

CENTER CITY

pedestrian circulation and wayfinding study | **final report**

ROCHESTER, NEW YORK



2012

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introduction

Finding your way has never been more important. Getting places on time, with minimum stress, is more valuable than ever. Easy accessibility to services whether on foot, by public transit or by automobile is not just a matter of courtesy or common sense.

It is an economic necessity.

Lynch, The Image of the City

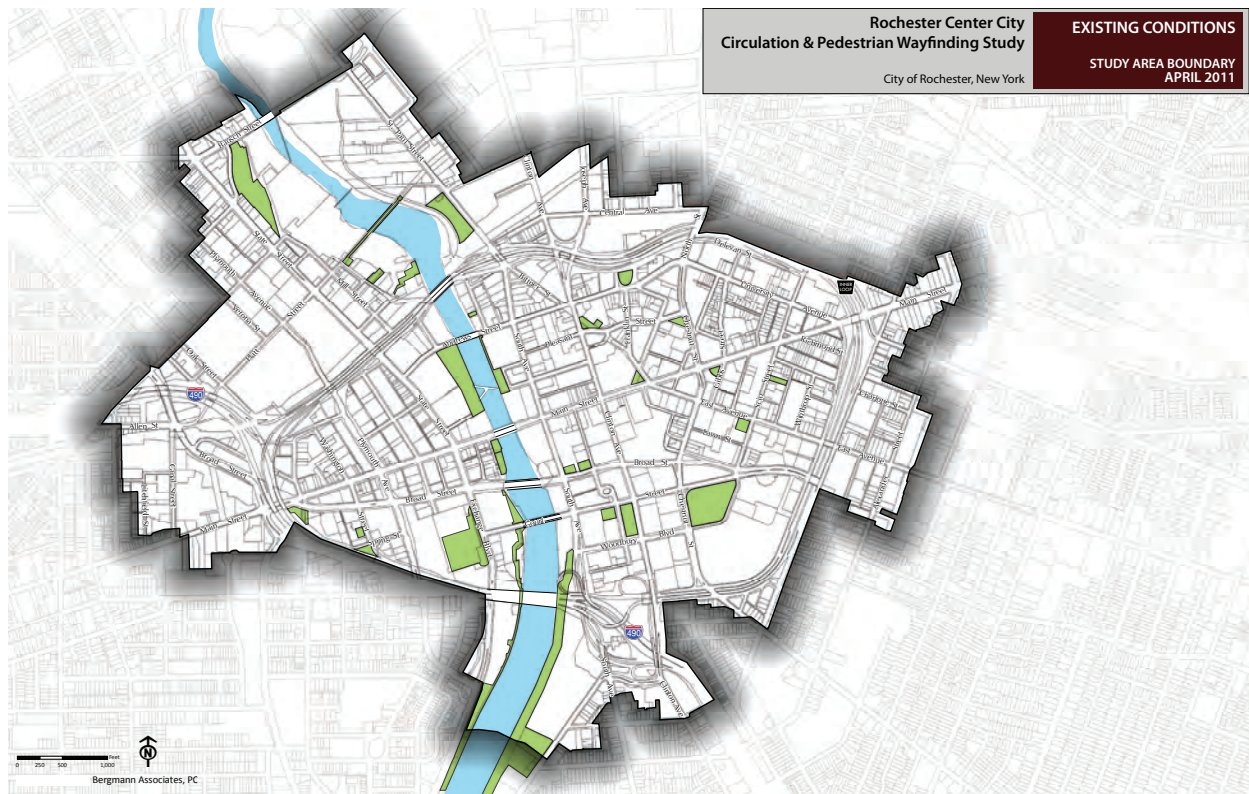


MAIN STREET

The Project

The urban form of Rochester's Center City reflects a range of decisions representing more than 200 years of progress and change. Center City contains a series of unique, human scaled places amid a complex system of urban arterials, super block office complexes and former retail malls. This results in several distinctive "places" within Center City which create different experiences for residents and visitors. Due to this, the City of Rochester has identified concern with the level of difficulty for visitor orientation and wayfinding within Center City.

The City recognizes the need to develop a plan that evaluates the existing wayfinding systems throughout Center City and provides recommendations to implement an integrated system with easy and enjoyable navigation within Center City.



STUDY AREA MAP

Importance of this Study

If an effective wayfinding and interpretive system, focused on the pedestrian or bicyclist was implemented, visitors to Center City would be more likely to travel on foot and explore beyond their traditional comfort zone. An appropriately designed system will function as the connective tissue of Center City, linking the myriad destinations, sub districts, trails and other resources together in a cohesive wayfinding network.

The ability to easily and efficiently navigate an unfamiliar place is directly related to the enjoyment of that place. A healthy wayfinding system allows visitors to easily orient themselves and navigate between destinations. These systems are not limited to signage, but also include visual cues from the streetscape, landscape, and landmarks. The implementation of this plan will result in enhanced visitor navigation and enjoyment.

Objectives

The goal of this study was to develop a plan to improve the visitor wayfinding experience within Rochester's Center City. The plan seeks to identify a strategy to enhance and connect existing pedestrian wayfinding devices and systems.

The recommendations set forth in this plan, once implemented, will tie together various existing sign systems, build upon the newly installed vehicular wayfinding system, direct visitors to key destinations and most importantly, create a seamless and unified experience throughout downtown.

Utilizing national best practices, the development of a new wayfinding system will provide clear and direct orientation and connections, allowing visitors to effortlessly navigate Center City.

Success will be measured by the ability of visitors to determine their location in a larger setting, identify destinations and identify a preferred route. Ultimately, this will improve traffic flow and lead to an enhanced visitor experience.

Process

The project limits correspond with the Center City zoning district, as indicated in the study area boundary map opposite. The total project area is 918 acres.

The project team evaluated a broad range of documentation, supplemented with in-field data collection to gain a comprehensive understanding of the existing conditions of the pedestrian wayfinding systems. Utilizing various maps and reports provided by the City of Rochester, in conjunction with additional locally available resources (for full document list see Appendix a), the team compiled the existing conditions data into a series of maps, which were used as the baseline for wayfinding system recommendations.

The existing wayfinding system was analyzed with special attention given to the visitor experience. This included an analysis of the existing districts, destinations, sign systems, and circulation. The Center City Master Plan and the existing wayfinding system were evaluated using comparable urban environments and recognized national best practices.

Project Advisory Committee (PAC) and Public Information Meetings were held to solicit feedback on the accuracy and relevance of the design team's interpretation of the existing condition information collected. The information presented gave an overview of the design team's understanding of the wayfinding and navigational opportunities and needs within Center City.

After collecting feedback the design team reviewed best practices and developed key design guidelines and recommendations. These recommendations were used to develop a conceptual sign package which included sign types, sign locations, and three design alternatives. These sign packages were presented at a PAC meeting, Rochester Downtown Development Corporation Luncheon, and at a Public Meeting for input and selection of a design concept.

After collecting final comments and feedback, the preferred design alternative was revised and further developed. The schematic sign package was developed based on the preferred sign concept and feedback collected throughout the planning process.



EXISTING WAYFINDING KIOSK AND WAYFINDING MAP



BROAD STREET AT SOUTH AVENUE

existing conditions

Wayfinding is the process of utilizing multiple pieces of information to understand and navigate a space via *'the consistent use of organization of definite sensory cues from the external environment.'* A healthy wayfinding system organizes information spatially and provides an easily understood hierarchy that improves the user's ability to find their way.

Lynch, The Image of the City

The documentation of existing conditions is critical in understanding Center City and serves as the baseline of information for the analysis and recommendations set forth in this report.

Maps and data collection provided by the City were used to prepare existing condition maps which identify the project boundary, vehicular quadrants, districts, destinations, pedestrian routes, and public transit routes.

Our extensive in-field data collection yielded a plethora of data documenting the existing signage within Center City. Utilizing this data, maps were prepared documenting the sign systems, sign types, sign condition, and intended viewer.

The inventory of the existing conditions included an overview of physical organizing elements related to wayfinding systems, a comprehensive inventory of existing wayfinding signage, and an overview of the existing pedestrian circulation.



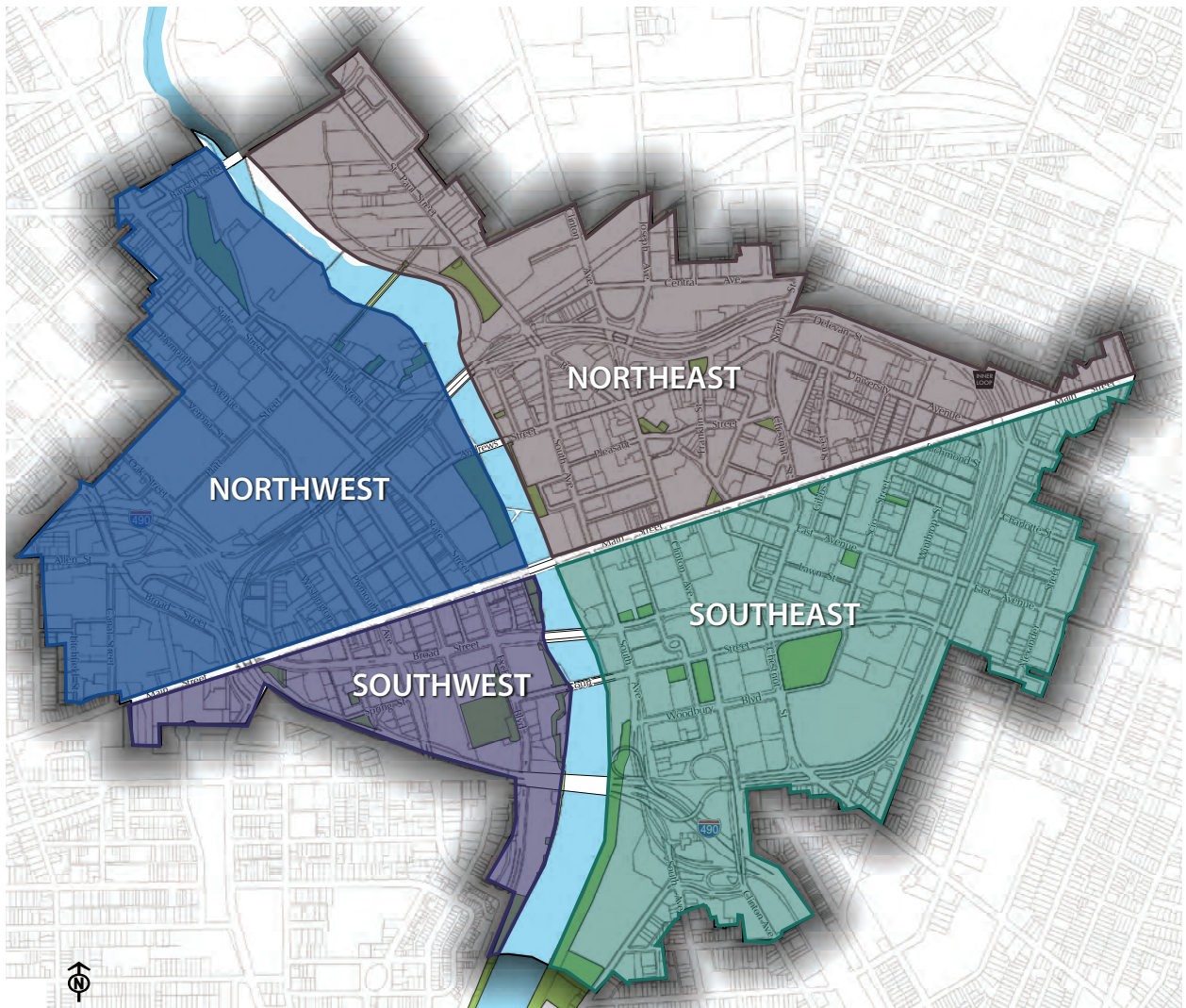
CENTER CITY SIGNAGE

Physical Organization of Center City

Rochester has a welcoming, small-scale urban form. For a city of its size, the character, architectural integrity, landmarks, and destinations are unparalleled. The physical organization of Center City can be simplified into four basic elements, quadrants, districts, circulation, and destinations.

Quadrants

Quadrants were identified as the basis for the vehicular signage system (see below). The quadrants follow the two major organizing elements, Main Street and the Genesee River. The quadrants are color coded and named by their geographic orientation and are indicated on the vehicular oriented sign system and the Center City kiosk maps.



QUADRANT MAP



GROVE PLACE DISTRICT

Center City Districts

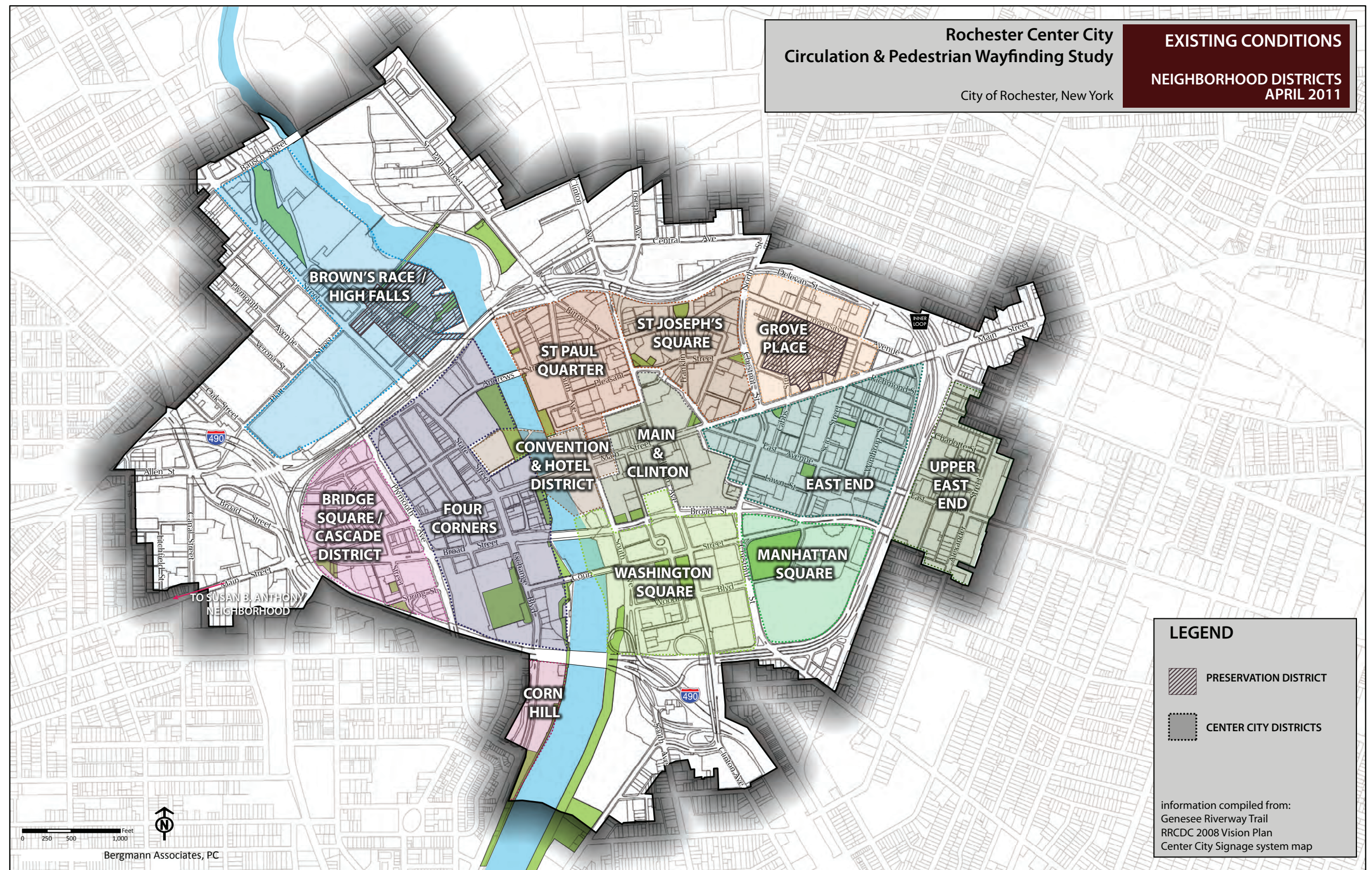
In Rochester, districts are defined by either the concentration of unique services or amenities or character of a geographic region or neighborhood.

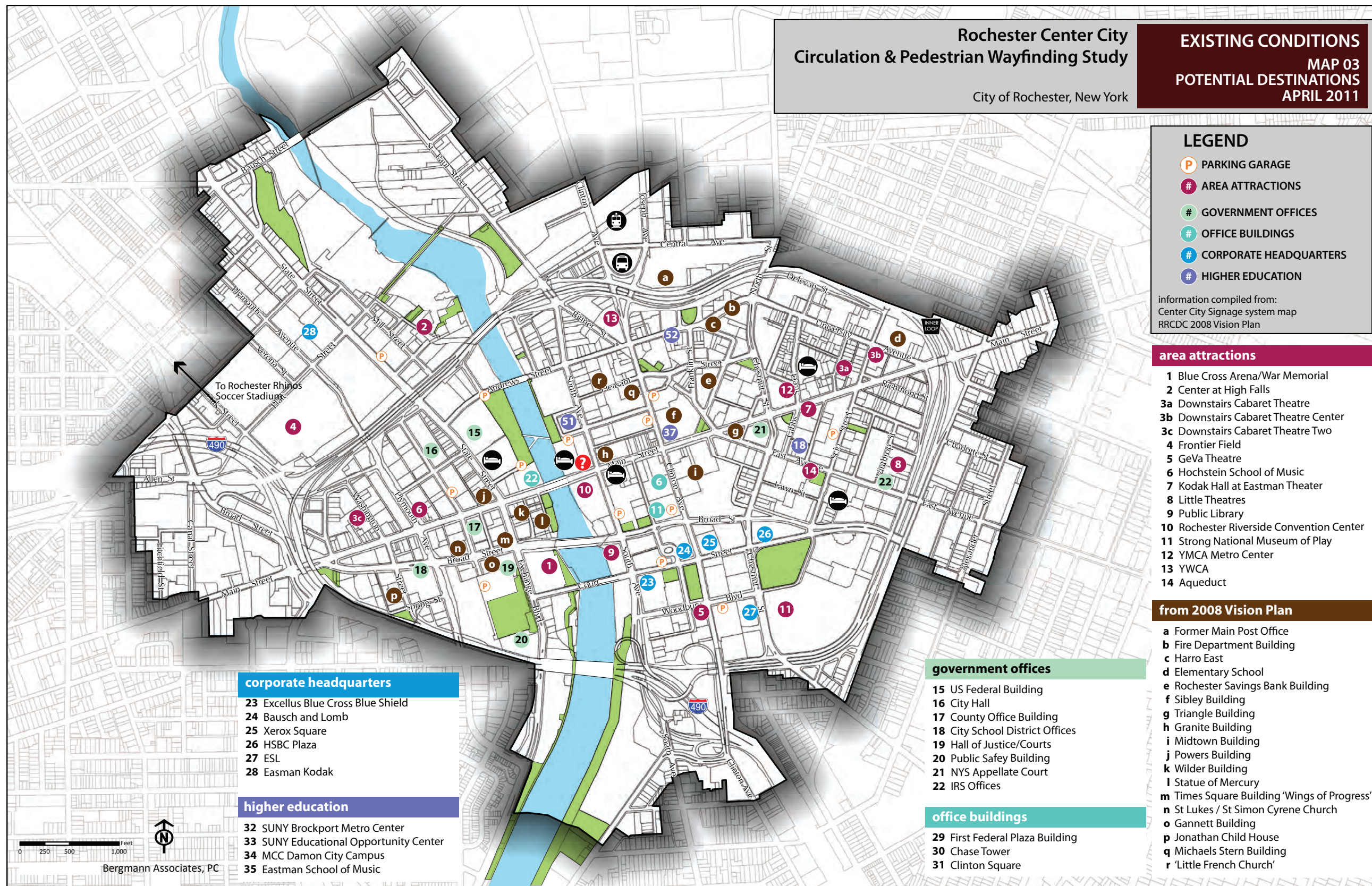
The district map published by the Rochester Downtown Development Corporation (RDDC) identifies twelve districts within Center City. Cascade, Four Corners, Convention and Hotel, Main and Clinton, East and Upper East End, Grove Place, St Joseph's Square, St Paul Quarter, Brown's Race and High Falls, Corn Hill, Washington Square and Manhattan Square, each having a unique identity and history. These districts are indicated on the Neighborhood Districts map, opposite.

In addition, there are two historic preservation districts within the neighborhood districts, the High Falls and Grove Place districts. These preservation districts are distinct with rich architectural features and history.

High Falls is located adjacent to the High Falls and offers expansive views of the Genesee River gorge. The district includes restored 19th century architecture and is home to restaurants, retail services, tourist center, event space, offices, and residential space. It is neighbored by a professional baseball field and soccer field and is connected to the Genesee Riverway Trail.

Grove Place is one of the best preserved historic residential neighborhoods in the City. This neighborhood has unique character with brick row houses, quaint tree-lined streets, and modern townhomes. The neighborhood is in walking distance to the East End district which offers many services and entertainment.





existing conditions can't



FRONTIER FIELD



BLUE CROSS ARENA



NATIONAL MUSEUM OF PLAY

Destinations

There is a broad range of destinations that attract people to Center City. The main source of data used to identify destinations include The Center City Signage Project (2003) and the Community Based Vision Plan for Downtown Rochester (Rochester Regional Community Design Center, 2008). These destinations were supplemented with the in-field inventory and community input.

Preliminary destinations range from event centers, cultural districts, accommodations, public parks and plazas, transportation facilities, government offices, office buildings, corporate headquarters, educational institutions, and landmarks. As decided by the Project Advisory Committee (PAC), basic services, although critical to the vibrancy of a city, are not included in the inventory of existing conditions. Basic services include restaurants, retail, and other like businesses. This decision was reached because services are not viewed as permanent and would require sign maintenance that is beyond the current and projected means of the City.

Visitor destinations are found scattered throughout Center City, without high levels of concentration in any one area. The destinations with the highest visitorship include the Blue Cross Arena, Eastman Theater, Frontier Field, Geva Theater, National Museum of Play, and the Riverside Convention Center.

The final list of destinations is identified on page 41, in the recommendation section of this report.

Existing Sign Systems

Several days were spent in the field conducting an inventory of existing signs located within the study area. The team took a photographs of each sign and documented information such as sign type, sign system, condition, intended viewer, materials, and installation information for each sign. This information was used to populate a GIS database which the City can use to manage sign systems. The findings of this inventory are summarized below.

Over 272 signs were identified in the Center City of Rochester. The existing design, destinations, scale and condition vary greatly. There is no common standard for pedestrian signage, unlike vehicular signage that was successfully standardized in 2003.

Through an in-field investigation and data collection, four distinct sign systems were identified throughout Center City. These system accounts for 73% of the total signage inventoried and are comprised of the Center City Signage, Genesee Riverway Trail, Erie Canalway Trail, and High Falls Walking Tour. The remainder of the signs are comprised of City informational, parking, gateways, and historic/interpretive signs.

Of the four distinct sign systems, the **Center City Signage System** is a vehicular-oriented system which comprises 55% of the total signs inventoried. This system, installed in 2003, is in excellent condition and includes pole mounted signs and overhead directional signs. There are a few gateway identifiers and destination identifiers within the system. This system divides Center City into color-coded quadrants, and guides visitors to parking garages and various destinations.

The signs inventoried as part of the **City Informational, Parking, and Gateway** systems are primarily vehicular-oriented, directional or parking signs. Informational kiosks are included in this category. These

signs do not appear to be part of any standard signage system and lack consistency in appearance. The condition of these signs vary from poor to good with few in good condition.

The **Genesee Riverway Trail** sign system is a pedestrian-oriented system located along the Genesee Riverway Trail. The trail travels parallel to the Genesee River in the north-south direction. The system is in good-excellent condition and includes kiosks, banner signs, and in-pavement trail markers. This sign system functions as a wayfinding and orientation system for users navigating the Genesee Riverway Trail.

The **High Falls Walking Tour** sign system is a pedestrian-oriented system that is located in the historic High Falls preservation district. The system is in good condition and includes 23 building-mounted bulletin signs. This system provides historic information for 23 sites within the district, and does not function as a wayfinding or orientation system.

The **Erie Canalway Heritage Trail** sign system is a pedestrian-oriented system located along the Genesee River (part of the canal system) in the north section of the Corn Hill District (within the Center City project area). The system is in good-excellent condition and includes three signs, one kiosk and two interpretive panels. This system is an interpretive and educational system which does not provide wayfinding or orientation information.

The signs included in the **'Other'** category are mainly historic and interpretive signs with varied materials and appearance. They are not part of a single planned, cohesive sign system. The signs included in this category are pedestrian-oriented signs.

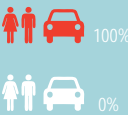
A summary of all data collected during the field visits is portrayed in the informational graphic on the following page and on the maps in appendix b.

CENTER CITY SIGNS

The exhaustive collection of existing signs included: 595 photographs of 272 signs and documentation of the location, sign system, type, condition, and intended viewer.

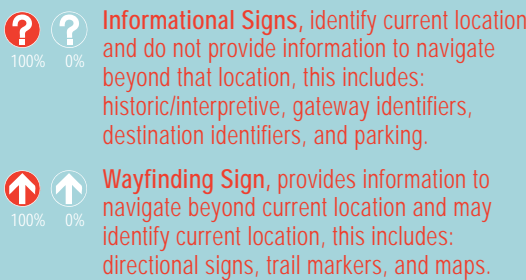
INTENDED VIEWER

Indicates the percentage of signs intended for the vehicular viewer or pedestrian.



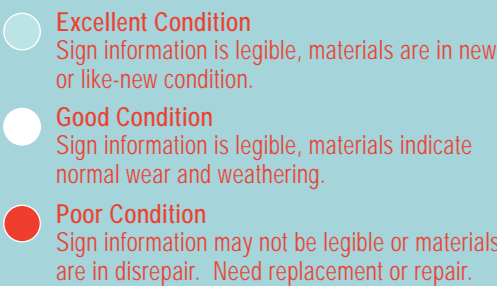
SIGN TYPE

Indicates the percentage of signs that are informational or wayfinding.

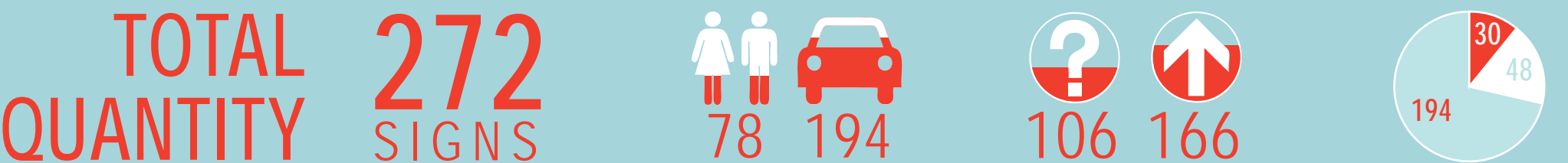


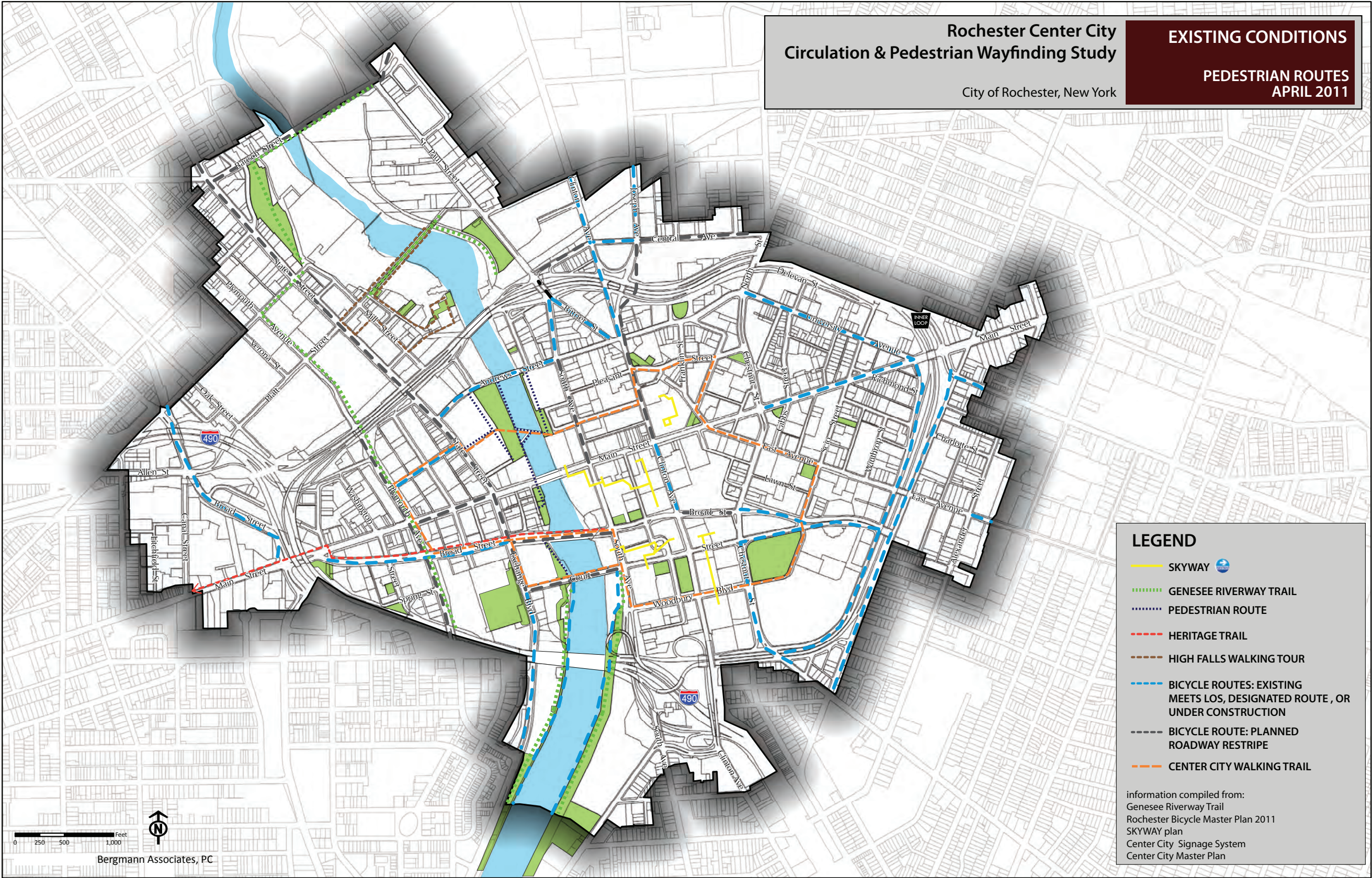
SIGN CONDITION

Indicates the percentage of signs that are in excellent, good, and poor condition.



SYSTEM	VIEWER	TYPE	CONDITION
1% Erie Canalway Trail			
3% Gateways			
4% Parking			
7% Other/Historic Interpretive			
8% Genesee Riverway Trail			
8% High Falls Walking Tour			
14% City Informational			
55% Center City Signage			





PEDESTRIAN ROUTE MAP



CASCADE DISTRICT PUBLIC SIDEWALK



WASHINGTON SQUARE PARK



ST PAUL QUARTER PUBLIC SIDEWALK

Circulation

Bicycle and Pedestrian Routes

Universal pedestrian accessibility is critical when routing visitors throughout a city. There are several options for pedestrians to navigate Center City both on-street, off-street, and elevated. The current designated pedestrian trails or tours located in Center City can be found on the pedestrian route map on the opposite page.

The Rochester Bicycle Master Plan 2011 identified bicycle routes within Center City that meet the current level of service (LOS), are a currently designated route, or are under construction. The routes provide limited connections and coverage within Center City. The Master Plan identifies planned routes which will provide extensive connections and coverage within Center City.

The Genesee Riverway Trail, High Falls Walking Trail, and Heritage Trail are designated pedestrian routes. These routes are typically located along vehicular routes, however there are several instances where these trails navigate into non-vehicular areas.

The Heritage Trail is a pedestrian route at Broad Street which connects Center City to the Historic Susan B. Anthony neighborhood, located west of our study area. This trail incorporates in-pavement markings and post-mounted interpretive panels. The in-ground pavement markings are the only wayfinding or orientation devices associated with this trail.

In addition to the at-grade pedestrian routes, the SKYWAY, a network of elevated enclosed walkways, connects several major buildings. This route provides traveling between office buildings during periods of harsh weather. In recent years segments of this network have been demolished or blocked due to adjacent development projects.

Public Transit Routes

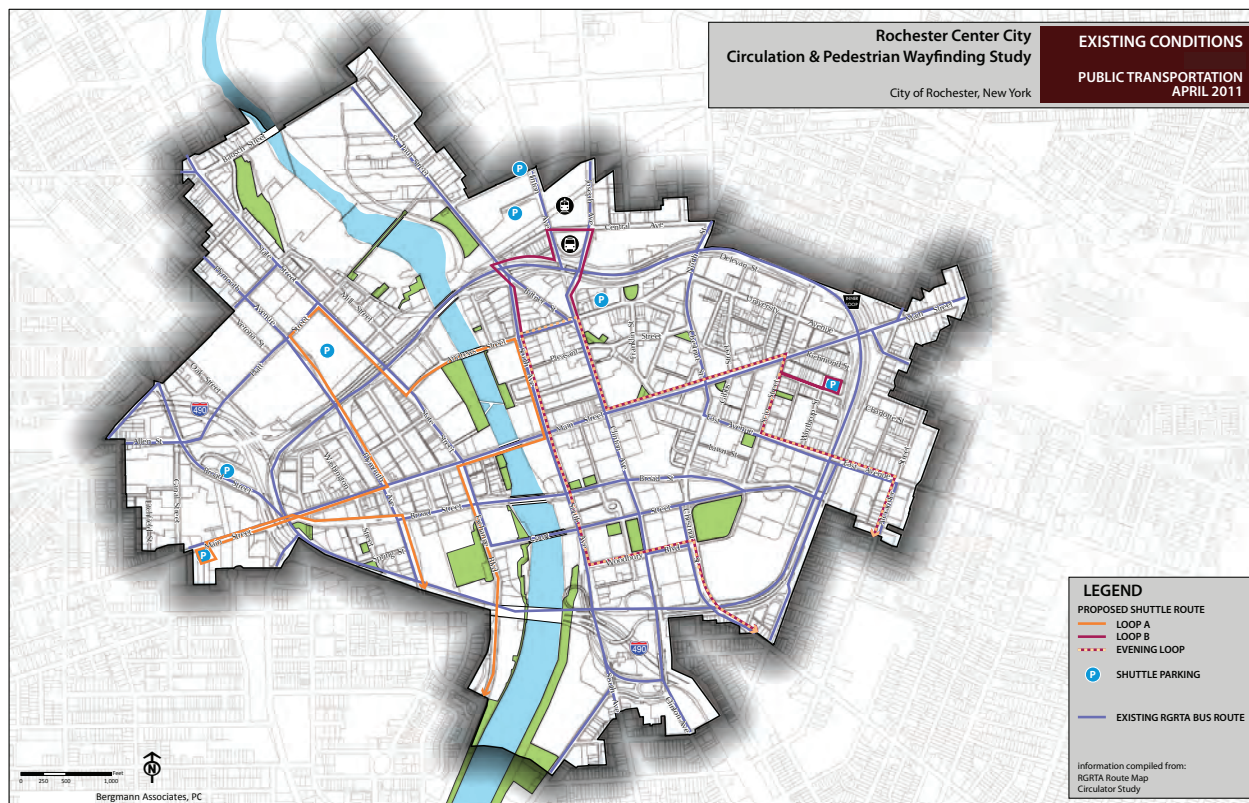
Public transportation options available within Center city include the public bus system, operated by the Rochester Genesee Regional Transportation Authority (RGRTA), regional bus systems operated by Greyhound and Trailways, and the train, operated by Amtrak.

The RGRTA bus station, formerly located in Midtown Plaza, was removed in 2009. In 2010, it was approved to relocate the bus station to Mortimer Street. The station is currently in the design phase, with construction expected to be complete by 2014. Bus routing currently exists on most streets within Center City and has 23 bus stops within the project boundary.

The Amtrak train station is located at Central Avenue. The City is in the process of completing the Intermodal Transportation Center Scoping Study, which is a study needed for the planned future expansion of the station.

The Intermodal Transportation Center will be shared by Amtrak, Trailways, Greyhound, local taxi's, and various shuttle services. The location, construction schedule, and bus and shuttle routes associated with this expansion are not yet determined.

The 2011 Circulator Study analyzed the parking and commuting preferences of the Downtown workforce and proposed recommendations to enhance commuting, circulation, and parking. The results of this study include two circulator (bus or shuttle) routes, east and west, with an evening route on the east loop. The buses would provide all-day service to perimeter parking lots and allow convenient shuttling through Center City. This study was completed in 2011, with no implementation schedule at this time.



PUBLIC TRANSIT MAP

evaluation



EXISTING WELCOME SIGNAGE AT OVERPASS

In order to inform the recommendations, the project team evaluated the existing districts, destinations, sign systems, circulation, and Center City walking trail. This section provides an evaluation of the condition and character of the elements documented and discussed in the existing conditions section.

Physical Organization of Center City Quadrants

The four quadrants identified in the Center City signage system are effective in dividing the City using prominent geographic organizing elements.

Districts

The twelve districts identified by the RDDC maps are effective in covering the entire property within the Center City limits, though not all of the districts have recognizable significance. It is critical that quadrants and districts are easily recognized by both residents and visitors.

The following provides an analysis of the identified neighborhood districts as it relates to the pedestrian wayfinding study.



CASCADE



FOUR CORNERS



CONVENTION AND HOTEL



MAIN AND CLINTON

The **Cascade** district, while it may be historically and architecturally significant, has little or no significance to a tourist. There are few attractions located in this district and it is mainly comprised of office and residential space. In addition, the current district boundary does not correspond with the architectural identity and historic elements of the district. The district includes property south of Main Street which has a completely different character. While the district is a recognizable district to residents, it is not a highly visited district.

The **Four Corners** district is a significant district containing a variety of services, venues, and government offices. The district is well known by residents and experiences high levels of pedestrian traffic, largely due to the presence of many government offices.

The **Convention and Hotel** district appears disjointed, stretching across the river to include a single hotel and conference space. The scale of the city does not warrant an entire district designated to accommodations and a convention center. This district is not familiar to local residents and is not easily understood, due to the disjointed boundary.

The **Main and Clinton** district is highly recognizable because it is the intersection of two major streets. Currently there are few visitor destinations within this district. However, development plans at the Midtown Plaza site is expected to spur economic development in this district, creating spin-off activity in the future.



GROVE PLACE



BROWN'S RACE AND HIGH FALLS



ST JOSEPH'S SQUARE



EAST END

The **Grove Place** district is a well known historic residential neighborhood adjacent to the vibrant East End district. Included in this district is the Grove Place preservation district. The character of this neighborhood attracts visitors, but there are few entertainment or services offered within the district.

Brown's Race and High Falls districts have a rich history and include the Brown's Race Preservation District, which offers interpretive and educational opportunities throughout. The unique character and destinations contribute to the visibility of this district to residents and visitors. This district is occupied by offices, residential , and has high visitorship associated with its entertainment venues and services.

St Joseph's Square district is identifiable by the historic St Joseph's Church bell tower structure, the only remains of the church after a fire in the 1970's. This district is mainly comprised of office and residential space, with significant amounts of undeveloped property. This district is currently not highly visited, though potential development opportunities exist.

The **East End** and Upper East End districts are highly visited entertainment districts which offer a wide variety of services, entertainment, housing and office space. The East End is a well known district among residents and visitors and is a very prominent and successful district within Center City.



ST PAUL QUARTER



CORN HILL



WASHINGTON SQUARE



MANHATTAN SQUARE

St Paul Quarter is a unique district with 19th century loft-style buildings and apartments which offer great views of the river. The district offers entertainment and many services with the recent addition of residential space. This district is another highly visited district that is also well known by residents and visitors who frequent the entertainment venues and restaurants.

Corn Hill district is a very well-known and finely restored Victorian neighborhood located on the River. The neighborhood has seen significant growth with a recent mixed-use development. The Corn Hill neighborhood has unique character; its close proximity to the river and event venues makes it an attractive and exciting district for residents and visitors alike.

Washington Square is a district surrounding the historic Frederick Law Olmsted park, a classic urban square with a central monument, mature trees, and benches. This square is bounded by corporate offices and the Geva theater. Although this district is considered a center for corporate offices, the square is well-known by residents. The theater, public library, and local dining establishments are main contributors to the visitation of this district.

Manhattan Square district, named after Manhattan Square Park, designed by renowned Landscape Architect Lawrence Halprin, is home to an ice-skating rink/fountain and the National Museum of Play. This district is easily identifiable due to the landmark park with overhead structural walkway and the contemporary architecture of the museum. Although limited services are available in this district, many visitors utilize the large open space, recreation opportunities, and The Strong.

The project team's evaluation of the existing districts determined the following:

- The districts do not accurately reflect areas within Center City that have viable visitor destinations and appeal.
- In most cases, the district boundaries are not easily recognizable.
- There are too many districts.
- Some district names are not recognizable or memorable.

Recommendations for simplifying and improving the districts as a navigational tool can be found in the recommendations section of this report.

Destinations

The destinations identified on the existing conditions map (page 8) is a comprehensive list of all the destinations collected through the inventory process. The Project Advisory Committee (PAC) determined there were too many destinations included and preferred a reduced number of destinations.

The PAC developed destination listing criteria which were used to evaluate the final destination listing. The PAC agreed that final destination listings should meet the following criteria:

- Permanent, meaning no services, such as retail and restaurants.
- Open year round.
- Publicly accessible.
- Consistent with the existing vehicular wayfinding system.

See destination map on page 41 for the final approved list of destinations.

“

Many parts of a town have boundaries drawn around them. These boundaries are usually in people's minds. They mark the end of one kind of activity and the beginning of another. In many cases the activities themselves are made more sharp, more vivid, more alive, if the boundary which exists in people's minds is also present physically in the world.”

Alexander, A Pattern Language



CENTER CITY VEHICULAR SIGNAGE



GENESEE RIVERWAY TRAIL KIOSK



CITY INFORMATIONAL SIGNAGE

Sign Systems

There are few pedestrian-oriented wayfinding systems within Center City. The majority of pedestrian-oriented signage is interpretive or educational. The remaining signage is categorized as wayfinding or orientation signage associated with a pedestrian trail system.

The recently installed Center City Signage system is an effective system for dividing the City and orienting vehicular traffic, but the scale is inappropriate for pedestrian use. This system has been well-received and is in good condition.

The miscellaneous informational and parking signs located throughout the City are not consistent in design and materials, and many are in poor condition. The lack of consistency is not desirable or effective in guiding users throughout an environment.

There is a lack of consistency among the interpretive and historic signs as well. Since these signs do not function as wayfinding devices, the lack of consistency in design and materials is not as important. The majority of these signs are in good condition.

Circulation

Center City is not easy to navigate, the lack of a grid street pattern, the Genesee River as a divide, and multiple signage systems with differing information make pedestrian travel difficult for those not familiar with Center City and its destinations.

Pedestrian Routes

With the increased focus on healthy living and reduced energy consumption, pedestrian routes are significant to the navigation of the urban environment.

Most pedestrians utilize City sidewalks to navigate to their destinations, but there is currently no routing map for pedestrians visiting the City. Existing kiosks display



MAIN STREET



STATE / EXCHANGE STREET



SOUTH AVENUE

street maps, which forces pedestrians to select their own routing to their destination.

As an organizing element, Main Street functions as a prominent east-west travel route, bisecting the City. The Genesee River would be an obvious north-south organizing element and prominent travel route, however existing development patterns prohibit the feasibility of this route. The main north-south route is State/Exchange Street, west of the river, and St Paul Street/South Avenue, east of the river.

While sidewalks are the primary travel route for visitors, pedestrians familiar with the City often utilize routes located off the main vehicular route, within open spaces, and along the River. These paths are not clearly identified to visitors, resulting in reduced visitor utilization of these routes.

The Genesee Riverway Trail and High Falls Walking Tour are clearly marked designated pedestrian routes and can be easily navigated by visitors.

Cyclists utilizing the designated routes have limited access to the City. Implementation of the planned bicycle routes will greatly improve cyclist safety and accessibility within Center City.

Public Transportation Routes

Buses are the main mode of public transportation, and are available on most streets throughout Center City. The impending relocation of the bus station and the planned expansion of the train station, will not change this.

Implementation of the recommendations of the Circulator Study would provide efficient travel, via a downtown shuttle. This has the potential to benefit residents and visitors of Center City.

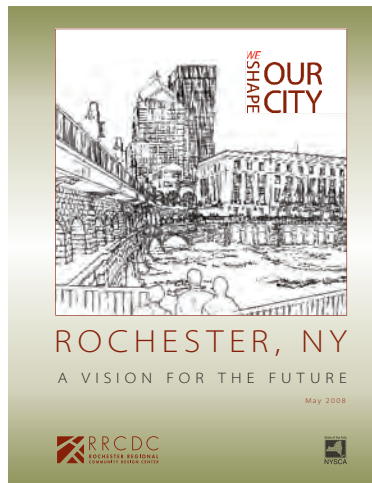


2003 ROCHESTER MASTER PLAN

GENESEE RIVERWAY TRAIL



GENESEE RIVERWAY TRAIL



2008 VISION PLAN

Center City Master Plan and Walking Trail

The City of Rochester has been pro-actively thinking about the future of Center City Rochester and its evolution for over a decade. In 2003 the Center City Master Plan was prepared to chart a course for future development initiatives in the downtown core. Included in the Master Plan were recommendations specific to a Center City Walking Trail and a wayfinding program. As noted, the vehicular portion of a new wayfinding system has already been implemented, with this planning effort intended to build upon that system at a pedestrian scale. The Center City Master Plan further states that Main Street, the Genesee River and the Center City Walking Trail should be key elements of the pedestrian wayfinding system.

The Center City Walking Trail, as proposed, would be a significant asset for downtown Rochester. As the Walking Trail is not yet fully implemented and is focused on connecting public "squares", it should not be the primary basis for the organization of the pedestrian wayfinding system in Center City. However, it can be an integrated part of the wayfinding system, as noted below:

The Walking Trail route should be incorporated as a layer of the larger wayfinding system, intended to be a connection between parks, open spaces, and development sites. The wayfinding system is envisioned to have a broader geographic scope and has been designed recognizing that the Walking Trail route is part of a larger context. Pedestrian wayfinding signage has been proposed along the Walking Trail route in its entirety, with the exception of the pedestrian bridge linking the Radisson Hotel to the Riverway Trail behind the Federal building. Additional signs could be added at this location once this has become a desirable and established pedestrian route in the downtown.

Since it will not function as the primary organizing element of the pedestrian wayfinding system, the Center City Walking Trail will be better highlighted through the use of innovative design elements. This may be through the use of specialty pavement detailing, pavement medallions, or bollards that have a similar design aesthetic to the wayfinding system but are unique to the Center City Walking Trail route.

Alternatively, the Center City Walking Trail route could be modified to coincide more directly with the key decision points and nodes identified in the Pedestrian Wayfinding System (see map in appendix c). This

would require only minor modifications to the existing route to shift north to Andrews Street and east to Gibbs Street along Main Street.

The Gateways identified in the Center City Master Plan are largely consistent with major and minor nodes identified in the Pedestrian Wayfinding Study. Thus, each of these gateways will benefit from the installation of new pedestrian wayfinding signage directing visitors and residents to destinations within the downtown.



**WALK CENTER CITY TRAIL,
2003 CENTER CITY MASTER PLAN**



INNER LOOP



UNDERPASS AT RAIL CORRIDOR



VEHICULAR SIGN SYSTEM

Existing Conditions Key Observations

The observations listed below are based on the site analysis and review of best practices. These key findings informed the development of the sign system recommendations.

- The vehicular highway loop around Center City is a visual, physical, and psychological barrier.
- Passages under the Inner Loop need to emanate a safer and friendlier persona and link to the pedestrian system.
- Neighborhood areas outside Center City are intimate, charming and inviting. The architecture, amenities and residences make them feel safe. In contrast, the business core is vehicular oriented, with wider sidewalks, making it less inviting for pedestrians.
- The roadway network in the center core is not a grid, which can be disorienting, making navigation more challenging.
- There are a multitude of sign systems, maintained by different users, that must be considered as part of a new signage system.
- The vehicular system is one many users are introduced to first, so the pedestrian system should transition from the vehicular system.

pedestrian wayfinding best practices

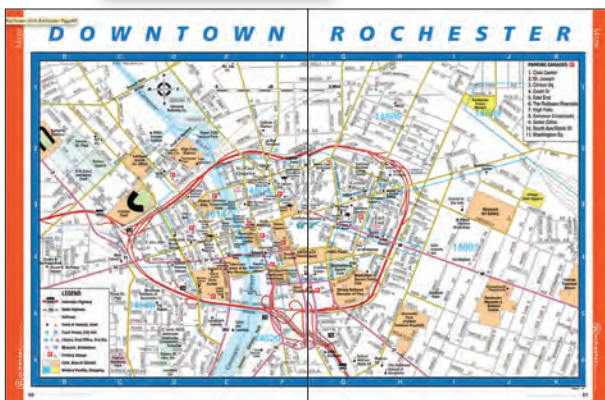


A search for Rochester, NY leads to many choices. The City of Rochester site provides a lot of information about what to do, but a map is not readily locatable.

Visit Rochester gives direct access to a visitor guide. The link 'Visiting Here' brings up a link to an online visitor magazine.

Clicking on the Online Visitor Guide gives you a magazine to browse. The table of contents directs you to visitor information and various maps of Rochester.

The downtown map has an online version that allows areas to be magnified for easy reading. Currently the map does not include the quadrant system of the vehicular system and it is not downloadable.



Cities are complex and often confusing to the visitor. When it comes to helping people get from place to place a wayfinding system helps make the journey and experience more manageable and enjoyable by creating order.

A wayfinding system is made up of many components. It involves signs and information, landmarks, symbols, maps, environmental enhancements and, more recently, electronic media. These all work together to create a system that helps direct people to their destination, helps them understand when they have arrived and shows them how to exit. Related communications, especially electronic or temporary ones, can also communicate event information.

For most visitors, wayfinding starts at home. The visitor typically does some research on the internet; they may research what a city has to offer, pick a place to visit or get directions. The maps, language and directions they receive should correspond to the information they see on the street.

Center City Rochester has a good framework for the development of a fully integrated and comprehensive pedestrian wayfinding system. With the primary focus on the visitor experience, the recommendations are based a compilation of observations of a number of wayfinding systems across the country and experience designing wayfinding systems.



**BENJAMIN FRANKLIN PARKWAY,
PHILADELPHIA, PA**



WALK! PHILADELPHIA, PHILADELPHIA, PA

Pedestrian wayfinding involves directed movement from an origin to a specific destination. It influences interaction between the pedestrian, the environment and the guidance system. There are four steps of pedestrian wayfinding: orientation, path selection, travel and destination recognition.

1. Orientation

Includes determination of one's location and location of the destination in the environment. Orientation elements should be at decision nodes where people enter a City. That may be at the edges or internal to a City such as at a parking lot where they have parked their car.

2. Path selection

Entails the selection of a path from the starting location to an intermediate or final destination. The kiosk includes information or maps that help the visitor create a mental map of how to get to their final destination.

3. Travel

Involves frequent checking and confirmation of the path at each decision point. Successful travel is achieved by placing directional signs, maps and trail blaze signs along predetermined routes. Directional signs are usually placed at decision points or street corners while a reinforcing key map may be placed mid-block. In many systems they are combined.

4. Destination Recognition

Can be realized from a distance or near the target destination, depending on sight lines. Recognition may involve elements such as a building facade or signage, park, unique landmark or a recognizable land feature such as a waterfall, stand of trees or open space.

[illegible]

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Wayfinding Approach

Most sign programs are organized on one of four strategies based on urban planning: districts, streets, connectors or landmarks. To choose a strategy, one needs to look at the city's layout, pedestrian and vehicular circulation patterns, the city's organization (district and street names), landmarks, unique highly-visited destinations, locations of visitor parking lots, transportation nodes and pedestrian entry points from parks, trails and surrounding neighborhoods.

Mapping sample journeys helps determine user circulation and what strategy is best used for the signage program. Sample journeys also help develop guiding principles for the sign program such as what sign types are needed, sign information requirements, where signs should be located and who has placement on the signs. The sign program also needs to take into account the functional component of how many listings can go on signs (sign size) and a strategy for updating content.



Above is a sample journey for Montgomery Township illustrating sign location and content.

Develop principles for where signs are located, sign function and what information the sign should carry. To the right is a diagram developed for the Benjamin Franklin Parkway in Philadelphia, PA.

The system should take into account the unique needs of the city such as weather and existing sign systems, and be designed with a distinctive design vocabulary that reflects local character and architecture. It can tie existing systems into one continuous system. The system should also be easy to update and replace over time.

Once a determination has been made on the wayfinding strategy that will be implemented, a city needs to be evaluated to identify major decision points or landmarks. Once determined, sign criteria can be developed. Decision points, landmarks and sign criteria as they relate to wayfinding systems are described below.

Identify Decision Points & Landmarks

There are many aspects to wayfinding in the built environment. There are decision points, alternate decision points and important features or landmarks.

1. Decision points are intersections, nodes or crossroads where two or more paths intersect. At a decision point a change in direction may be necessary to follow the selected path.

2. Potential decision points are locations along the route where a change of path or direction is possible to select a more scenic or more frequently traveled route.

3. Landmarks are significant features, such as parks, sculpture or buildings that are useful in confirming your location and path choice. Routes enriched with landmarks lead to better wayfinding.

Develop Sign Criteria

Determine an organization scheme:

- Quadrants – a system of zoning that organizes the city
- Districts – distinct neighborhoods within each quadrant
- Streets - corridors that connect and route people between destinations
- Landmarks - Landmarks can be primarily visual characteristics (geometric, spatial, landscape features), structural characteristics (objects or groups of objects) or functional (historic or cultural).

Identify eligibility criteria: *who gets on the signs*

- Visitorship – places everyone is trying to find: markets, parks, amusement attractions
- Cultural attractions – museums, religious institutions, theaters, concert halls, landmarks, trails
- Transportation nodes
- Parking
- Offices and Government
- District / Neighborhood
- Hotels / Convention

Determine criteria for the number of messages that can go on a sign:

- Organizing information – subdividing to make information manageable, i.e. districts and walking distance
- Inclusion into the sign program
- Prioritizing destinations
- Proper naming of destinations

ORIENTATION TOTEM

To contain Parkway map, general information and interpretive panels.

- May stand alone, or with Walk!Philadelphia directional signage
- Components determined by location

Location Criteria:

- Major pedestrian nodes
- Near key parking lots and drop-off locations

PARKWAY MAP PANEL

ORIENTATION COMPONENT

- Two (2) orientations, NW and SE
- Include distance and walking time
- Incorporate limited information about institutions and key attractions/landmarks
- Include:
 - public transportation stops
 - train station access points
 - parking information
 - public amenities, i.e. ball fields, restrooms(?), food service, bike rentals etc.

GENERAL INFORMATION PANEL

INFORMATION COMPONENT

- Listing of each major cultural institution, location and contact (phone) info, description of exhibits
- Allow for Parkway Institution seasonal event information

INTERPRETIVE PANEL

INTERPRETIVE COMPONENT

- Oriented to the parkway
- Can be double-sided
- May incorporate informational or interpretive information about institutions and sculptures
- Large panel** to tell over-arching themes relating to history of Parkway and to include:
 - header: 2-5 words
 - main story: 150 words max
 - secondary story: 50 words max or two secondary stories of 25 words max
 - date and/or signature
 - Fairmount Park logo
 - 2-5 photos /images
 - captions and credits
- Small panel** to tell story within over arching themes and to include:
 - header: 2-5 words
 - main story: 75 words max
 - secondary story: 25 words max
 - date and/or signature
 - Fairmount Park logo
 - 2-5 photos /images
 - captions and credits

WALK!PHILADELPHIA

PEDESTRIAN DIRECTIONAL COMPONENT

- Orient to specific locations
- Up to 10 messages per sign face
- Should be double-sided
- Direct pedestrians to:
 - institutions and key attractions
 - public transportation
 - parking

PARKWAY IDENTITY

Graphic Elements:
(can be used separately or together)

- Image of Ben Franklin
- THE PARKWAY wordmark
- PKWY logo

Uses:

- On gateways and destination information
- On orientation totem as over-brand
- For promotional events, advertising and marketing

Other:

- Institutional identities to appear on posters displayed within system

INSTITUTION EVENT & PROMOTIONAL DISPLAY

- Stand alone
- Located near given institution
- Must be changeable
- Allow space for poster (must last for two months)
- Allow space for info about current exhibits and upcoming exhibits
- Allow space for calendar and special event info; e.g., concerts, festivals, poetry readings, theater groups
- Include:
 - institution names
 - exhibit dates and hours
 - phone numbers for additional information

SCULPTURE INFORMATION PANEL

(content provided by FPA)

- Oriented to the sculpture and along pedestrian edge
- Single-sided or tableau
- Tell story of sculpture, artist, historical relationship to city and Parkway
- Include:
 - header 2-5 words
 - artist name
 - date executed
 - main story - 50 words max
 - Fairmount park logo
 - one photo/image
 - captions and credits

KEY

- Large Information Totem
- Small Information Totem
- ▲ Large Interpretive
- ▲ Small Interpretive
- Sculpture Information
- Pedestrian Directional
- Walk!Philadelphia Map
- Parkway Map
- Informational Element
- Walk!Philadelphia Directional
- Direction Phila Fairmount
- Gateway
- Information
- Pedestrian Movement
- P Public Parking

Above is a sample journey illustrating sign type and sign location.

Organization of Wayfinding System

Fundamental principles that should be followed when organizing a wayfinding system include:

- Locate orientation kiosk with map at key pedestrian nodes and parking.
- Direct pedestrians to districts then destinations.
- Place key maps and directional signs along path of travel.
- Reinforce the user's location throughout the system.

Design Features

General design guidelines that pertain to pedestrian wayfinding systems appropriate for Center City include the following:

- Develop icons to make districts unique and memorable.
- Tie system together through hardware, color palettes and sign geometry.
- Simplify nomenclature and use them consistently in all media (print, maps, web and signage).
- Limit number of messages (8 to 12) on signs to reduce sign size.
- Use "heads-up" mapping on mid-block maps (keeping what is in front of you directly ahead).
- Organize messages (top to bottom) by nearest destination.
- Include interpretive stories along the path to animate the visitor experience.
- Group messages by direction next to a single arrow or pair each with a directional arrow.
- Indicate distance from the sign/message to the destination.
- Indicate approximate walking time to the destination in minutes.
- For path or trail conditions, indicate degree of difficulty (such as "moderate to steep").
- Use accessibility symbols where appropriate.
- When listing directional messages on a single panel, organize messages closest to furthest from top to bottom.
- Use 3/4" cap height minimum for messages closer to the viewer's line of sight.
- Use 1 1/8" cap height minimum for overhead messages.
- Use 70% to 80% contrast level for white lettering on dark, semi-gloss field.
- Make sign panels changeable for easy updating and maintenance.
- Design signs so they can be used on their own poles or existing poles.
- Set height from bottom of overhead sign at 8' from bottom of the sign to the sidewalk or the ground plane.
- Use color to help differentiate districts or neighborhoods in the messaging.
- Use color to support city and district branding.
- Limit branding to the city, neighborhood or district.

pedestrian wayfinding best practices can't



This page and opposite illustrate various sign types which utilize the best practices mentioned in this section.





Map Design & Layout

Maps give an overview of the space and are the best way to help the visitor find destinations. They can show the layout and organization of a complex place, relationships between elements and the pathways between.

Listed below are best practice strategies for the design of and features to include on signs included in the pedestrian wayfinding system.

General Design Concepts

- A simple design and updateable map should work for print, web and the wayfinding system.
- Present appropriate information in the correct information hierarchy.
- Graphic language should be appropriate to the information requirements.
- Use graphic conventions such as color, line weight, pattern, symbols or drawing style (plan or axonometric) to organize, raise awareness and to establish importance.
- When using a triangle shape to point or give direction, modify the shape to ensure the viewer will understand direction (A triangle with equal leg lengths is confusing).
- For interstate roads, etc. use the nationally recognized shield/label instead of a circle.
- Label quadrants, districts, streets, destinations, landmarks, parks and waterways.

Map Features

- Use colors to differentiate between locations and features, such as roads, pathways, buildings, parks and waterways.
- Consider featuring other key landmarks to help orientation.
- Make key pedestrian walkways look different from roads.
- Label important landscape features (such as parks, streams and plazas) that people use to give directions.
- Distinguish bridges, overpasses and skywalks with dotted line or drop shadows.
- Identify handicapped entrances.
- Indicate bike paths.
- Maps should have custom markers indicating map location ("You Are Here").
- Add north, south, east, and west orientation and a simple coordinate system (grid with alpha on one axis and numbers on the other axis).
- Include a comprehensive directory keyed to buildings (listings may be organized alphabetically, numerically or by key).
- Use a legend that explains how to decode symbols, marks and colors.
- Orient map illustrations and text the same way the viewer is standing ("heads-up" orientation) on trail blaze sign maps since a map panel cannot be spun, as would a hand-held map.
- Simplify information as maps get smaller or are located above the viewer.



Maps should fit the character of the city and wayfinding system. Illustrated above are maps organized by streets and addresses the other key locations to the street grid.

- Incorporate a method to mark one-way streets.
- Limit the number of vocabulary, elements, and colors.
- Make colors strong enough to ensure legibility after fading.
- Study contrast/legibility and reproducibility on copiers and faxes.
- Design map so it is usable online and in print brochures.
- For pedestrian directionals, create a simplified map designed to fit in a square or circle so it can be rotated easily.

Accessibility

There are several programs, agencies, and boards that have developed guidelines to address universal accessibility of the built environment. The proposed wayfinding design should consider the information available from the US Access Board, Americans with Disabilities Act, and the Architectural Barriers Act. With focus on wayfinding signage guidelines, the Society of Environmental Graphic Design (SEGD) has issued a white paper in response to the ADA Act with interpretation and clarification for designers and sign fabricators.

The following principles should be followed to achieve universal accessibility in the proposed pedestrian wayfinding system.

- Utilize upper and lower case when designing visible type faces.
- Use 1" cap-height for every 25' of viewing distance for directional signs.
- Provide 70% contrast between background and text color.



Above images illustrate best practices in map design and map features.

- Simplify color selection and minimize including too many hues, as those with visual impairments may have trouble differentiating between hues.
- Use symbols and pictograms consistently and legibly.
- Include short simple words and limit message lengths to keep message clear and concise.

Conclusion

The Best Practices in wayfinding design identified above address the organization, design features, map design and layout, and accessibility. All of these principles were considered and incorporated, as applicable, in the recommended Center City pedestrian wayfinding system. The specific best practices recommendations can be found in the following section of this report.

recommendations

Just as this printed page , if it is legible, can be visually grasped as a related pattern of recognizable symbols, so a legible city would be one whose districts or landmarks or pathways are easily identifiable and are easily grouped into an overall pattern...

Lynch, The Image of the City

This section provides specific recommendations for the development of the Center City pedestrian wayfinding system. The recommendations focus on overall wayfinding approach and organization, sign types, sign placement, and implementation strategy.

These recommendations are intended to assist the City in the development of a pedestrian wayfinding system that meets the project goals.

- Integrate local landmarks into design and branding in a manner that highlights local assets.
- Integrate multiple wayfinding systems for ease of use by visitors.
- Create engaging journeys to make pedestrian travel enjoyable.
- Identify prioritized routes and destinations which guide visitors on memorable journeys.

Approach

The pedestrian wayfinding approach selected for Center City is based on the established quadrant system which utilizes Main Street and the Genesee River as major organizing elements. The guiding principles for the signage program were developed after the final destination list developed by the PAC and sample journeys were studied. This exercise led to the following recommendations on sign placement criteria and destination listing criteria.

The pedestrian wayfinding system should utilize the two primary organizing elements in Center City, the Genesee River and Main Street, as the vehicular wayfinding system does, to define the four quadrants. Within each quadrant there are unique districts. Within the districts the wayfinding system makes use of major pedestrian corridors. Major pedestrian corridors are those identified by safe pedestrian accommodations and are currently highly traveled. Pedestrian routing should be simple and allow for ease of locating and traveling to a final destination.



GROVE PLACE DISTRICT

Quadrants

The established and functioning vehicular wayfinding system within Center City is important to the City of Rochester. The recommended pedestrian wayfinding system should build off of that existing vehicular system. The colors utilized for each quadrant should be based on the vehicular wayfinding system. The recommended quadrant colors are modified to be brighter, making them more legible at the pedestrian scale. Brightening the colors maintains the connection between the two systems, while adding a unique character to the pedestrian wayfinding system.

Districts

Districts should be used to elevate, enliven and organize the pedestrian experience. Typically districts have the ability to help organize information, however too many districts can become unwieldy and confusing.

The pedestrian wayfinding systems should:

Utilize the natural boundaries as an organizational tool for districts, such as the Genesee River/Main Street as an organizational tool.

Simplify the districts and destinations to make it more manageable and easier to comprehend and navigate.

Eliminate the Convention and Hotel and Main and Clinton districts and replace with a single Midtown district.

Coordinate wayfinding efforts with tourism efforts to provide consistency among marketing materials, as relate to district identity.

Refer to the recommended district map on page 42.

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GEVA THEATER



THE STRONG



EAST END PUBLIC SIDEWALK



GROVE PLACE PUBLIC SIDEWALK

Destinations

The master list of recommended destinations was approved by the PAC is illustrated on the opposite page. As Center City begins to experience redevelopment, it is recommended that the list of destinations be reevaluated and revised as needed.

Prioritize destination categories.

Direct people to destinations that are significant and desirable for visitors.

Eliminate all services, which are not viewed as permanent.

Include parking garages.

Identify parks, which are scattered throughout the city and serve as useful landmarks and identifiers.

Routes

The pedestrian experience downtown can be greatly improved by clearly identifying preferred pedestrian routing. This can be achieved through the design of the wayfinding system. This will allow the visitor to make a path selection and mental map that will guide them easily with little stress to their final destination.

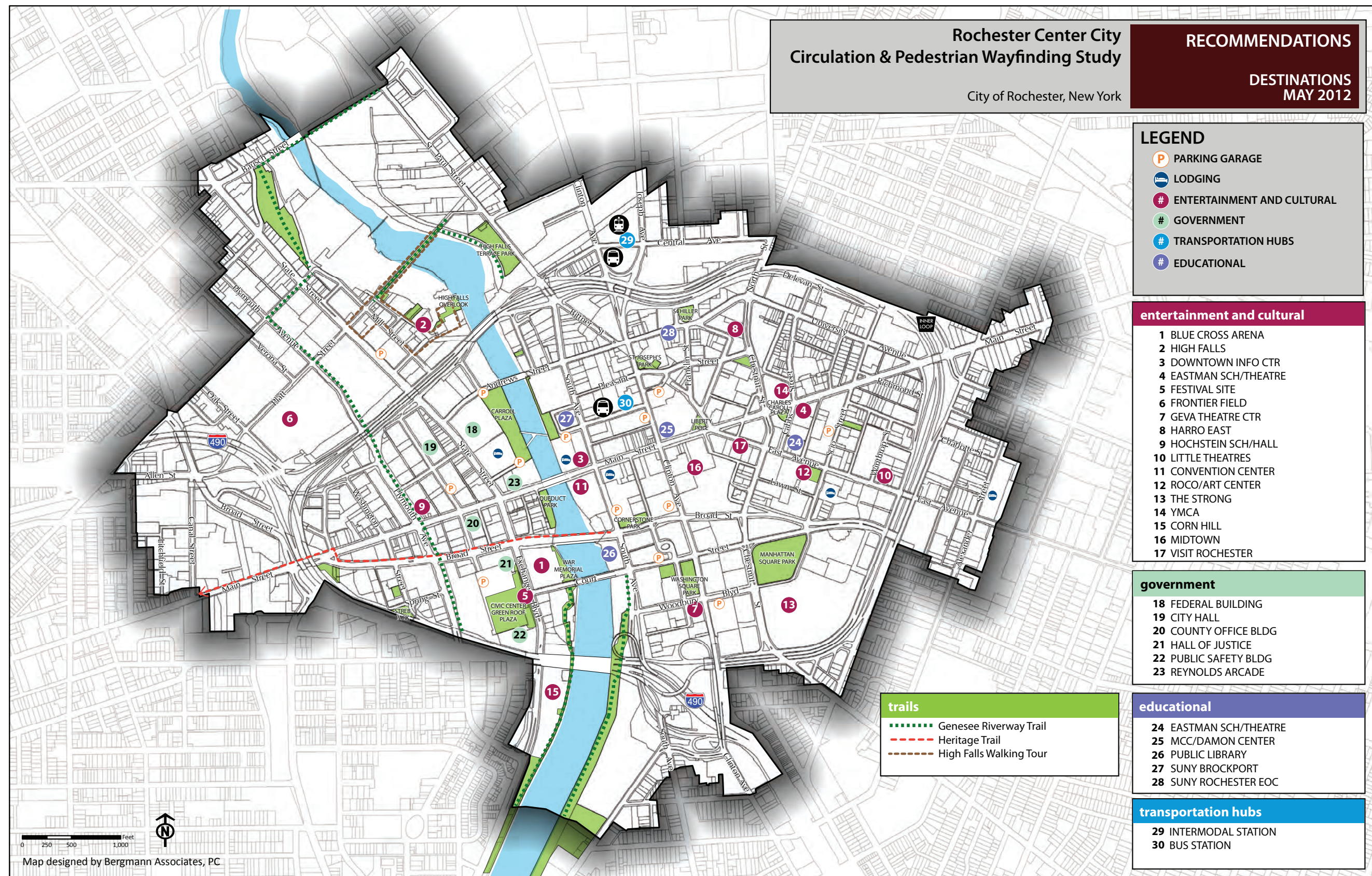
The Project Advisory Committee developed four criteria for identifying pedestrian routes.

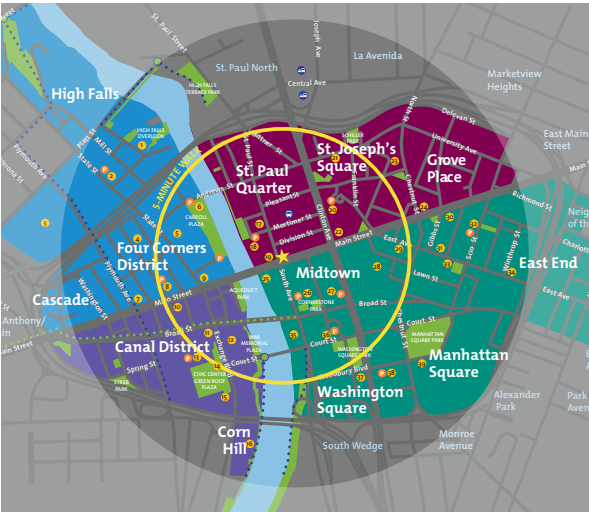
Utilize Main Street and the Genesee River as primary organizing elements of the wayfinding program.

Anticipate near future development and consider when defining pedestrian routes.

Take advantage of unique character of downtown architecture and landmarks by highlighting along routes.

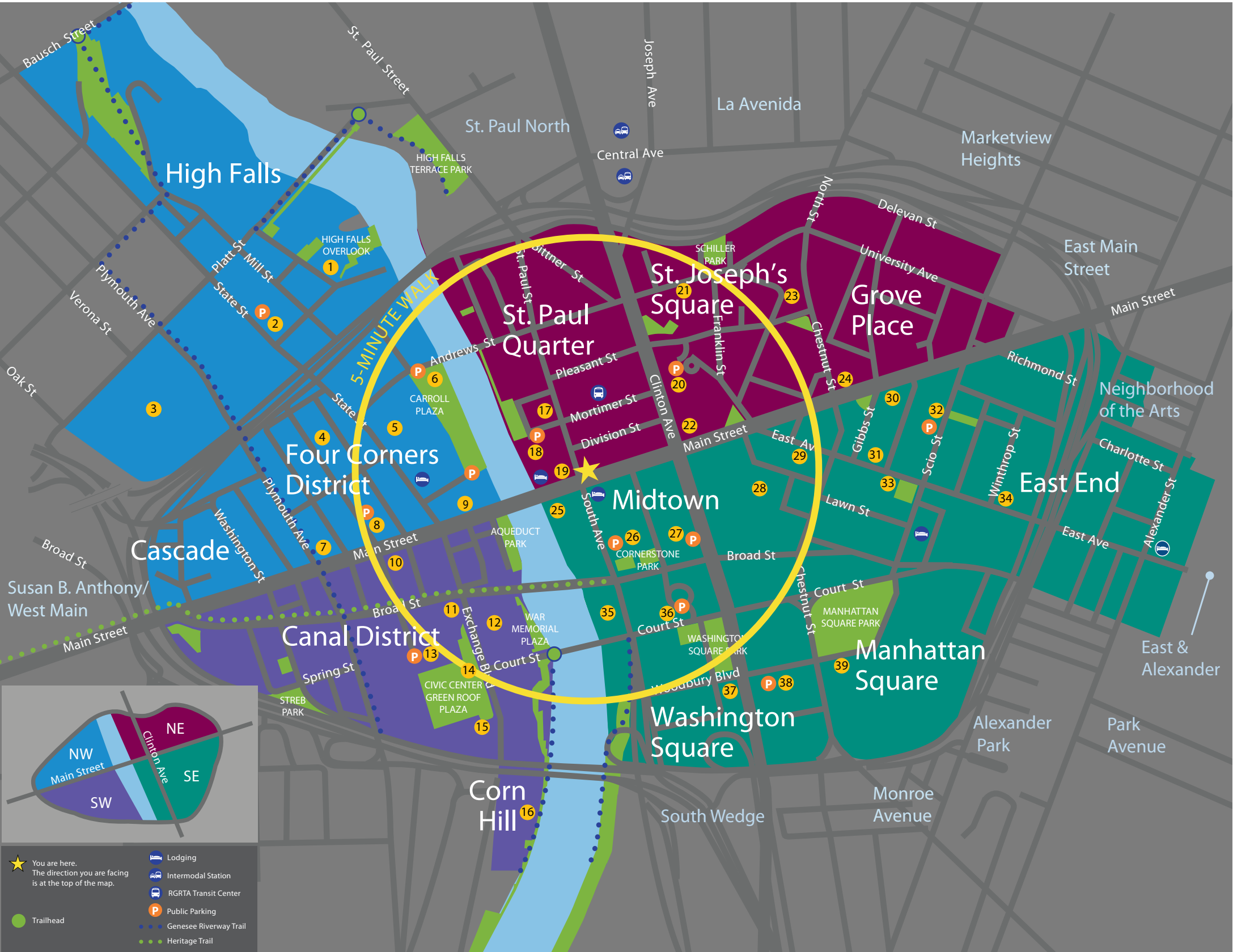
Connect districts and neighborhoods.





Mid-City Map
As the Rochester study area is rectangular a device was needed to create a consistent geometry that could be rotated on a single-sign design.

For the pedestrian mid-city map a circle was laid on top that focuses on the immediate area around the viewer but gently obscures the surrounding area. This allows the visitor to orient themselves to the city.



Organizational Features

A clear and coherent wayfinding system should promote specific origin points, destinations, and routes, as well as landmarks and identifiers along the way. To achieve this, the proposed wayfinding system will need to seamlessly integrate the various systems already in place and enable visitors to Center City to efficiently, safely, and enjoyably navigate downtown by adhering to the guidelines below:

- Interfaces should be used to orient people with maps and directories. Directories should be comprehensive and list major destinations and landmarks while providing information about basic human needs (restrooms, restaurants etc.).
- Orientation should be provided at transportation hubs, exits from public parking lots/garages, and at egress points into the city from neighborhoods and open space corridors.
- Trails should be highlighted on the maps.
- Points along the route should have key maps that help reconfirm your route.
- Decision points should direct to districts and the nearest highly-visited destinations.
- Direction to local transportation should be incorporated into the signage.
- Interpretive panels should be incorporated along the route to entertain and enlighten the visitor.
- Major roads leading to Center City and minor roads leading to garages should be clearly identified.

Maps and Map Features

Wayfinding maps were designed to address and incorporate the best practices summarized the previous section of this report.

Typography

The recommended typeface family is contemporary but also has an industrial feel, which relates well to Rochester's heritage. The height of the font is larger than a standard typeface, which is ideal for legibility from a distance, as stated in the best practices section.

F1 - The Sans Small Caps

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
1234567890 &!?,."

F2 - The Mix Semibold

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 &!?,."

F3 - The Mix Bold

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 &!?,."

Sign Types

The system should include a hierarchy of signs which serve different purposes and facilitate effortless pedestrian navigation. Five sign types are recommended as part of the pedestrian sign system. The five sign types are described below.

Preferred Schematic Design

Based on community and Project Advisory Committee feedback, the sign system illustrated was identified as the preferred concept. The concept is derived from the existing black gateway signs implemented in the vehicular sign system. The design is contemporary with an asymmetric form, but it references classic colors and materials which will maintain a level of sophistication that will be long lasting.

Refer to the Center City Pedestrian Circulation and Wayfinding Study: Schematic Design Package 1 (appendix d) to review all design concepts presented to the PAC. Refer to appendix c for the Final Approved Schematic Design Package.

Major Kiosk

Major kiosks should be located at major pedestrian intersections or at significant decision points. These kiosks should have a map of Center City and a location identifier on the map so that visitors can easily locate and orient themselves. The map should indicate the location of all destinations on a map of Center City and include a complete listing of all destinations.

When possible or where space permits, the major kiosk should also provide additional information about each destination, whether it is a website, phone number, hours of operation, or current technology (Quick Response Code or Radio Frequency Identification) to allow mobile device access to additional information. This will provide visitors the opportunity to seek out additional destinations during their visit.



MAJOR KIOSK

Minor Kiosk

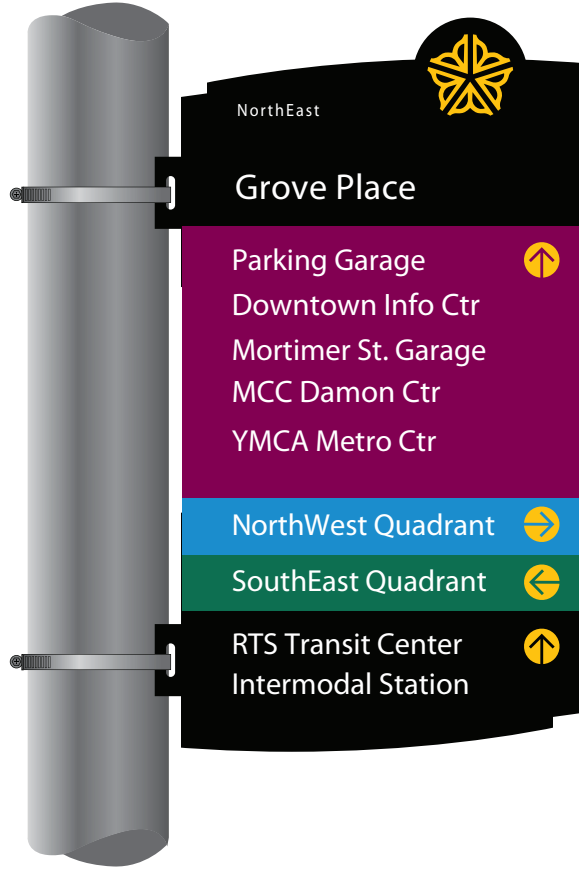
Minor kiosks should be located at origination points and minor intersections. Origination points include the perimeter of the Center City boundary, parking garages and major bus stops. These kiosks should include a map and listing of all the destinations located within a five minute walking distance. The destination listing should indicate which quadrant and district the destination is located in to reinforce the wayfinding strategy.



MINOR KIOSK

Directional Sign

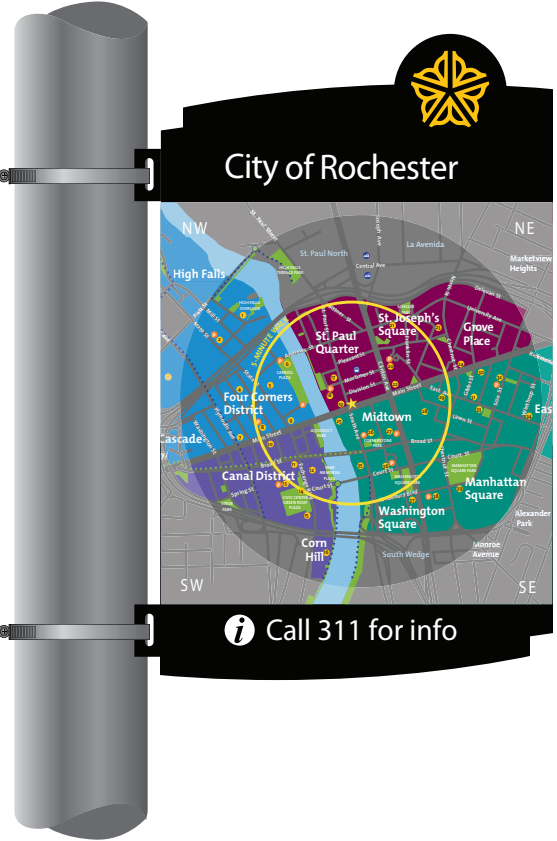
Strategically located and oriented for use by pedestrians, directional signs should guide wayfinding along a route. Signs should include the district name, adjacent quadrant names (with arrow) and a listing of up to 6 destinations located within one quarter mile radius (5 minute walking distance) of the location of the sign. To further reinforce the wayfinding strategy, destinations should be listed in association with the quadrant color it is located in.



DIRECTIONAL SIGN

Midblock Map

Midblock maps would be used only as needed at strategic locations where it is necessary to reinforce the user location along a route. The map would indicate user location within the Center City boundary and include a walking radius ring to indicate user proximity to major wayfinding elements such as the Genesee River, Main Street, and the color coded quadrants.



MIDBLOCK MAP

Interpretive/Trailblazer

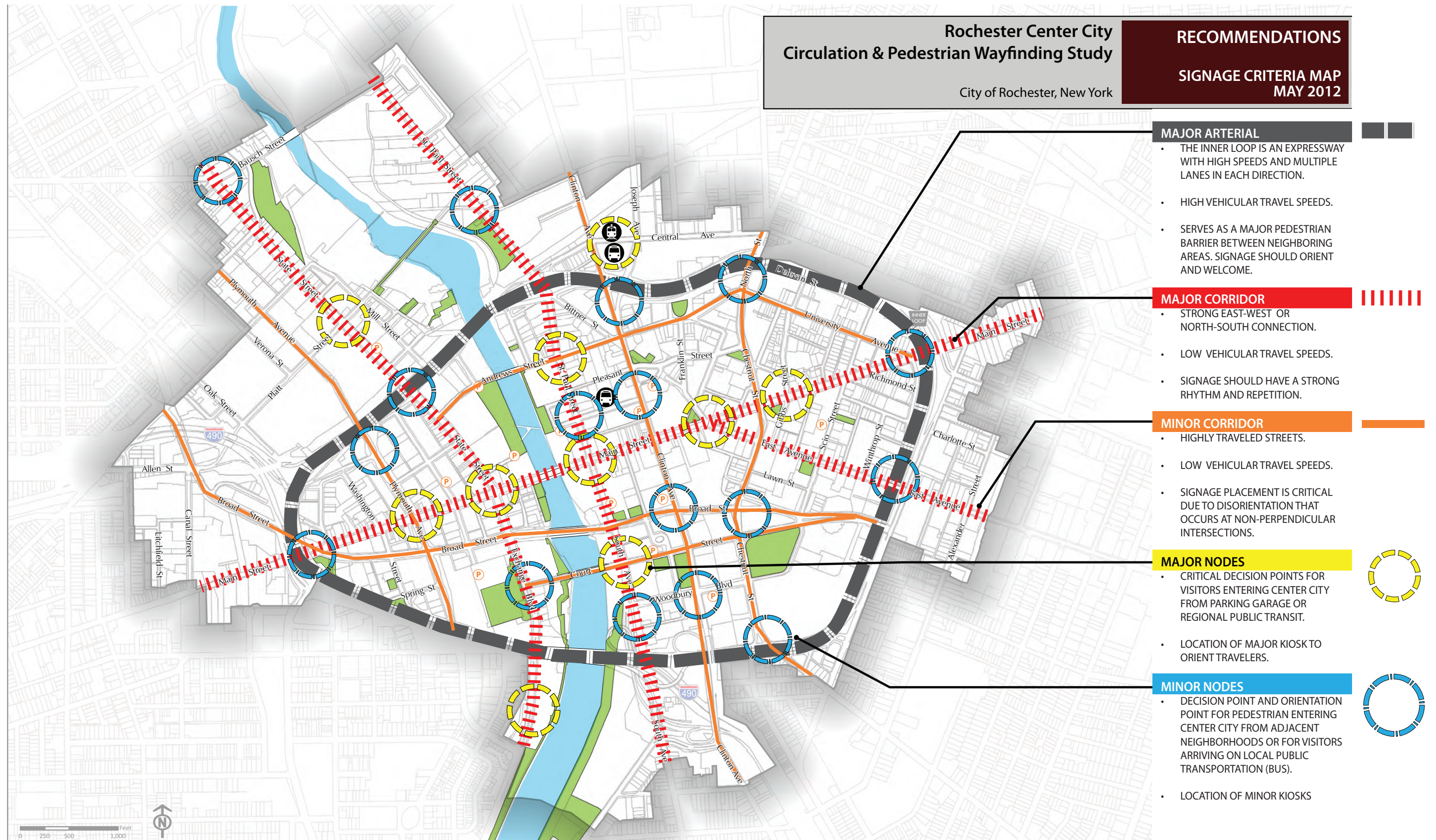
This is a flexible sign type that should be incorporated at areas of historic and cultural importance. This sign would be affixed to existing structures, mainly utility or light poles, along the pedestrian route. This sign can be fabricated in two sizes to accommodate the space available on an existing structure.

The sign could include a quick response (QR) code or similar technology which will allow visitors to learn more online through a mobile device.

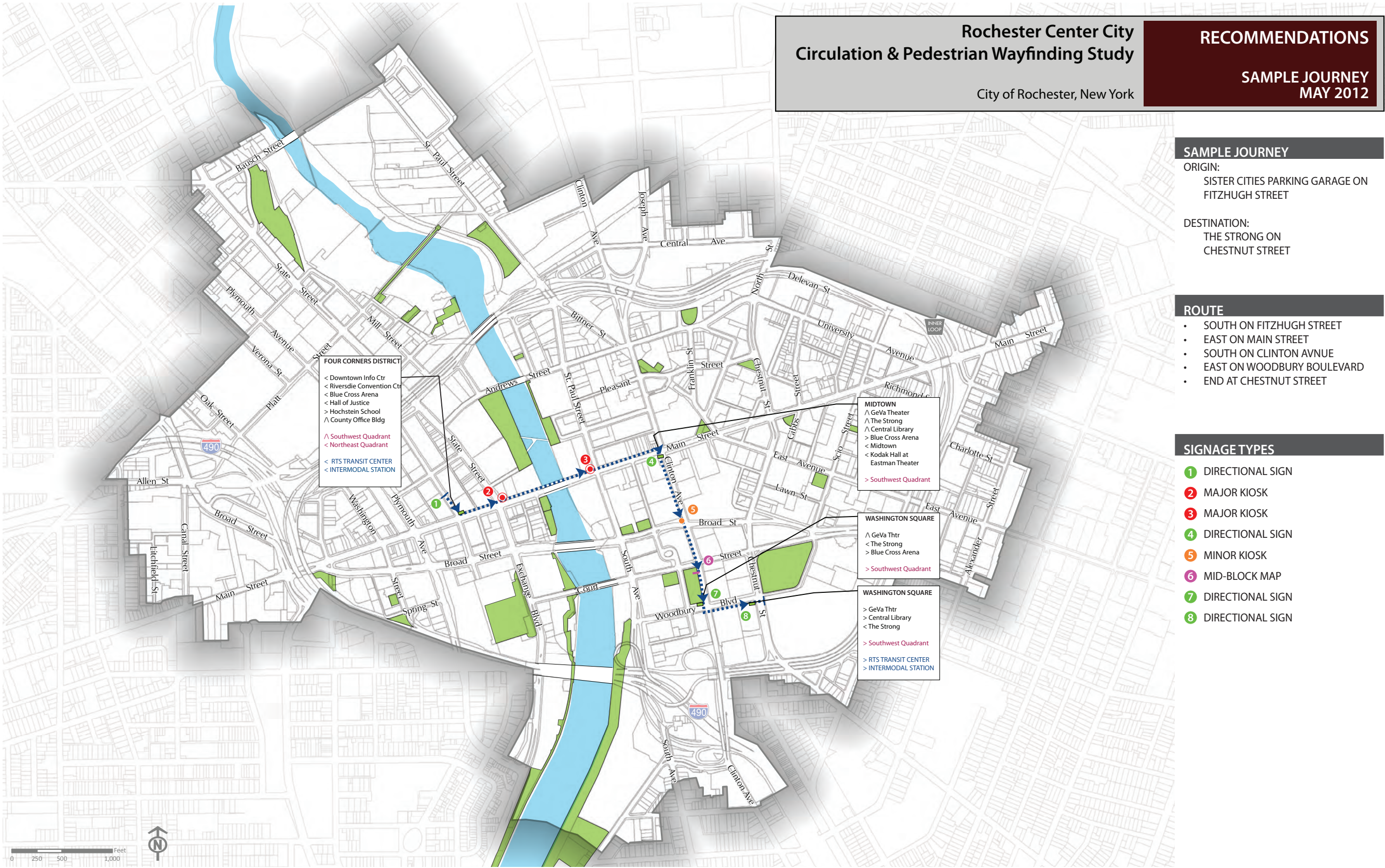
See final schematic design package in appendix c for illustrations of the preferred pedestrian sign system opposite.



INTERPRETIVE/TRAILBLAZER







recommendations can't

Sign Location

Criteria and Sign Placement

The intent of the signage system is to provide a consistent and reassuring message along a route that leads a visitor to their final destination. Sign location is critical in supporting the usability and effectiveness of a wayfinding system.

The existing pedestrian corridors were evaluated and classified according to the traffic speeds, connectivity, and alignment. The nodes, or intersections, of the corridors were also evaluated and classified according to the location and how it relates to pedestrian decision making and orientation. This classification system was used to develop the sign location criteria. Refer to map on page 46.

Sign locations were determined using the sign location criteria that was established during the corridor evaluation. This evaluation led to the development of the criteria used to identify sign locations for each sign type. Refer to the sign location map on page 49.

Sample Journey

The sample journey was prepared to aid in studying the locations and effectiveness of the sign system and messages. The sample journey travels from the Sister Cities parking garage to The Strong, a highly visited destination. The journey travels through three quadrants and several districts. This study provides an understanding of how one would experience the wayfinding system.

The sample journey is shown on page 50 and the associated views at street level are illustrated on page 48.



MAJOR KIOSK - MAIN ST AND SOUTH AVE



DIRECTIONAL SIGN - MAIN ST AND CLINTON AVE



MINOR KIOSK - BROAD ST AND CLINTON AVE

Implementation

Materials and Maintenance

The materials recommended for the proposed signage system respond to the City's need for signs that are durable and have affordable fabrication and replacement costs. The major kiosk should also utilize removable panels for destination and event marketing.

The proposed signs utilize standard durable materials such as aluminum panels, steel poles, resin graphic panels, and vinyl stickers. The signs are detailed in appendix c.

Costs

Cost estimates have been prepared for each sign type. Refer to appendix e for detailed cost estimates.

Funding Sources

The most likely means of implementing some or all of the wayfinding improvements identified in this study is through the use of multiple funding sources. Most wayfinding programs are developed using either a combination of public funding from various governmental levels or a combination of public and private funding. An overview of the potential funding sources for development of the Center City Pedestrian Circulation and Wayfinding Study are listed below.

Federal Sources

The federal government provides funding for transportation projects through various funding programs contained within the transportation and housing legislation. Transportation funding is provided via SAFETEA-LU, or Safe Accountable Flexible Efficient Transportation Equity Act. The Community Development Block Grant (CDBG) also provides a flexible mechanism for entitlement communities to leverage federal funding for public facilities.

Federal surface transportation and housing and community development law provide tremendous flexibility for the funding of

public improvements from a wide variety of programs. Virtually all the major funding programs through both Federal Highway Administration (FHWA) and Housing and Urban Development (HUD) can be used for pedestrian-related projects. Local officials may also be able to acquire funding assistance by working with their federal representatives to acquire special funding appropriations through appropriations bills, transportation and other related legislative actions, and other special appropriations.

Community Development Block Grant Program (CDBG)

The CDBG program provides for the flexible utilization of both formula funds and program income for Public Facilities Improvements, which includes "design features and other treatments aimed at improving aesthetic quality" and infrastructure improvements. The City of Rochester would need to determine if the Center City would be eligible for the use of these funds based upon conformance with national program objectives. Upon the determination of eligibility, CDBG funding should be pursued as a primary source of implementation funding for Center City Pedestrian Circulation and Wayfinding improvements.

Surface Transportation Program (STP)

The Surface Transportation Program is a primary core Federal-aid program within SAFETEA-LU utilized for local highway and trail improvement projects. The STP provides flexible funding that may be used for a variety of projects through numerous sub-programs. STP funds would support the development and installation of maps similar to those planned for the several kiosks located throughout the Center City. STP funding is commonly utilized for pedestrian projects and should be investigated as a primary source of funding.

Transportation Enhancements Program (TEP) funds are administered by the New York State Department of Transportation

(NYSDOT), with assistance in project solicitation and selection being provided by the Genesee Transportation Council (GTC). TEP funds would support the development of maps and other wayfinding signage associated with the Center City Pedestrian Circulation and Wayfinding Study, and should be investigated as a secondary source of funding for the project.

Congestion Mitigation and Air Quality Program (CMAQ)

The CMAQ program provides funding for surface transportation and other related projects that contribute to air quality improvements and reduce congestion in areas that are designated as non-attainment or in maintenance per the National Ambient Air Quality Standards. Selection of CMAQ projects is made at the State and local level but is subject to broad Federal project eligibility guidelines. Eligible project categories include bicycle and pedestrian projects, and CMAQ funding should be investigated as a secondary source of funding for the Center City Pedestrian Circulation and Wayfinding Study.

State Sources

In 1996 NYS approved funding for environmental protection and enhancement projects through the creation of the Environmental Protection Fund (EPF). The EPF is a dedicated funding mechanism to provide critical funding and grants to local governments and non-profit organizations to implement a variety of environmental programs to protect public health and ensure communities have access to clean water, land, and air.

The Local Waterfront Revitalization Program (LWRP) is funded through the EPF, and provides a flexible source of funding for projects within approved LWRP zones established within eligible municipalities. Portions of the Center City Pedestrian Circulation and Wayfinding System within

the City's LWRP may be eligible to receive EPF funding.

Local Sources

Limited federal and state funding opportunities for wayfinding development have led many communities to allocate more local funding for these types of projects. The most common sources of funds at the municipal level include allocations from specific departments (e.g., public works or economic development) or a line item in a community's annual budget and /or Capital Improvement Program (CIP). Additionally, development impact fees levied by a municipality or funding obtained through development incentive programs may also be allocated to capital wayfinding improvements.

Private Funding

There is the potential to partially or substantially fund wayfinding systems utilizing private funds from donations by businesses, corporate sponsorships, and various fundraising efforts, including the sale of advertising space on system amenities like signage and information kiosks.

Funding Conclusions

It is likely that the Center City Pedestrian Circulation and Wayfinding System will need funding from multiple sources at the federal, state, local and private levels. The implementation of the system on a phased basis, with the design of the phase tied directly to the funding source for construction, will be required to complete the desired improvements. A small amount of local or private funding can leverage state and federal funding to make the wayfinding system a reality.

Phasing

A practical phasing strategy is critical to the long term implementation of the pedestrian wayfinding system. It is unlikely that the entire pedestrian wayfinding system would be funded and installed at one time. For

this reason, it is recommended that the City focus funding on major pedestrian corridors first, such as Main Street, Clinton Avenue and South Avenue. These corridors were identified as key organizing elements and the development of these corridors will strengthen the north-south and east-west travel corridors.

It is also recommended that all streetscape improvement and urban development projects include a budget for the pedestrian wayfinding system. There are several major projects currently under development within Center City that would contribute greatly to the early implementation of this system.

Digital Wayfinding

Globally we are experiencing rapid advancements in the dissemination of information. Interactive mapping applications are being utilized by cities to aid individuals in navigation through personal mobile devices. These applications enable visitors to orient themselves at any location within an area and personalize the information they are viewing.

The community has already demonstrated an interest in digital wayfinding. This was indicated through the June 2012 tactile urbanism installation which was part of the TEDxRochester events. The event organized community members to install simple low-cost, temporary wayfinding signs throughout the city. The signs identify a nearby destination, distance, travel time, and a Quick Response (QR) code that allows smart phone users to access additional information on RocWiki.org. RocWiki.org is a searchable database which is continually updated with information about Rochester.

It is recommended that the City consider the development of a digital wayfinding system for use on mobile devices that builds upon the built system. This is particularly valuable for Center City because services are not included on the proposed signage system.

Through digital wayfinding application services, organizations, cultural or historic resources and public transportation can be located and additional information can be easily accessed.



TACTILE URBANISM INSTALLATION,
TEDXROCHESTER 2012

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Simple free applications such as Google Maps, allow individuals to search services and routing. Through the use of Google Places, business owners can add their business to the map with a link to their website, at no cost. This application relies on the community to populate the maps and manage the relevance of the information through user reviews.

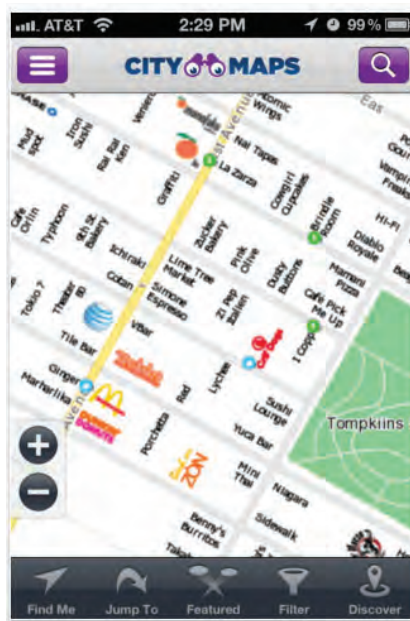
Alternatively, a more sophisticated application could be developed specifically for Center City, relying less on community participation to populate and maintain. Existing applications such as UpNext or CityMaps combine mapping and service information in an application that has an interactive user interface.

A final option would be to create an interactive map, branded the same as the proposed pedestrian wayfinding system. This would reinforce the wayfinding system, providing a fluid experience from a user's pre-visit online, arrival, and throughout their journey within the Center City. Interactive maps have been developed for various locations, such as large urban parks, zoos, historic districts,

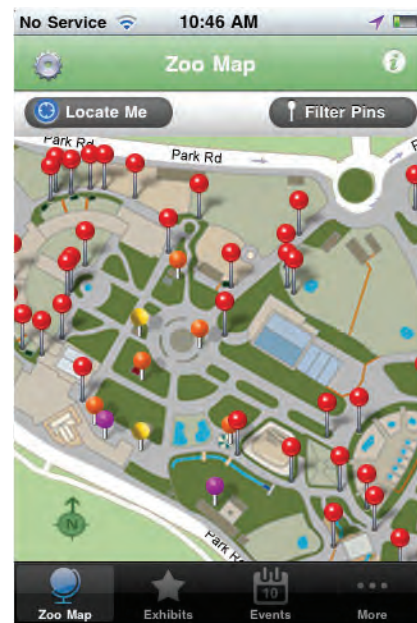
theme parks and other tourist attractions. The Buffalo Zoo, Central Park, SeaWorld, and other similar attractions have successful interactive maps available (usually at no cost) to visitors. An example of an enhanced interactive map is the application 'It Happened Here' which highlights nearby historic events for a user based on their current location in a city.

Digital wayfinding is an extraordinary opportunity to create a truly dynamic wayfinding system within the city and an opportunity for Rochester to be on the forefront of technological advancements, which is fitting for this historically innovative city.

The information presented above is a very preliminary review of the current trends in digital wayfinding. When the City of Rochester is prepared to engage in the development of a digital wayfinding system it will be important to evaluate the current trends and technologies available.



CITY MAP APPLICATION
MOBILE DEVICE SCREEN SHOT



BUFFALO ZOO APPLICATION
MOBILE DEVICE SCREEN SHOT