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Executive Summary

Cornell has a large and complex campus; our goal is to enhance the visitor experience by providing a more organized system of welcoming and directing them. Making wayfinding easy for everyone—visitors, faculty, students, alumni and prospective students—improves their impression of campus. After a thorough environmental audit and interviews with stakeholder groups, the design team determined the following major recommendations to improve campus wayfinding:

Add gateway signage and landscaping

Entrances to campus are not often marked; entrances with signs are underscaled, have poor visibility, and are not placed strategically. Enhancing campus gateways with signage and landscaping not only reassures the visitor they have arrived, but also gives them a positive first impression.

Enhancing information booths and adding more information to parking areas

Currently, drivers looking for parking are greeted by unsightly information booths, a complicated parking system and little information about how and where to obtain permits for parking.

By enhancing or redesigning information booths, the visitor’s first point of contact on the university is welcoming and friendly. Parking lots and garages should have clear information about when permits are required and how to obtain them.

Improve vehicular wayfinding

Roads to and around campus lack consistent and comprehensive directional signage. Cornell’s current brown campus signs blend into the landscape. They do not effectively communicate the Cornell identity. The number of messages and size of type used on vehicular directional signs are not appropriate for the speed, viewing distances or amount of traffic that motorists must contend with on campus. This increases the frequency of navigation errors by drivers and a network of signs is not there to help them correct errors.

The recommended vehicular wayfinding scheme creates a comprehensive, cohesive and understandable system. A more selective process has determined which destinations appear on signs. Signs are aesthetically aligned with the Cornell brand and are scaled appropriately.

Add loops and campus districts

The sprawling campus is difficult for visitors to understand the basic layout of campus. Loop roads provide an organization and easily remembered structure to the campus. This helps both visitors and those giving directions. Formally distinguishing different areas of campus (North, Central, East and West) breaks down the campus into understandable and memorable pieces.

Help pedestrians get around campus

Pedestrians have few signs to help them navigate the campus. It is difficult for visitors to estimate how long it will take them to walk from “point A” to “point B.” Visitors report having difficulty finding buildings on campus, especially those used for prospective student activities. Trails and natural areas are often not seen as viable commuting routes, although they provide more scenic alternatives to more heavily trafficked routes.

Adding pedestrian directional signs and maps will help people move through campus more efficiently and with less confusion. Trail signs help formalize the trail network and inform users of potential alternative routes. Bus signs can be improved with more information about route and frequency, helping users decide if they should wait or walk.

Improve maps on campus

Existing campus maps are difficult to read and don’t function as well as they could. The map signs are oversized and too complicated for a visitor to easily understand. We propose two types of map signs. A regional key map provides a snapshot of campus so the visitor can ascertain the general area of their destination. These are placed around perimeters of campus and near parking areas. As they move towards the center of campus, signs should feature area maps. These show a section of campus but provide more detail. Limiting the amount of campus shown helps users concentrate on the detail displayed on the map.
Signage and wayfinding system goals

1. **Approach: bring visitors to the perimeter of campus**
   Develop a vehicular sign system that coordinates with state and county signs

2. **Announce: mark the arrival to campus**
   Design gateways and landscapes in appropriate locations

3. **Welcome: provide assistance**
   Offer personal service at information booths that are unique to Cornell

4. **Orient and direct: help visitors find their way**
   Help newcomers understand the campus and navigate to specific destinations

5. **Enjoy: celebrate the campus**
   Help visitors discover Cornell's spectacular and surprising campus
Signage and wayfinding system goals

The 2008 Cornell Master Plan gives us the advantage of understanding key decisions and high level priorities which can directly guide this project. The signage and wayfinding system can contribute to master plan goals in the following ways:

- Improving access to the campus, particularly for the thousands of first-time or infrequent visitors
- Creating a clear framework for better wayfinding
- Complementing Cornell’s unique and beautiful character
- Achieving organizational, visual and functional clarity in the signage
- Dealing effectively with growth and change
- Reinforcing major paths with signage
- Linking the campus to downtown and Collegetown
- Marking accessible (alternative) routes where necessary
- Making the campus more pedestrian-friendly
- Supporting the use of bicycles and transit
- Increasing awareness of, and access to, campus amenities
- Coordinating sign design and placement with other street furniture

Our approach will incorporate these key issues:

**Planning issues:**
- Developing a system that works both day and night, weekdays and weekends
- Incorporating a future Welcome Center into the plan
- Coordinating signage implementation with other projects to maximize impact and cost savings

**Wayfinding issues:**
- Identifying the “intuitive landing points”
- Reducing the number of choices a visitor has to make
- Empowering the visitor by increasing opportunities for self-help
- Recommending what landmarks can be used as wayfinding “handles”
- Understanding people’s “mental maps” of the campus
- Understanding how visitors actually perceive campus areas or precincts and how that differs from plan views
- Establishing consistent nomenclature for all types of communications, not just signage
- Simplifying or abbreviating messages to decrease the information load
- Studying current digital, “pre-visit” and non-sign wayfinding tools

**Interpretive issues:**
- Designing sign types that interpret historic resources: traditions, events or discoveries
- Celebrating Cornell’s amazing physical assets, e.g. architecture, monuments, public art, geology, etc.; determining how these might be interpreted to “enrich its legacy of memorable landscapes”
Section 1: Wayfinding challenges & opportunities
**Approach: bring visitors to the perimeter of campus**

Develop a vehicular sign system that coordinates with state and county signs.

**Observation**
There is a lack of signs pointing towards preferred campus entrances and at important vehicular decision points along major routes (i.e., Route 79). This leaves visitors to their own devices in choosing a route to campus and adds to traffic congestion along secondary routes into campus (e.g., Stewart Avenue, College Avenue), according to information booth workers.

**Recommendation**
Add signs directing to campus along preferred routes. These should include distance information when possible. This could reduce vehicular congestion both on and off campus. For special events, digital signs or drop down panels could provide different messages as needed.

At visitor parking exits, provide directions back to Routes 366, 79 and 13, using MUTCO standard route symbols.

Coordinate sign locations with the Tompkins County Wayfinding plan.

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**Future: Tompkins County wayfinding signs**

**Ithaca**

- Waterfront
- Downtown
- East Hill CORNELL
- South Hill ITHACA COL
Campus approaches

Coordinating with the Tompkins County Plan

The Tompkins County regional wayfinding plan (2014) includes many signs that will overlap with the University system. These sign locations are indicated within the Tompkins County plan (right).

Through coordination with Tompkins County, these proposed signs could be modified to include “Cornell University” or similar destinations. Coordinating with the regional sign system would limit any unnecessary or duplicate signage.

Proposed destination messages from Tompkins County Plan that reference the University:
- Cornell
- Nevin Welcome Center
- East Hill Cornell

We recommend that the University work with the County to remove Nevin Welcome Center as a message from the Tompkins County Plan, as it may be confusing to those looking for the University Welcome Center. It is also not obvious to unfamiliar users that the Nevin Welcome Center is associated with the Botanic Gardens. The Nevin Welcome Center should be a message on University signage, but only in the immediate area around the Botanic Gardens.
Campus approaches - common routes to campus

Directing drivers from regional approaches
This map shows the most common approaches to campus and the vehicles per day (vpd) counts for each.

The regional sign message should be very general, directing vehicles towards “Cornell University” without any specific references to buildings, parking, or other destinations. This keeps sign messages consistent and simple, making the system easier to use while the driver is navigating to campus.

We recommend that the University work with Tompkins County to ensure that signs directing to campus are placed strategically.

Future: Tompkins County wayfinding signs
Campus gateways

Announce: mark the arrival to campus
Design gateways and landscapes in appropriate locations

Observations
There are multiple routes into the campus with no identified major entrance. Visitors have a little sense of arrival or welcome to the Cornell campus. Several entrances have identification signs, but are easily missed because of their small size and neutral color. In some cases, the signs seem to be placed at legal property lines rather than where one feels a sense of arrival.

Recommendations: Gateways
Routes into campus should announce Cornell where Cornell’s physical presence is recognizable (rather than at legal boundaries). Some entrances should be treated as “primary” gateways, where they are enhanced with signage, landscaping and banners. Other entrances should be considered “secondary” gateways, and feature a sign and simple landscaping where possible.

Recommendations: Visitor Center
The proposed Welcome Center at Noyes Lodge and the adjacent bridge area will be the most important “landing zone” for visitors to Cornell. They will be the primary location to offer a formal welcome. They should be landscaped and marked accordingly. While visitors will pass Cornell-branded signs and know they are on campus, the Welcome Center should make a more elaborate welcome statement.

Recommendations: Information booths
Because the booths are often the first destination for visitors, these should be enhanced to be more welcoming and brand-appropriate. The booth design should allow for the display of information when the booths are closed.
Wayfinding Challenges & Opportunities

Campus gateways - opportunities

Recommended primary gateways:

1. **Dryden Road/Rte 366 at Hoy**
   - Because the buildings are set back from the road there is an opportunity for a landscaped gateway; the generous amount of space can accommodate a horizontal gateway sign.

2. **Hoy Road**
   - Along Hoy Road, just east of the Hoy Garage, is where drivers coming from Dryden Road/Rte 366 may get their first feeling of being on campus. This entrance is especially important because of the nearby information booth and visitor parking garage, a first stop for many visitors.

3. **Stone Arch Bridge (campus side of the bridge)**
   - While not a common route for vehicular traffic, this is a major entrance for those walking from Collegetown. This entrance is currently marked with "Cornell University" on the low bridge wall and offers views of the campus up the hill. There is a campus map here for those crossing the Stone Arch Bridge or the adjacent Trolley Bridge.

4. **Pleasant Grove at Cradit Farm Road**
   - Most traffic coming from the airport and other areas north funnels through this entrance. This gateway can help keep traffic out of the Forest Home neighborhood by clearly indicating that all University traffic should turn down Cradit Farm Rd. It would be beneficial to have an unmanned information kiosk just past the gateway so drivers can be clear on where they are going before crossing the Thurston Avenue bridge.

Recommended secondary gateways:

5. **Intersection of Stewart and Campus Road**
   - This entrance is accessed by locals. The proposed Tompkins County wayfinding system will also send some visitors from downtown up Buffalo St and then through this intersection. This entrance should be marked, but not emphasized as a major entrance to campus.

Recommended welcome zones:

6. **Dryden Road/Rte 366 at Hoy**
   - Dryden Road/Rte 366 is an important transportation corridor but does not provide a consistently welcoming image for Cornell. Campus is visible but one is still given the impression that they are not on campus. Since many visitors find themselves on Dryden Road/Rte 366 at some point throughout their visit, this area should be enhanced with banners, landscaping, and Cornell-branded wayfinding signage to reinforce the University presence on this road.

7. **Thurston Avenue bridge**
   - Because there are many different ways to enter campus, there is a need to create a central "welcome zone" for visitors to make them feel that they’ve truly arrived. The bridge is a highly visible and well-known landmark on campus and the Welcome Center will soon be adjacent to it. This area should be enhanced with banners and landscaping to emphasize its importance and recognizability.

Other entrances to campus:

Less prominent entrances to campus can be marked with a simple post-and-panel tertiary gateway sign (Sign Type 3).
Campus gateways - existing conditions
Wayfinding Challenges & Opportunities

Campus gateways - existing conditions

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Cornell University

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11.08.16 N/A
Campus gateways - sign recommendation

Sign function
Confirm that the user has arrived and create a sense of welcome.

Content
Text: Cornell University
Symbol: Cornell seal

Locations
At major vehicular entrances to campus

Legibility requirements
Visible and legible in excess of 200 feet

Comments
The vertical pylon is recommended at some gateway locations due to limited space.
WAYFINDING CHALLENGES & OPPORTUNITIES

Information booths - existing conditions

Tower Rd booth

Hoy Rd booth

Campus Rd booth

Tower Rd booth

Campus Rd booth

Campus Rd booth

Hoy Rd booth

Campus Rd booth
Welcome: provide assistance

Offer personal service at information booths that are unique to Cornell

Observation
Information booths are used to direct visitors to parking. The difficulty of finding visitor parking at the University stresses the ongoing importance of the information booth for parking information and as a point of welcome for visitors.

Recommendation
Add unmanned information kiosks to high-traffic routes into the campus and near the proposed Welcome Center. A kiosk near the Welcome Center allows visitors to quickly understand how and where to go without parking the car and going inside the Welcome Center. These might also be used as information stations for trucks coming to campus to make deliveries, so delivery information should be available.

The Hoy Road booth’s location is excellent, since it is nearby a major gateway to campus and because it is situated right next to the garage. Other booths, however, are not in optimal locations. These booths should be relocated for improved visibility and function:

Tower Road booth
Peterson Lot, Stocking Hall/Dairy Bar and the Tower Road Booth are on the same part of Tower Road west of Judd Falls Road. The booth is easily missed because of its design, scale and location—it is set back from the road and seasonal plants and trees obscure views of the booth. There is a “Welcome” sign pointing visitors to the booth, but there is no distinguishing feature of the booth (such as an information i, Cornell branding, etc) to reinforce its purpose.

Relocating the booth closer to or inside the Peterson lot would:
- give the booth a more prominent location, as it would be closer to the intersection of Judd Falls and Tower Road and directly across from Stocking Hall/ the Dairy Bar, an important campus destination.
- move the booth closer to where visitors are parking, making it easier for them to obtain information before they explore campus on foot.
- create a landmark for those coming from the eastern side of campus or using a future shuttle bus system. It would make the Peterson lot much more visible.
- make the information booth easier to locate/direct to because of its proximity to the street intersection and to Stocking Hall.

Campus Road booth
The Campus Road booth is in a high traffic area and has been reported to create congestion down to College Ave, which can be a safety hazard. The current location of the booth requires cars to queue into the street due to its location.

Moving the booth farther east on the concrete median would allow more cars to queue in existing pull off.

Observation
Booths are staffed during the week from 8am to early evening. They are closed on weekends and in the evening hours, important times for visitors to campus. Staffed booths provides the opportunity for a good first impression and human interaction. This is particularly important now that many campus visit agendas are computerized.

Tower Rd booth - move booth to Peterson lot for better visibility and easier access to parking.

Campus Rd booth - move booth to the other end of median to allow more cars to queue without blocking the intersection.
Information booths (continued)

**Recommendation**
Identify one or two booths that either get high-traffic or which are often passed by visitors to be staffed on the weekends and evenings.

The university should also consider whether any unmanned kiosk locations should be staffed at high visitor times (i.e. Cornell Days) as well.

**Observation**
The booths themselves are not attractive, do not have Cornell identification and look like guard booths. They do not appear welcoming.

**Recommendation**
Information booths should be attractive, have welcoming elements, be identified as Cornell’s, and provide a protected location to get information and ask questions.

Information booths should be unified in their look and feel but can have some unique characteristics to distinguish them from the other information booths.

**Observation**
Existing visitor information signs identifying booths are low—easily blocked by vehicles or snow.

**Recommendation**
Signs identifying the information booths should be located within the cone of vision of motorists and designed so they will not be obscured by passenger vehicles or by snow.
**Information booths**

**Key considerations**
- Booths can be based on an off-the-shelf unit and enhanced with custom features.
- There are opportunities to integrate innovative and sustainable engineering/architectural features, such as green roofs, solar panels, etc. This emphasizes Cornell as a forward-thinking institution.
- Booths should have a consistent and recognizable identity. This can help turn booths into more discernable landmarks, without users questioning their function.
- Improved booths could physically express Cornell’s academic and institutional principles and priorities. Example: provide space for computers, permit printers and informational postings inside; provide a covered walk-up window outside.

**Diagrammatic sketch**
### Information Kiosk

#### Sign function
Map pull-off/info station

#### Content
Campus map and directory, interactive touchscreen (optional), visitor parking instructions, map take-aways (optional)

#### Locations
At select locations along major routes at the edge of campus.

#### Legibility requirements
Should have take-away maps that accommodate older adults and those with visual impairments.

Will need illumination for use at night.

Should be identifiable at 300 feet to allow for slowing and pulling over out of traffic.

#### Comments
Alternate means for information should be available for those with serious visual or physical impairment.
Wayfinding Challenges & Opportunities

Observation
Cornell’s existing brown campus signs do not call effective attention to themselves and tend to blend into the landscape. They do not effectively communicate the Cornell identity.

Recommendation
The new design should feature some red and be more aligned with the Cornell identity. Signs should be higher off the ground to keep sign faces from being obscured by snow piles and to increase visibility.

Observation
The number of messages and type size used on vehicular directional signs are not appropriate for the speed, viewing distances or amount of traffic that motorists must contend with on campus. This increases the frequency of navigation errors by drivers and a network of signs is not there to help them correct errors.

Recommendation
Message loads should be limited to a maximum of 4 destinations. MUTCD suggests a maximum of 3 messages but this is not always possible in areas with many destinations, and we highly encourage the University to work with NYDOT to allow for 4 messages. Increasing the number of listings increases the size and cost of the sign, so only the most prominent campus destinations should be listed. Lower-speed areas, such as around the Veterinary School of Medicine complex, can carry an additional 1-2 messages, but these should be deployed sparingly. Long names should be abbreviated to fit on a single line so the sign can carry more listings. Vehicular sign listings are limited to 13–15 characters (varies depending on character width). Messages should be grouped by direction to increase readability. See Appendix I for more information about legibility and message guidelines for vehicular signage.

Observation
Many events on campus use temporary signs to direct motorists. This is expensive and generates landfill waste for messages that are used year after year. For example, Reunion signs cost about $5,000 per year. Signs are also purchased for Homecoming, event parking, summer camps, etc.

Recommendation
Temporary signs are expensive and waste resources. Consider placing changeable message signs at important locations for traffic diversion and parking information during special events. (e.g., athletic events, reunion, homecoming, Cornell Days, Move-in, summer programs, etc.). These might be digital (solar powered, wireless connections perhaps) or they might be lockable flip-down panels where a limited number of messages are ever used. This would reduce costs and resources required. An analysis of messages and current locations is needed to determine the best form and technology.

Orient and direct: help visitors find their way
help newcomers understand the campus and navigate to specific destinations

Cornell University

Wayfinding Signage and Wayfinding Master Plan

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Signage and Wayfinding Master Plan
11.08.16 N/A
Campus districts

Observations
The Cornell campus is a large, spread out area that is separated in use and topography. Although conceptually one place in people’s minds, it is never experienced that way. Physical features, such as the gorges, hills and winding roads, make it difficult for the campus to be experienced as one cohesive unit.

Recommendations
The University should use a small set of district designations to organize the campus while maintaining a sense of unity.

“North Campus,” “Central Campus” and “West Campus” are already used in everyday speech and on signs; no doubt they evolved as useful ways to explain the campus. “East Campus” is a designated area in the Campus Master Plan, is a logical addition and will be very helpful in directing to popular visitor destinations there (such as the Dairy Bar, Botanic Gardens and the Veterinary School of Medicine).

Campus districts should not be formally announced when the user has transitioned onto another part of campus; these are not boundaries that should be delineated. Campus districts exist only as organizational handles that direct the user to the correct area of campus. (i.e. The Veterinary School of Medicine is on East Campus, the freshman dorms are on North Campus).
Wayfinding Challenges & Opportunities

Observation
Establishing and maintaining a sense of orientation is challenging for the Cornell visitor due to the campus's scale, topography and lack of sight lines. There is neither a "main street" on campus nor a grid to help newcomers understand how the campus is organized. Several street names change at intersections, which also makes campus navigation more confusing.

Recommendation
Overlay a loop structure onto campus roads

Develop and sign a circulation loop that encompasses the core of campus and has connections to other parts of the campus. This loop will facilitate self-navigation and make the campus less overwhelming to visitors. In addition, it will provide a much easier way to give directions. (suggested name: Inner Loop or Green Loop)

Develop and sign a second loop to provide a tour of North campus. The loop is conveniently connected to the inner loop and passes the proposed Welcome Center location. (suggested name: North Loop or Blue Loop)

Inner loop advantages:
- Provides an organization and easily remembered structure to the campus. This helps both visitors and those giving directions.
- A loop is a familiar way of talking about movement on a campus. This loop can be experienced in private vehicles or shuttle buses/campus circulators.
- The loop is easily accessible from the proposed Welcome Center and major campus gateways: Caldwell Road, Hoy Road and College Avenue.
- The loop form is reassuring to visitors because it is continuous and implies the ability to return to a starting point if they are lost.

- The loop passes major destinations, such as the Veterinary School of Medicine and Athletics facilities, and access roads to major destinations, including visitor parking and information booths.
- The loop is an option for visitors, not a necessity. Drivers coming off major approaches including 79 and 366 do not have to use the loop to reach the Hoy Garage, where most visitors park.
- As configured, the loop would direct visitors coming from 366 to avoid East and Campus, a very congested intersection during the day, when going to the Welcome Center, North Campus and Forest Home Drive Garage.
- While needing some level of marking on the roads, it does not need to be marked on all campus maps. It is recommended to be marked on maps at information kiosks and booths and as a layer on the online interactive map.
- Marking of the loop can use blazes that can be attached to directional signs and lamp posts.

Inner loop disadvantages:
- Due to the road structure of the campus, the loop passes through areas that are congested for vehicles and pedestrians.
- The loop passes by important locations on campus that motorists can see but cannot park at.

North Loop Advantages
- Provides a marked trail for applicants and parents to see student housing on a self-guided tour.
- Gives staff a tool to help them explain and show the range of housing options on the Cornell campus to prospective students and their families.
- The loop passes major destinations, such as the Veterinary School of Medicine and Athletics facilities, and access roads to major destinations, including visitor parking and information booths.

North Loop Disadvantages
- It does not and cannot show all residential locations on the campus.

Visitor parking
info booth (existing/relocated)
info booth (proposed)
info kiosk (unmanned)
proposed gateway location
proposed area

1.17
Wayfinding Challenges & Opportunities

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WAYFINDING CHALLENGES & OPPORTUNITIES

Campus vehicular wayfinding - sign recommendations

Sign function
Vehicular directional sign

Content
Text: Campus destinations, drop-off and parking facilities. Vehicular sign listings are limited to 13–15 characters (varies depending on character width). Messages should be one line only so the sign can carry more listings.

Suggested number of lines by vehicle speed:
> 35 mph: 2-3 lines of text
25-35 mph: 3-4 lines of text
< 25 mph: 4 lines of text on campus if NYDOT agrees

Locations should be listed in order of movement: ahead, left, right; then closest to furthest
Symbols: MUTCD approved symbols for parking and information; Cornell logo (on backs of signs)

Locations
Signs should be placed 200 feet in advance of the intersection. On lower-speed roads, such as on campus, shorter distances are acceptable, 100-150 feet.

Legibility requirements
From MUTCD 2009:
Letters should be at least 6” in height for all capital letters, with 4.5” in height for lower case letters. On urban streets with speeds of 35 mph or less, letters should be at least 4” in height for all capital letters.
Font is to be sans serif for legibility.
Visitor Parking

OPERATIONS

Observation
Parking at Cornell campus is complicated, particularly for those unfamiliar with the campus. Visitor parking is limited, and there are rules (and costs) for using it. The difficulty of finding parking, and the complexity of the system, can create an undesirable first experience of the University.

Even if someone determines (or is told) where to park ahead of time, there may be snags (e.g. if the metered or garage spaces are full). As a result, the presence of manned information booths at major campus entrances is both helpful and necessary for visitors.

Recommendation
Visitor parking (garages, lots or parking spaces) needs to be signed as simply and clearly as possible. Because the overall parking system is so complicated, it is especially important that the visitor parking signage distinguish itself (shape, color, size, etc.) from staff/student parking; the same terminology and visual vocabulary should be consistently used in all forms of communication. Parking codes that rely on abbreviations that are not meaningful to outsiders should be avoided to minimize mistakes.

At the Hoy Garage, Forest Home Drive Garage and future visitor parking facilities, identification signs should include a “Park Here for...” section with a short list of major destinations in the vicinity. This will reassure visitors that they are parking in an appropriate lot.

Information Booths need to be a primary message on vehicular directional signs throughout the campus. Messages should direct to the nearest booth.

PERMITS

Observations
Rules for parking permits are complicated, for example: “Short-term permits are valid in designated areas, in the Hoy Road parking garage, residence hall lots FH, ND, SW, WD, and lots signed A, E, ME, O, R, WE, not valid in metered spaces or in loading zones.” The permits themselves say which parking code the permit is valid for, but do not give the names of those lots (figure 1). Booth workers typically give specific instructions on where to park, but have no way of knowing when lots are full. Visitors sometimes need to return to the booths to ask again where to park.

Recommendation
Garages and high-traffic visitor lots should have changeable message panels for operational messages, such as “lot full” and alternate locations for parking.

Observation
When permits are mailed to visitors in advance, they are not always accompanied with a map showing which lots the permits are for. This creates an extra step for the visitor, where they either have to go to an information booth when they arrive or, if they are coming when the booths are closed, they have to find the information online. This proves to be difficult, because the interactive map does not have a layer showing lot permits (figure 2), the visitor parking page does not provide a link to any parking map, and the campus parking maps page does not provide a map with all permit types on a single map (figure 3).

Recommendation
When permits are mailed to visitors in advance, they should be accompanied by a map indicating which lots the permit can be used in or naming a specific lot with GPS-friendly address.

Parking and Transportation should also work with University Communications to improve the accessibility of visitor parking information online.
WAYFINDING CHALLENGES & OPPORTUNITIES

Visitor Parking (continued)

PERMITS (continued)

Observations
There are both metered and “Parkmobile” spaces but it is not immediately clear if or how they overlap. On the Transportation website, metered parking and Parkmobile regulations take up multiple screens of information listing lots by name. It is left to the individual to determine where they might be able to park and how payment is made at specific locations. Information is not alphabetically listed (if visitors could determine where they are) and lots have varying rules and prices. This format is not user-friendly.

It is reported that “Parkmobile” lots are typically full by 10 am and booth staff feel uncomfortable recommending visitors seek spots in those lots because of this.

Recommendation
On the website, present parking types and information in a tabular/grid format so it is easier and faster for users to identify relationships between parking types, prices and rules. There should be a direct link to this information from the campus interactive map.

As the parking system continues to evolve, it is essential that information on the website is kept up-to-date, especially for visitors.

PARKING SIGNS

Observation
The parking lots are identified with complex codes. Additionally, there are lots where the identification signs are not near the entrance, further frustrating the visitor.

Recommendation
Parking identification signs should be clearly visible to motorists and located at the entrance(s) to the garages or lots. Symbols, colors, format and nomenclature should be consistent across all parking signs and related communications.
Visitor parking garages - sign recommendation

**Sign Function**
Identify the garage name, hours of operation, permit types, regulations and special conditions

**Content**
- Text: Name of the facility
- Symbols: Parking symbol
- Subcomponents: changeable message screen (optional), list of nearby destinations (optional depending on size)

**Locations**
At entrances to parking lots

**Legibility requirements**
Visible from 200 feet
Legible in excess of 100 feet

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Visitor parking lots - sign recommendation

**Sign Function**
Identify the lot name, hours of operation, permit types, regulations and special conditions

**Content**
- Text: Name of the lot
- Symbols: Parking symbol
- Regulatory information

**Locations**
At entrances to parking lots

**Legibility requirements**
Visible from 200 feet
Legible in excess of 100 feet
Wayfinding Challenges & Opportunities

Pedestrian wayfinding

Orient and direct: help visitors find their way
help newcomers understand the campus and navigate to specific destinations

Observations
Central campus has an additional layer of campus organization: quadrangles. The Arts, Agriculture and Engineering Quads fit the traditional form of quadrangles; all are recognizable, pedestrian-scale landmarks.

Recommendation
Quadrangles are useful terms for pedestrian wayfinding and should be included on pedestrian directional signage and maps.

Some maps have alternate names for quads and names for other areas that need clarification (e.g. Pew Quad, Wee Stinky Glen). Only the most recognizable quads and plazas should be included in the University wayfinding system and should be labeled using consistent nomenclature. The map pictured on this page shows the recommended plazas and quadrangles that should be included on all campus maps and pedestrian directional signage.

Observations
The Cornell campus has complicated circulation system for pedestrians that follows topographic features rather than a recognizable geometric form. Tower Road, Campus Road and East Ave are major vehicular and pedestrian routes but none of these function as a spine connecting every part of the campus.

Recommendation
Without significant efforts to reconfigure pathways through campus, creating a pedestrian spine does not appear to be a useful tool for pedestrian circulation. Student maps of campus reinforce this impression (see appendix). Instead, maps and directional signs should emphasize the roads and pathways already in use. Consistently labeling and directing to quads and major landmarks will give the user a more helpful and intuitive impression of campus.
Pedestrian wayfinding

Observations
Distances and grades make the campus challenging for pedestrians, especially those with any age-related or mobility limitations. There are very few existing pedestrian directional signs and they do not constitute a cohesive wayfinding network.

Most signs that pedestrians might use appear to be vehicular directional signs or intentionally dual purposed (figures 1 & 2). The text is typically too small to be used by motorists who are not stopped and are too limited in information for pedestrians.

Recommendations
Develop a network of pedestrian directional signs. A pedestrian sign network is needed to guide visitors, students and staff to important destinations. These signs need a consistent set of messages to create an effective trail of information for people to follow.

Use text and maps on signs
Most pedestrian signs will need maps and text messages to provide multiple forms of information and include destinations that cannot be included in the limited set of messages. Maps should be localized to show all buildings in the immediate area. A key map should be provided.

Use a consistent set of messages on pedestrian signs
Directional listings on signs should be biased in favor of visitor destinations. One subset of messages (“global” destinations) should be major destinations for the whole campus, while another subset should be focused on the immediate area (“local” destinations). The maximum number of messages will be limited by desired size of the signs, inclusion of graphics and ADA requirements.

Recommended global destinations:
- Welcome Center
- East Campus
- Central Campus
- North Campus
- West Campus
- Ag Quad
- Arts Quad
- Engineering Quad
- Botanic Gardens
- Bailey Hall
- Veterinary Hospital
- Cornell Store
- Statler Hotel
- Athletics
- Hoy Garage
- Forest Home Drive Garage

Observation
Because admissions offices are in different buildings for each College, it can be difficult for anyone looking for administrative offices (especially potential students) to determine the appropriate building.

Recommendation
Directional listings should include College offices next to building names.
Pedestrian wayfinding

Observations
Some quadrangles, especially the Arts Quad, are very large and buildings are difficult to identify from a distance (figure 3).

Recommendations
Develop maps for individual quadrangles (figure 4). A map of each quadrangle should be located at pedestrian entries to the quadrangles and at quadrangle-side exits from important buildings (e.g., libraries). Such signs would be smaller than directory maps. Maps should show a distance scale with walking time.

Observations
There are a limited number of directory maps at locations on campus. The maps themselves are very large, detailed and with small text that must be examined very close up. Those with visual limitations will have great difficulty using them (figure 5).

Recommendations
Consider developing new directory maps with detail selected for orientation and navigation utility. Enlarge the text and graphics, which may require limiting the extent of the main map and providing a key map. (This can be tested during map redesign.) Include walking time scales.
Pedestrian wayfinding - directional sign recommendation

**Sign function**
Direct users to major buildings, parking lots and areas of campus.

**Content**
Text: Campus district, directional listings (names may be abbreviated to fit on the sign). Sign width limits message lines to 32–35 characters.
Symbols: Parking symbol, directional arrow
Campus Map

**Locations**
At street corners, quads and plazas, and pedestrian paths at the edges of campus. Locations should be coordinated with the primary pedestrian routes being studied for enhanced night lighting.

**Legibility requirements**
Minimum 5/8” cap height as per ADA.
Pedestrian wayfinding - map sign recommendation

Sign function
Provide a campus map for people to see the campus layout and understand where they are.

Content
Text: [top 20 University destinations - to be determined]

Locations
Visitor parking pedestrian exits
Information booths
Important visitor destinations (e.g., Welcome Center, Cornell Store, main libraries, student center, food service)
The map should be “heads up” (so that “up” on the map is ahead for the user). A you-are-here arrow should indicate which way the user is facing.

Legibility requirements
Will need illumination, either internal or using ambient light at night.

Should be identifiable from 150 feet by pedestrians.

Comments
Alternate means for information (e.g., phone number) should be available for those with a serious visual impairment.

See our interactive map: cornell.edu/about/maps

Parking regulations are enforced at all times
Weekdays 7am–5pm
Obtain a permit at an info booth or park in a metered or Parkmobile lot
Evenings and Weekends
Park in Hoy or Forest Home Garage, A, B or CC lots without a permit
Maps - existing conditions

Figure 1 - Pine Tree Rd (across from Tennis Center)

Figure 2 - Hoy Rd

Figure 3 - Campus map on Google Maps
WAYFINDING CHALLENGES & OPPORTUNITIES

Creating a better campus map

**Goal:** Provide consistent, accurate, understandable and accessible information that supports and empowers those navigating to and around Cornell’s campus.

Maps are a diagrammatic form of location and directional information that work in conjunction with text-based signs. Some people find one type easier to use than the other, which is why it is important to offer both forms of information on a campus.

**HOW VISITORS ACCESS MAPS**

Visitors and the university community can access map information three ways: map signs on campus, take-away (printed) maps, and digital maps.

**Campus map signs**
Located near visitor parking facilities, public destinations or serving as a stand-alone sign, this sign is a powerful tool in orienting and empowering users. Directional signs have limited space and only list key destinations; a map can list most buildings and can include additional wayfinding information (figures 1–2 show existing map signs).

**Pedestrian directional signs**
These signs include both a destination list and a section of the campus map. The map section should show the immediate area (about a 1/2 mile radius) and call out key buildings.

**Map orientation**
Users have significant difficulty rotating maps and spatial relationships in their head. Ideally, map orientation should change depending on how the sign is oriented. Placing maps so that the top of the map aligns with what is ahead of the user makes it easier to relate the flat image to the three-dimensional world.

**Takeaway Maps**
Offering printed maps is extremely helpful. Day Hall and the information booths rely heavily on printed maps when giving directions.

Downloadable PDFs of the campus map(s) should be available on the website for easy printing by those planning a visit. The campus interactive map on the Cornell website is not optimized for printing—the printer dialogue crops the map in a different position, often excluding desired parts of the map.

**Digital Maps**
Digital maps are available on many devices: smartphones, iPads, GPS devices and, somewhat less conveniently, computers. GPS navigation is incorporated into smartphones, making them especially helpful for wayfinding. If accessing maps on home computers, visitors have other conveniences—larger screens and printers. Maps available online should carefully consider the different formats in which the maps may be accessed.

With the advent of digital and interactive maps (Google, MapQuest, GPS units, etc.) many people will see and use non-University maps and directions. To the extent possible, the University must work directly with the database companies (such as Tele Atlas) affiliated with these to give them accurate information. Google Maps currently has many campus buildings and high-visitor destinations tagged (figure 3). More buildings and facilities should be tagged. With the exception of B Lot, it does not name any visitor parking facilities, which would help visitors navigate directly to the parking facility.

Apple Maps has far fewer campus destinations tagged (figure 4). The University should work with Apple Maps to add more key visitor destinations, especially the Veterinary School of Medicine (figure 5).
Creating a better campus map (continued)

existing map sign

Comprehensive building map - not recommended

map text is 10 pt.

building directory text is 15 pt.

Regional key map - recommended

destination list text is 23 pt.

RECOMMENDATIONS

Due to the scale and complexity of the campus, a large-scale comprehensive building directory is not recommended. Existing comprehensive campus map signs are overwhelming and the type is too small to read. Instead, the university should implement two types of map signs: regional key maps and area maps. These maps should match in style and color, but are rendered differently to accomplish different goals:

Regional key map

The regional key map provides a quick “snapshot” of campus that provides the user with context and allows them to become familiar with the general layout and organization of campus. In this map:

• buildings are displayed graphically but are not identified by name
• important large areas like quads, athletics and Botanic Gardens are labeled. Major/high-visitor facilities are also labeled
• campus landmarks are rendered and emphasized
• visitor parking and information booths are called out with glyphs
• a numbered list of “Top 20” campus destinations, keyed to the map, is included. This allows for important academic buildings, such as the Law School, to be identified.
• URL for online map is included so users can query specific buildings
• important phone numbers are listed

Cornell University
Signage and Wayfinding Master Plan
15CU256001

11.08.16 N/A

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Creating a better campus map (continued)

Area maps
Pedestrian directional signs should have a more detailed map. These are more focused on the user’s immediate area.

- buildings are marked directly on the map to minimize back-and-forth between a legend and the map
- you-are-here marker placed on maps with indication of viewer’s orientation
- shows the different campus districts and highlights major areas
- roads are named and major pedestrian pathways are shown
- typography and colors are refined for optimal clarity
- more limited color palette so less important features recede
- simplified building forms to reduce complexity
- selective distortions to emphasize useful features - e.g., boundary roads that are both important definers of campus and major access routes

Sample regional map (in progress)
Sample area map (in progress)
Creating a better campus map (continued)

CONTENT FOR SIGN MAPS

Map content needs to be carefully considered so that features that are most useful to viewers are included and superfluous detail is omitted. Details that are not unique features or ones that the typical visitor would not notice should be omitted. The map should include:

You are here marker
- marker should be directional (e.g. an arrow), unambiguous and show the viewer’s position relative to the map they are viewing
- marker should be legible enough to be clearly visible without obscuring other important features

Major vehicular and pedestrian circulation
- include heavily trafficked pedestrian pathways on the map
- differentiate pedestrian-only interior pathways with a color shift
- maps should show the campus loops and major trails

Major landmarks
- It is the uniqueness of an object’s or place’s appearance that allows it to stand out vis-a-vis its surroundings to newcomers. They need to be distinctive, recognizable and describable to be useful landmarks.
- sentimental landmarks (because of historic value or fame)

Parking
- lots/garages with parking for visitors (both day-to-day and events) should be identified with “P” symbol

Building footprints
- simplify shapes to reduce complexity
- non-University or non-public buildings should be differentiated graphically

Showing context
- decide if and how to show university boundaries
- determine if “soft” or “hard” boundaries should be shown
- landscape features (such as slopes) or other elements (such as public art) that could help orient a visitor

Off-site facilities
- major off-site university facilities should have their direction indicated with arrows and text or with an inset map

Additional wayfinding content might include:
- helpful phone numbers (primary): University operator or information number, Admissions office, parking department, security. Any that are 24/7 or at least 7 day should be noted as such.
- helpful phone numbers (secondary): most-visited venues (such as athletics, performing arts, etc.), graduate Admission office
- university website address(es)
- transit information plus phone number and/or web address
- accessibility information plus phone number for 24-hour assistance
- links to event listings (optional)

CONTENT FOR TAKE-AWAY MAPS

Take-away maps offer opportunities for more content and can be customized for different purposes. Take-away maps will be explored further during the map design phase. Some features that can be considered for these maps are:

Legend/building directory
- list building names and key to an alpha-numeric grid coordinate
- include multiple listings for the same building if there are multiple common use names. This should be done sparingly and only where needed
- names and grid coordinates should use a tabular format to speed searches for information
- titles of buildings can also go directly on the buildings if there is room

Alpha-numeric border and grid overlay
- provide a map grid so viewers can more easily locate their destination
- the granularity of the grid should provide an unambiguous intersection for destinations. Consider a grid that is not equally spaced so that some grid lines can align with roads/paths people will travel on

Scale and distribution
- ability to reproduce maps in B&W/grayscale as well as color
- map should be scaled to be legible in a handout size. Both sides should be utilized to better display the information.

SPECIALTY MAPS

There is a need for specialty maps; at the very least a parking map and handicapped accessibility map are needed. As with the basic campus map, these can be stocked at information booths out or made available as pdf downloads. These maps should share the same base artwork as the other campus maps, with layers that can be turned on and off to display certain features. Examples of specialty maps include:

- parking map for staff, students and visitors.
- bike map showing bike racks, paths and dismount zones.
- map for disabled users showing accessible building entrances, routes and features such as power doors, accessible non-powered doors, accessible paths, tactile ramps and elevators.
- map for visually impaired and older users with increased text and object sizings.
- map showing loading docks and truck-friendly routes. These should be sent to delivery drivers and should also be available at information booths.
- a “night” version of the map that shows safe and well-lit pedestrian routes through campus. Printed copies should be offered at various locations around campus and also available online.
Pedestrian wayfinding - blaze sign recommendation

Accessibility blazes
All buildings without an accessible main entrance should either indicate where the accessible entrance is on the building identification sign (which is not a feature on existing building identification signs) or use accessibility blazes. These blazes will help guide the user to the appropriate entrance.

Making navigation easier for disabled users
Printed maps need to indicate accessible routes from appropriate parking and accessible building entrances. This will result in one or more additional maps beyond the standard University Campus map. Accessible route maps should be available at the information booths, online, on University mobile applications, at pedestrian exits from public parking, drop-offs and at major public transit stops.

Sign function
Direct to accessible entrances

Content
Text: Directional instruction
Symbols: Accessibility symbol

Locations
From the main building entrance to accessible entry.
Located where they will not interfere with disabled movement

Legibility requirements
100 foot visibility, 50-75 foot legibility
**Buses - existing conditions**

**Observation**

Bus shelters can take many forms but it is important that, however they look, they are viewed as information stations for travelers. On existing shelters, bus route and schedule information is inconsistent. Information numbers and URLs do not appear in many locations. There is no real-time information at shelters regarding next arriving buses and routes.

**Recommendation**

Each shelter should have bus route and schedule information. A map showing routes in relation to the campus and bus connections would be helpful. These maps and schedules should include information numbers and websites. The University should consider working with TCAT to deploy electronic message panels at major stops identifying route and time to next bus.

Campus bus shelters should be enhanced with Cornell branding to emphasize to riders when the bus has entered or departed from campus.
**WAYFINDING CHALLENGES & OPPORTUNITIES**

**Buses - sign recommendation**

**Sign Function**
Identify the stop, route, schedule and hours of operation. Routes should indicate major destinations accessed at each stop. Emphasize those most frequently used by visitors and freshmen.

**Comments**
Information should be organized to minimize cross referencing different graphics and legends, particularly for the novice user.

It is important that potential riders, especially first-time users, be able to locate the bus stops, know the routes, schedule, accessibility and any costs or restrictions to use. This information should be readily available online.

**Content**
Text: Stop name/location, route name(s), frequency of buses, hours of operation, information number and/or website/smartphone app
Subcomponents: changeable map
Symbols: bus symbol

**Locations**
At each stop

**Legibility requirements**
Place in close proximity to ambient light for nighttime legibility

**Notes**
Layout is an example only. The conceptual layout shows the principles of simple and clear information design. Designs will be further developed after discussions with TCAT.
Bus, shelter, and digital signage recommendations

**WAYFINDING CHALLENGES & OPPORTUNITIES**

**1.35**

Examples - campus circulator bus wraps

When a campus circulator service is launched, the bus should be wrapped with University-branded graphics to make it recognizable.

Examples - bus shelter wraps

Campus bus shelters should be enhanced with branded graphics to enhance their presence and emphasize to bus riders when they have entered the campus.

Examples - digital signage at bus stops

Real-time digital signs show when and which bus is next to arrive.

Examples - digital signage at bus stops

Examples - bus shelter wraps

Examples - campus circulator bus wraps
Bicycles - existing conditions
1.37 WAYFINDING CHALLENGES & OPPORTUNITIES

Bicycles - regulatory sign recommendation

The Campus Master Plan outlines several planning principles and actions for better bicycle facilities on campus:

The bike network should discourage cyclists from using heavily traveled pedestrian routes, and along shared paths and trails signage should remind cyclists to look out for and give way to pedestrians. Identify and sign primary bike routes to and through campus.

Wayfinding Recommendations
Standard MUTCD Chapter 9B (2009) regulatory and guide signs should be used to define routes for bicyclists on roads adjacent to and throughout the campus. Guide signs will encourage cyclists to stay on the road rather than cutting through pedestrian paths. Include mileage for the destinations.

Sharrow pavement markings (figure 1) should also be used on bicycle-friendly streets without bike lanes.

Sign Recommendation
Consider regulatory signs, such as “bikes left, peds right” and dismount zone signage to make shared-use paths safer.
If a robust bicycle network is created within and around campus, a bicycle wayfinding sign system should be implemented. Sign types include guide signs, which include directional information with mileage, and Bike Route signs.

Sign Functions
Bicycle regulatory and wayfinding

Content
Regulatory messages
Symbols: Bike and walk symbols

Locations
High-collision or densely populated walkways as needed

Legibility requirements
Place in close proximity to ambient light
Directional signs and Bike Route signs should be retro-reflective.

Figure 1

Figure 1
### Bicycles - Big Red Bikes map sign recommendation

**Sign Recommendation**
Big Red Bikes bikeshare locations should include a map sign. These maps are useful to cyclists by showing:
- Big Red Bike dock locations
- which roads have bicycle facilities such as bike lanes or sharrows
- which roads should be avoided or traveled with caution
- where amenities like showers, bike stairs, covered bike parking, and nearby bike shops are located
- where dismount zones (if any) are located
- major destinations/neighbourhoods beyond the campus so cyclists can plan their route to and from class
- important phone numbers, websites and regulations
- information about bicycle registration, Big Red Bikes bike share, reporting a stolen bike or reporting a collision.

**Sign Function**
Campus area bicycle map

**Content**
Text: Big Red Bikes, Campus district
Subcomponents: Map
Symbols: Bike and amenity symbols

**Locations**
Big Red Bike dock locations

**Legibility requirements**
Place in close proximity to ambient light
Building identification - existing conditions

Observations

NOTE: The current scope does not include building identification signs. A more thorough analysis with specific recommendations and design will be conducted if the scope is extended to include this sign type.

Currently buildings are identified with cut letters. Several fonts have been used, usually in all capital letters. Depending on background, letter size and location on the buildings the signs vary widely in their legibility and overall appearance.

Many buildings have multiple entrances. Admissions staff mentioned that some buildings that hold information sessions are hard to identify because they are often approached from the rear or side.

It is not realistic from a cost (or aesthetic) perspective to formally sign each and every entrance. But important secondary entrances should be signed; this can be as simple as silkscreening on glass panels or doors. Also, as mentioned elsewhere, accessible entrances must be identified.

Buildings are often identified at a single location, which is not always near the entrance and not always visible from the pathways. Resulting errors are potentially time consuming and tiring, especially for older adults or those with mobility limitations. Building identification locations needs to take into account campus circulation paths and how they provide access to each building. Identification should be placed where it is clearly visible from pedestrian circulation pathways.
Interpretive system

Enjoy: celebrate the campus
help visitors discover Cornell's spectacular and surprising campus

Interpretive panel system
Recommend horizontal tableau or vertical post-mounted that are on the back of pedestrian directional signs.

The signs are usually site-specific, deployed in locations that are relevant to their subject matter. Interpretive signs are popular with campus tour guides; they offer a place to stop and highlight an interesting topic.

Themes
At a university like Cornell there are dozens of potential themes. They can highlight people, places, history, landscape or architecture. It is important to ask: what themes lend themselves best to the physical environment? What themes link clearly to specific buildings or the campus itself (as opposed to themes covered in a publication or online)? Example: The Eddy Gate

Topics could include:
- Important milestones in the University's history.
- History of campus buildings and their architects.
- Important contributions and innovations made by Cornell's presidents, faculty, and alumni.
- Geology, plants and other natural features
Wayfinding Challenges & Opportunities

Observation
The campus features many walking trails, but do not feature destination information or trip length/difficulty level (figure 1). This is a missed opportunity, as these trails provide more scenic and less congested routes than roads weaving through campus. Some map signs exist (figure 2), but these are placed sparingly along the trails and require a thorough study of the map to gain an understanding of where trails lead.

Recommendation
Develop a trail blaze sign that directs to trails and lists specific destinations along the trail. By including destinations, users can discover alternate paths around campus. Mileage or walking times should be listed next to the destination, which will be especially helpful for students trying to gauge whether they have time to walk the trail before their next class. Warning signs should also be implemented on trails with rough terrain and offer an alternate easier route, if available.

Because winter trail maintenance changes from year to year, it is not recommended that these signs indicate which trails are maintained throughout the winter. Instead, winter warning signs should be implemented on an ad hoc basis.

Sign function
Direct to and along nature trails

Content
Text: Trail name, destinations (buildings, quads, roads, etc)
Symbols: Directional arrow and trail color marker (if desired)

Locations
At trailheads and trail intersections

Legibility requirements
Minimum 5/8" cap height as per ADA

Comments
Smaller intermediary blazes may be required to keep hikers on the correct path
WAYFINDING CHALLENGES & OPPORTUNITIES

Athletic banners

Sign function
Identify and enhance Athletic facilities

Content
Text: Building name
(alternate: Cornell Big Red)
Symbols: Cornell Bear logo

Locations
Existing street poles near fields and athletic facilities. Banner spacing will vary based on the context. It must consider light pole locations, light pole heights, and availability of light poles to use vs. need for new poles. It should also be determined based on sight lines (straight road vs. curving), interference with the existing tree canopy and property ownership (1 side of the road vs. 2). Banners can have even spacing or can be used in clusters, but should have enough density to make a statement.

Athletic banners are designed to boost branding but also to identify destinations. Their locations will depend somewhat on the above factors, but also the proximity of the poles to the destinations. The limiting factor might be the locations of existing poles.

Legibility requirements
Visible from 75'

Notes
Banners should be aluminum for longevity and neat appearance.