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Making the Connection

Charlotte is building what may be one of the world's most highly integrated urban wayfinding systems. BY PAT MATSON KNAPP

Opposite: Pedestrian signage was the first phase of a comprehensive wayfinding system for Charlotte.

Above, left to right: Vehicular and parking components, to be installed by 2010, are consistent with the pedestrian system design. The NCDOT approved its unique colors and graphics. The parking system will eventually include dynamic signs that broadcast parking availability, traffic conditions, and other information.

Charlotte, North Carolina, has plenty of reasons to make sure people can find their way around the Queen City.

Its 2010 Center City Vision Plan projects the downtown employee base will double in the next few decades, to 100,000. The city opened a new light rail system in 2007, followed by a cultural arts campus that brings four new attractions and the tourists that come with them. A mini construction boom in business and housing developments has added to the city's growth.

So when the city adopted its Center City Transportation Plan in 2006, it recommended a comprehensive wayfinding system to guide motorists, pedestrians, and light-rail commuters to their destinations in Uptown, Charlotte's center-city core.

"With the new light rail system going on line in 2007, it made sense to tackle the pedestrian portion first," says Jim Kimbler, Uptown transportation planner for the Charlotte Department of Transportation. In the almost four years since the transportation plan was adopted, a multidisciplinary team has completed two phases of the pedestrian wayfinding system and planned and designed vehicular, parking, and egress components. By spring 2010, when the entire system is in place, the city will have created one of the most integrated urban wayfinding systems in the world.

Innovative funding

The city's transportation plan also cited growing traffic congestion during peak hours, and in 2004, Kimbler's department applied for a federal Congestion Mitigation Air Quality grant to fund a downtown wayfinding system, basing their application on the idea that an effective system would reduce trip lengths and therefore emissions.

"We made the case that good signage would reduce the amount of needless driving in Uptown by guiding people most efficiently to parking garages and then on to their destinations," Kimbler explains. He estimated that an effective wayfinding system would reduce trips by one-half mile per motorist (including visitors and non-commuter business trips). Multiply that by the number of motorists heading to Charlotte's Uptown every year, and the savings reaches 1.7 million miles per year.

The city won the grant, and is slated to receive a total of \$4.1 million, funding the entire wayfinding program implementation. The city will pay for its ongoing maintenance.



CHARLOTTE WAYFINDING SYSTEM

Location: Charlotte, N.C.

Client: City of Charlotte

Client Team: Jim Kimbler (Uptown transportation planner)

Project Management: Howard M. Landers Consulting

Design: Two Twelve

Design Team: David Gibson (principal in charge); Anthony Ferrara, Jonathan Posnett (creative directors/project managers); Dominic Borgia (director of technical design); Darlene van Uden (senior designer); Andy Ng (designer)

Consultants: DAWA Inc. (programming and on-site coordination, pedestrian and vehicular systems); Brinkley Design (on-site coordination, initial design of pedestrian system, map artwork)

Fabrication: Signs Etc. (fabrication and installation), Matthews Paint (coatings)

Photos: Jonathan H. Posnett

Right: Double-sided pedestrian signs consist of structured aluminum panels topped by a waterjet-cut aluminum version of the city's emblem. Maps are exterior-grade digital prints with a protective polycarbonate coating.

Below: The impetus behind the pedestrian system was the opening of a new light rail line. Commuters and tourists arriving in Charlotte's Uptown need orientation and direction to new cultural destinations and new routes to work.

Opposite: Working closely with stakeholder groups, Two Twelve devised an easy-to-remember organizing system that divides Charlotte into four quadrants, much like radiating pie slices. Color coding helps distinguish the districts.



Walking Uptown

Charlotte's Uptown is relatively small, encompassing 168 blocks over an area of about 1.7 by 1.1 miles within the I-77/277 loop around the city. Most of the major attractions are in the Uptown core, within a half-mile of the city square.

Developing an organizing principle that would help pedestrians quickly create their own "mental maps" was the crucial first step in planning a pedestrian system, says David Gibson, managing principal of Two Twelve (New York), the lead design firm on the project.

"The whole point of an urban wayfinding strategy is to find the hidden logic in a city's organization, then reduce this complex

geography into a simple diagrammatic idea," he explains. Working with stakeholder groups, Two Twelve explored a few options for dividing the Uptown into easily digestible districts. Finally the team decided on a scheme that would essentially draw an "X" across the oval-shaped area, dividing it into four radiating pie slices. They named the districts North, South, East, and West because those directions are where the major streets connect to the highway loop. Distinct colors for each district help to differentiate them in pedestrians' minds.

Another key step in the process was extensive coordination with the stakeholder groups. Kirk Lohry, president of DAWA Inc. (Charlotte), created the project's initial design brief and kicked



off the design process with a visualizing workshop that involved approximately 20 key stakeholders. Later, he led the difficult process of helping stakeholders determine the destinations that would appear on the signs.

Two Twelve designed the signs to express the civic identity of downtown Charlotte, relate to the traditional design of existing street furniture, and accommodate district identifiers and wayfinding panels. Color-coded header panels serve as district labels, while dark green panels carry wayfinding information. Bottom panels color-keyed to the district are devoted to transportation-related information. Below the sign panels, eye-level maps give pedestrians an overview of the Uptown area and attractions within its four districts.

The signs are crowned—literally—with a version of the city’s emblematic crown waterjet-cut from a 1.5-in. slab of aluminum. While you might think the crowns would be tempting to thieves and vandals, they are welded to the upper district panel and collar assembly and secured via a recessed internal sleeve. “And if that’s not secure enough, there are four tamper-proof set screws locking each assembly in place,” says John Cox, senior project manager for fabricator Signs Etc. “It would take a monumental effort to remove one.”

The first phase of the pedestrian program included 13 on-street signs as well as 14 map kiosks at light rail stations. The second phase added 30 more signs on streets throughout Uptown. A final phase will add six more signs in Spring 2010, when two art museums, a new African-American cultural center, the NASCAR Hall of Fame, and other new venues open.

Driving factors

Kimbler and Howard Landers, the consultant coordinating the efforts of the multidisciplinary project team, believed the vehicular, parking, and egress components of the program should build on the look of the pedestrian signs. And through some visionary thinking, close attention to guidelines from the federal Manual on Uniform Traffic Control Devices, and creative collaboration with the North Carolina Department of Transportation, the use of type, colors, graphics, and nomenclature will remain largely consistent from highway to final destination and back again.

The vehicular component aims to route visitors as efficiently as possible from the I-77/I-277 interstate loop to Uptown parking garages, where they will leave their cars and follow pedestrian signs to their final destinations. Implementing a new system will require removing vestiges of several old systems that were inconsistent, ineffective, and sometimes just plain incorrect.

“A variety of freeway signs had been installed ad hoc over the past three decades,” says Kimbler. “They aren’t very legible from a distance and don’t direct visitors to take the most efficient routes to their destinations from the freeway.” The new system will actually provide more effective wayfinding with 33 fewer signs than are now in place.

Incorporating the pedestrian system’s unique colors and crown finial also seemed logical. “It just makes sense that the most effective system would be consistent in how it orients visitors, provides them directions, and identifies districts, amenities, and transportation choices,” says Landers. But state departments of transportation generally follow MUTCD guidelines closely and are often unreceptive to the use of unique colors and particularly non-standard graphic images. Kimbler and Landers knew that getting NCDOT’s approval might be an uphill battle.

So they enlisted the help of Craig Berger, consultant and SEG D director of education. Berger updated NCDOT officials on changes to MUTCD guidelines and presented best practices adopted by other cities linking interstate systems with their urban centers. Ultimately, this helped the city gain approval to use the unique colors and

distinct crown logo. “I don’t know of a municipality in this country, or perhaps in the world, that has achieved this level of integration in its wayfinding system,” says Berger.

The vehicular system, to be installed by Spring 2010, will include 45 freeway signs and at least 38 on-street signs, 10 parking guidance signs, and at least one dynamic sign that will broadcast parking availability, street closure information, and traffic management information. As the core of a functional system, the city has organized a consortium of its mostly privately owned parking garages. A dynamic parking information system will be able to collect parking garage data and distribute it via a system of dynamic signs at five major approaches from the freeway system to the city center. The city is also working with NCDOT on a system of egress signs consistent with the vehicular and pedestrian components.

Kimbler already sees the fruits of the team’s labor when he walks through Uptown and sees visitors and commuters using the pedestrian signs. The city has also gotten good feedback from the business community. As the program heads toward completion, the city is planning a campaign called “Find Your Way” to promote the system. Through print, television, and web channels, the campaign will educate, inform, and remind Charlotte residents and visitors that the new system relieves congestion, reduces harmful emissions, and generally makes the Queen City an even better place to live. X

