possible implementation process diagram. These scenarios can inform and educate wayfinding sponsors of best practices, timing, and coordination related to delivery, approval, implementation, and long-term ownership and maintenance of a wayfinding program.

The scenarios illustrate the use of wayfinding to:

- Attract visitors to "downtown"
- Improve guidance to attractions
- Promote active transportation and the trail network
- Help people use transit

1 ATTRACTING VISITORS TO DOWNTOWN

> Hi.
> I'm Bob, the Director of Downtown Commercial Partnership. My organization wants to attract visitors to our downtown.

In this scenario, a local nonprofit community development corporation hopes that a robust wayfinding program will help guide visitors to local attractions in the urban core. The signs will begin at the town limits and will guide users into the town center. Because this program targets pedestrians, the design of the sign system offers high levels of flexibility and creativity. Because the signs will not be located on the Maryland State Highway System, the design and development process may be more flexible. A strong community involvement component will ensure a successful end product.

PROCESS FLEXIBILITY

RIGID — FLEXIBLE

DESIGN CREATIVITY

CONVENTIONAL — CUSTOM

COMMUNITY INVOLVEMENT

LIMITED — COLLABORATIVE

SAMPLE PICTURES:

STEP 1: PREPARATION

A group of businesses want to encourage visitors to explore downtown. The first step is to get organized by:

- Forming a project steering group
- Defining the boundaries of the project area
- Deciding who to engage with and form a plan
- Identifying who will fund and maintain the project

The project is in a municipality so they start by contacting the Mayor, City Manager and City Engineer, as well as community stakeholders and interest groups for support and funding ideas.

Having agreed their objectives and engaged the community, they think about the motorist they are targeting and what agencies need to be consulted. They use this information to prepare a resource report.

They are focused on pedestrians in an area that is all City-owned streets. They don't need to contact the State or County so they arrange to meet the municipality to check transportation and planning ordinances.

They survey the project area. There is a welcome gateway sign but this is unaffected by the plans.

STEP 2: PLANNING

They keep the municipality informed and hire a professional engineer to advise as they develop the project plan. They work together to:

- Determine the key destinations and rules for being included on the signs
- Prioritize the routes to be signed with input from the community
- Prepare a concept plan of and check-in with the municipality
- Identify the decision points where signs will be needed as a preliminary plan
- Create a table of sign locations, types and messages
- Consult with the municipality and finalize a sign plan
- Estimate the cost and agree upon construction and maintenance funding
- Determine who will maintain and upgrade signs once installed

The municipality approves the project plan concept.

STEP 3: IMPLEMENT

The steering group would like to include a brand design in the pedestrian signs so they hire a professional designer to prepare sign designs:

- Their designer produces ADA-compliant designs and brand standards
- They coordinate with the municipality to obtain permits for construction
- They hire a contractor to fabricate and install signs

Once installed, long-term ownership and maintenance is turned over to the responsible party as agreed upon during planning.

2 IMPROVING GUIDANCE TO ATTRACTIONS

> Hi.
> I'm Tina, the Director of Visitor Experience for the town's historical society, and we want to attract more visitors!

In this scenario, a local nonprofit intends to increase signage to local historical sites, aimed primarily at motorists. The wayfinding will initiate at the exit ramp from the Maryland State Highway System and will utilize the County-owned roadway system. Despite their location off of SHA's network, the signs are able to be installed via the Tourist Area and Corridor Signing Program. Because it is a state program, the project delivery process is prescribed in advance and design creativity is limited, but the signs support the goals of the initiative.

PROCESS FLEXIBILITY

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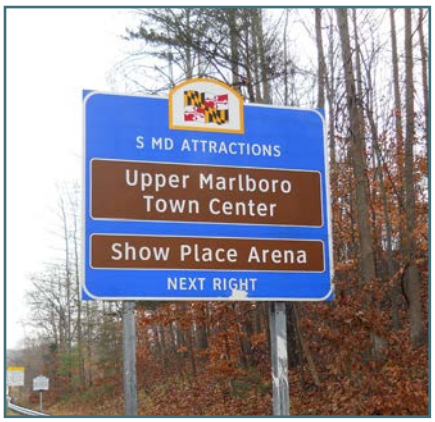
DESIGN CREATIVITY

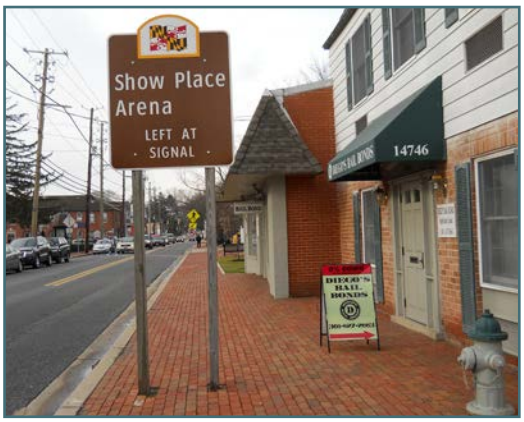
CONVENTIONAL — CUSTOM

COMMUNITY INVOLVEMENT

LIMITED — COLLABORATIVE

SAMPLE PICTURES:





STEP 1: PREPARATION

The local historical society wants to improve signs to two local attractions. They form a sub-committee to prepare a plan of action by:

- Making contact with the attractions
- Organizing volunteers to serve on the committee
- Defining the boundaries of the project area
- Deciding who to engage with and form a plan

The project area falls within an unincorporated community so they contact the County and also reach out to a local citizens group and visitor bureau to gain support.

They agree that the wayfinding will primarily address motorists using County-owned roads but they would also like motorists on the nearest State highway to see information.

- As the project includes County-owned roads, DPW&T is contacted first about new vehicular guide signs

STEP 2: PLANNING

The DPW&T advises that there is no current funding for new signs. The historical society applies to the MDOT SHA TAC Signing Program. The committee will:

- Review TAC application criteria
- Obtain brochures and data from the attractions
- Apply for a permit to MDOT SHA for each attraction

MDOT SHA agree that both attractions are eligible and that they will progress a TAC project.

MDOT SHA investigates the feasibility of the request.

- Eligibility request - is there space for adding messages or new signs?
- Stakeholder consultation
- Reviewing against the TAC Program implementation schedule

Having completed their review, MDOT SHA includes the project in the TAC program.

STEP 3: IMPLEMENT

If approved, MDOT SHA completes the planning, design and implementation. This includes:

- Preparing signing plans and coordination with DPW&T
- Arranging all necessary approvals and permits
- Arranging the installation of the signs

3 PROMOTING ACTIVE TRANSPORTATION

> Hi.
> I'm Steve, the Deputy Manager for the Trails Improvement Department. We want to install wayfinding that improves connections from town to our nearby trail network.

This sample project is an example of when a municipality within Prince George's County leads a wayfinding initiative aimed at bicycles and pedestrians. It is recommended that the municipality coordinate this project with M-NCPPC, who will act as a resource for project planning, design, implementation, maintenance, and operations. Because this system targets multimodal users, and is not located on the Maryland State roadway network, the requirements allow a flexible, creative wayfinding program. Components could include wayfinding signs, pavement markings, street furniture, or identity elements. Robust community involvement is recommended to ensure that common routes are included, and any deficiencies in the network are addressed.

PROCESS FLEXIBILITY

RIGID — FLEXIBLE

DESIGN CREATIVITY

CONVENTIONAL — CUSTOM

COMMUNITY INVOLVEMENT

LIMITED — COLLABORATIVE

SAMPLE PICTURES:

STEP 1: PREPARATION

A municipality wants to encourage locals to make use of the new trail links to increase active transportation in their area, so they:

- Form a project steering group
- Define the area they want to include
- Create a community consultation plan
- Investigate sources of support and funding

The project is in the municipality but has links that connect to the County-wide trail network.

Municipalities use this information to prepare a resource report, but prior to doing so, they:

- Consult with the local community
- Consult the County (M-NCPPC) about the relevance to the County-wide Plan for off-road paths and trails

A survey finds some existing cycling signs that will need updating as part of the project.

STEP 2: PLANNING

The entire project is on streets owned and mainained by the municipality. The steering group:

- Identify the trail heads and relevant destinations to be included on signs
- Consult the community about the priority routes to be signed
- Prepare a concept plan of and check-in with the M-NCPPC
- Identify the decision points where signs will be needed as a preliminary plan
- Create a table of sign locations, types and messages
- Consult with the commnuity and M-NCPPC to finalize a sign plan
- Estimate the cost and identify budgets
- Arrange for the maintainance and upgrade of signs once installed

STEP 3: IMPLEMENT

The municipality coordinates with M-NCPPC to prepare the designs:

- They hire a professional designer to design signs and coordinate with the M-NCPPC on the County-wide strategy
- They arrange agreements with landowners for construction
- They hires a fabricator and sign installer

Once installed, long-term ownership and maintenance responsibility is turned over to the relevant municipal department and recorded by the M-NCPPC as a part of the County-wide network.

4 HELPING PEOPLE TO USE TRANSIT

> Hi.
> I'm Joanne, the Planning Director for Smalltown, and we would like to encourage people to safely bike or walk to the new transit station.

Prince George's County will likely experience the construction of new transit stations in the coming years. To provide "last mile" multimodal connections, this sponsor identifies the need for wayfinding above and beyond what is installed by the transit agency. This type of program will need to be carefully coordinated to ensure that any wayfinding elements are properly coordinated, designed, and implemented with the many overlapping agencies that could be encountered. The wayfinding elements may enjoy some design flexibility depending on placement and target user, but will ultimately reflect the transit agency brand or standards (colors, logos, fonts, etc.) to provide the user with the confidence that they're using the expected transit system and route.

PROCESS FLEXIBILITY

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SAMPLE PICTURES:

STEP 1 : PREPARATION

A group of businesses want to encourage visitors to explore downtown.
The first step is to get organized by:

- Forming a project steering group
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- Identifying who will fund and maintain the project

The project is in a municipality so they start by contacting the Mayor, City Manager and City Engineer, as well as community stakeholders and interest groups for support and funding ideas.

Having agreed their objectives and engaged the community, they think about the motorist they are targeting and what agencies need to be consulted. They use this information to prepare a resource report.

They are focused on pedestrians in an area that is all City-owned streets.
They don't need to contact the State or County so they arrange to meet the municipality to check transportation and planning ordinances.

They survey the project area. There is a welcome gateway sign but this is unaffected by the plans.

STEP 2 : PLANNING

They keep the municipality informed and hire a professional engineer to advise as they develop the project plan. They work together to:

- Determine the key destinations and rules for being included on the signs
- Prioritize the routes to be signed with input from the community
- Prepare a concept plan of and check-in with the municipality
- Identify the decision points where signs will be needed as a preliminary plan
- Create a table of sign locations, types and messages
- Consult with the municipality and finalize a sign plan
- Estimate the cost and agree upon construction and maintenance funding
- Determine who will maintain and upgrade signs once installed

The municipality approves the project plan concept.

STEP 3 : IMPLEMENT

The steering group would like to include a brand design in the pedestrian signs so they hire a professional designer to prepare sign designs:

- Their designer produces ADA-compliant designs and brand standards
- They coordinate with the municipality to obtain permits for construction
- They hire a contractor to fabricate and install signs

Once installed, long-term ownership and maintenance is turned over to the responsible party as agreed upon during planning.

AP

Appendix

Appendix Index

GLOSSARY OF TERMS

GPS - Global Positioning System

A satellite-based service providing users with positioning, navigation, and timing information. GPS is used in digital tools such as in-car navigation devices and cellphones.

Last-mile Connections

A term used to describe the final short section of a journey by transit. These connections may be completed by walking, cycling, or other modes.

Legibility (*in wayfinding*)

How easy it is to recognize and organize the parts of a city or place into a coherent pattern. There are traditionally five factors that influence legibility:

1. Paths: Streets, sidewalks, trails, and other routes that people travel. Paths with a distinguished character, that are surrounded by street-level activity, or connect important places, add to legibility.
2. Edges: Visible or perceived boundaries such as walls, buildings, and shorelines.
3. Districts: Relatively large sections of a city that can be identified by its architecture, use, or other features that distinguish it from its surroundings.
4. Nodes: Natural or constructed focal points such as major intersections and public spaces.
5. Landmarks: Readily identifiable objects such as tall buildings or works of art that provide reference points.

MDMUTCD

The *Maryland Manual on Urban Traffic Control Devices* produced by the Maryland Department of Transportation State Highways Administration to regulate traffic signs, signals, and markings.

Project Resource Report

Report at the end of the project preparation phase that provides goals, geography, limits, key contacts, and other pertinent information. The report summarizes the planning efforts and stakeholder engagement process performed in the phase. The report serves as documentation for use in future project phases.

Public Right-of-Way

The area of property where the municipality or other government agency has a dedicated or acquired right-of-way allowing the public to pass over it by certain modes of transportation.

Regulatory Framework

The system of standards, rules, and guidance for wayfinding as well as the bodies that produces, maintains and enforces them.

Survey View

Maps are survey views of an area; they provide a two-dimensional representation of the physical world from the viewpoint of the map maker or surveyor.

Sustainable Transportation

Sustainable transportation options reduce reliance on finite sources of energy and resources. These normally include walking, cycling, transit, and shared transportation services.

Tactile surfaces and Braille

Raised lettering, relief maps, and Braille, which is a writing system using patterns of raised dots, can be used to assist people with blindness or visual impairments who have learned these systems.

Wayfinding

The process of navigation assisted by our senses, decision-making skills, and memories, that builds our understanding of the world around us.

- Standard Wayfinding: Primarily uses regulated signage to assist navigation of the state's public transportation network. Standard wayfinding is consistent, predictable, efficient, and effective.
- Enhanced Wayfinding: creatively builds from the foundation of standard wayfinding to offer greater opportunity to target a larger audience, meet wayfinding goals, and incorporate sponsor identity. Enhanced wayfinding is unique, targeted, flexible, effective, and conveys wayfinding information through use of multiple senses.
- Community Wayfinding: A type of extended wayfinding that differs from traditional highway signs to reflect local character and identity under guidelines contained in Section 2D.50 of the MDMUTCD.

ONLINE REFERENCES

American Association of State Highway and Transportation Officials (AASHTO)

https://www.transportation.org/

Americans with Disabilities Act (ADA)

https://www.ada.gov/

Anacostia Trails Heritage Area (ATHA)

https://www.anacostiatrails.org/

Code of Maryland Regulations (COMAR)

http://mdrules.elaws.us/comar

Federal Highways Administration (FHWA)

https://mutcd.fhwa.dot.gov/

Institute of Transportation Engineers (ITE)

https://www.ite.org/

National Association of City Transportation Officials (NACTO)

https://nacto.org/publication/urban-bikeway-design-guide/bikeway-signing-marking/bike-route-wayfinding-signage-and-markings-system/

National Parks Service (NPS)

https://www.nps.gov/subjects/hfc/upload/Wayside-Guide-First-Edition.pdf

Prince George's County Approved General Plan

https://www.mncppcapps.org/planning/publications/BookDetail.cfm?item_id=279&Category_id=1

Prince George's County Bicycle and Pedestrian Program

https://www.princegeorgescountymd.gov/2266/BikingWalking-Resources

Prince George's County Department of Public Works and Transportation

https://www.princegeorgescountymd.gov/1002/Public-Works-Transportation

Prince George's County Master Plan of Transportation Bikeways and Trails

https://www.mncppc.org/DocumentCenter/View/1696/Countywide-Master-Plan-of-Transportation-Bikeways-and-Trails-PDF

Prince George's County Transportation Action Guide for Urban Communities

https://issuu.com/mncppc/docs/transportation_action_guide_for_urb

Prince George's County Zoning Ordinance

https://www.mncppc.org/1002/Zoning-Ordinance-Use-Tables

Purple Line Corridor Access Study (CAST)

https://www.pgparks.com/1187/Purple-Line-Corridor-Access-Study-CAST

Maryland Department of Transportation State Highways Administration (MDOT SHA)

https://roads.maryland.gov/pages/home.aspx

Go to MDOT SHA to search for the following (not all have resources available for download):

- Bicycle and Pedestrian Design Guidelines
- Bicycle Policy and Design Guidelines
- Community-Based Guide Signs Guidance
- Jurisdictional Gateway Signing Guidelines
- Recreational Trails Program
- Scenic Byways Program
- Sidewalk Retrofit and Bicycle Retrofit Programs
- Standard Highway Signs and Markings
- Tourist Area and Corridor program (TAC)
- Transportation Enhancement Program

The Maryland - National Capital Park and Planning Commission

https://www.mncppc.org/

Maryland Manual on Urban Traffic Control Devices

https://www.roads.maryland.gov/mdotsha/pages/index.aspx?PageId=835

Maryland Tourist Attractions Sign Program Policy

https://roads.maryland.gov/OOTS/MarylandTouristAttractionsSignProgram.pdf

Transportation Research Board (TRB)

https://www.nationalacademies.org/trb/transportation-research-board

Wayfinding Guide For Bus/Rail Transfers, Washington Metropolitan Area Transit Authority (WMATA)

https://www.wmata.com/initiatives/plans/upload/MetrobusVEMP_WF_100P_FINAL_20190927.pdf

Public Engagement Summary

As part of the research stage of the study, two online surveys were conducted by M-NCPPC. One was distributed to jurisdictional stakeholders, including regulatory agencies and municipalities, while the other was distributed to a select list of organizations and representatives of various user interests, including tourism, transportation, and accessibility groups.

BREAKDOWN OF RESPONSES (AS OF 10.25.20)

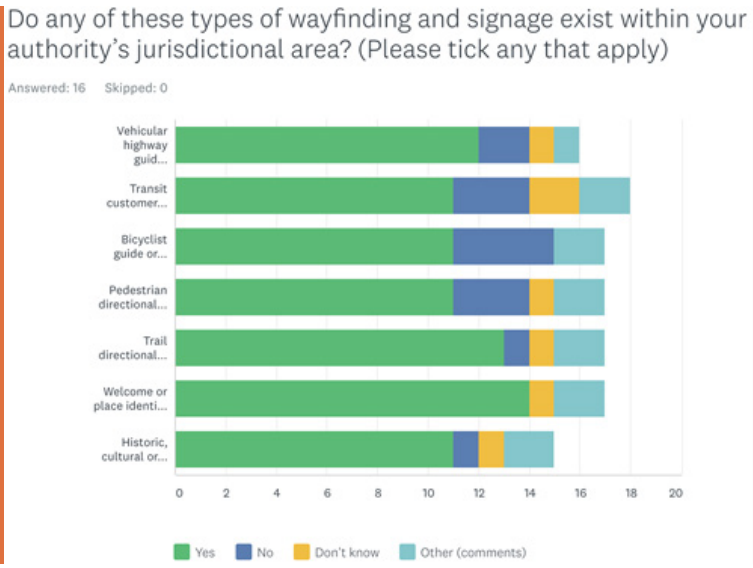
- Eight responses from County departments
- Eight responses from municipal or institutional authorities
- Two responses from interest groups

Analysis

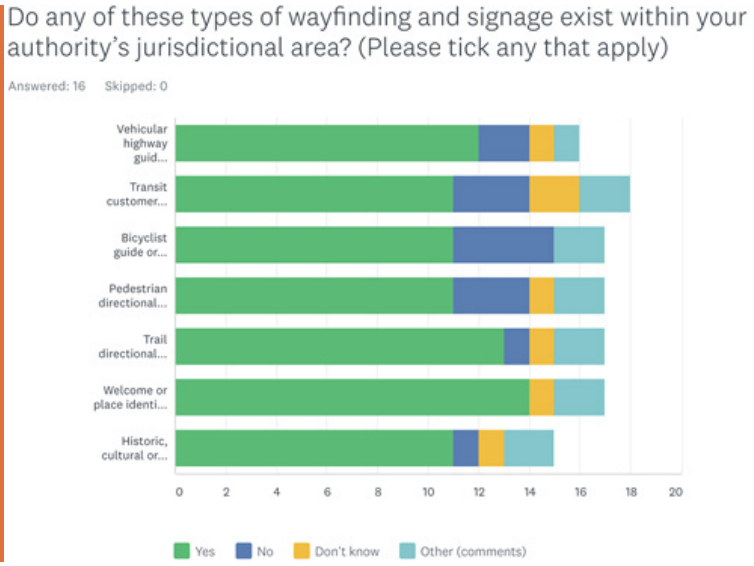
The limited responses prevent comprehensive analysis but provide insight into specific issues and relationships relevant to the concept of a countywide approach.

JURISDICTIONAL SURVEYS

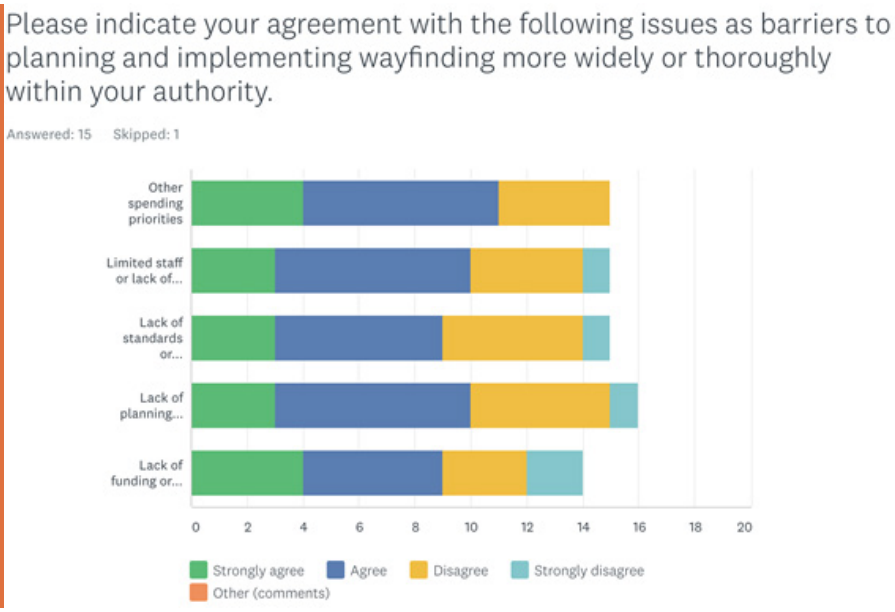
1. Respondents identified that a wide range of wayfinding exists within the County, but not universally. Comments include qualifications referring to specific initiatives, such as the Maryland Milestones Heritage Area, and educational and heritage signing associated with parks.



2. There is a mixed picture of responsibility for planning and implementing wayfinding. Deference to MDOT SHA and WMATA for responsibility over vehicular and transit wayfinding may be expected, in as much as this may be considered to refer to their jurisdictional roles. The greater understanding of localized responsibility for biking and walking wayfinding supports the MUTCD encouragement for creativity and delegated responsibility for community wayfinding. This is mirrored by all municipal respondents citing their responsibility for place and heritage signage. Mixed views on responsibility for trail wayfinding may reflect local circumstances in relation to the County master plan and long-distance trail management.



3. Overall, there was significant agreement with administrative and policy-based restrictions on the implementation of wayfinding in the County. Nine in 14 concurred that limited staff and skills, a lack of standards, and a lack of coordinated planning and funding, create barriers. Encouragingly however, nearly 40 percent of respondents disagreed that funding was a significant barrier. This table suggests there may be a role for countywide coordination that could potentially be delivered through locally funded projects.



4. When asked about how wayfinding and signage projects are funded, respondents indicated a broad range of sources, which suggests a good understanding of options and some creativity in local fund raising. While traditional sources of capital funding from federal, state, or County grants and local taxation are used for all types of wayfinding, private grants or sponsorship is also well represented as an option used by respondents.

INTEREST GROUP SURVEYS

The low response rate prevents any meaningful conclusions through analysis. Instead, selected comments from the replies are referenced for anecdotal value.

The two respondents represented the Capital Trails Coalition and the Maryland Milestones/Anacostia Trails Heritage Area, and have specific, program-based knowledge with countywide scopes of interest.

Both agreed on several statements about benefits, including:

- Wayfinding could help local people choose better ways to travel
- Wayfinding could help businesses and tourism in the County
- Any system of wayfinding should be consistent across the County
- Wayfinding is a good use of public money
- Spending on physical signage remains necessary despite mobile apps

Both also highlighted lack of signage on trails and at trailheads as particularly difficult challenges for visitors to the County. Comments also reflected concern for sign clutter and the value of information that could extend visits by showing people other places to go in centers.

When asked about the process of planning and implementing wayfinding, the respondents identified four areas where there are some challenges, although none were impossible:

- Identifying the relevant approving authorities
- Finding relevant guidelines and regulations
- Agreeing on a design for the wayfinding
- Agreeing on the destinations and other contents of signs

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

Prince George's County Planning Department