

3RD AND 4TH STREET IMPROVEMENTS PLAN  
**TRANSPORTATION IMPROVEMENTS**



# TRANSPORTATION IMPROVEMENTS

## STREETS

Connectivity and the development of a “complete street” is at the forefront of the 3rd and 4th Street Improvements project. An expanded downtown street grid will connect neighborhoods to attractions, businesses, education, and employment. Paired with this connectivity is the desire to provide safe and accessible facilities for vehicles, bicycles, pedestrians and transit.

Hardscaping and landscaping enhancements will complement the “complete street” and connect the improvements in the study area to other prior and ongoing street enhancements outside the study area. Improvements within the study area will be coordinated with the University of Tennessee at Chattanooga and Erlanger Hospital masterplans.



Figure 6-1. Riverfront Parkway BEFORE

### Riverfront Parkway

Within the University of Tennessee at Chattanooga district, Riverfront Parkway (Figure 6-1) is proposed (Figure 6-2) as either a two-lane or four-lane roadway with on-street parking along the south side of the roadway (Figures 6-3, 6-4, 6-5, and 6-6). The various options for the Riverfront Parkway cross-section will be explored further during future phases of the project.



Figure 6-2. Riverfront Parkway AFTER

# TRANSPORTATION IMPROVEMENTS

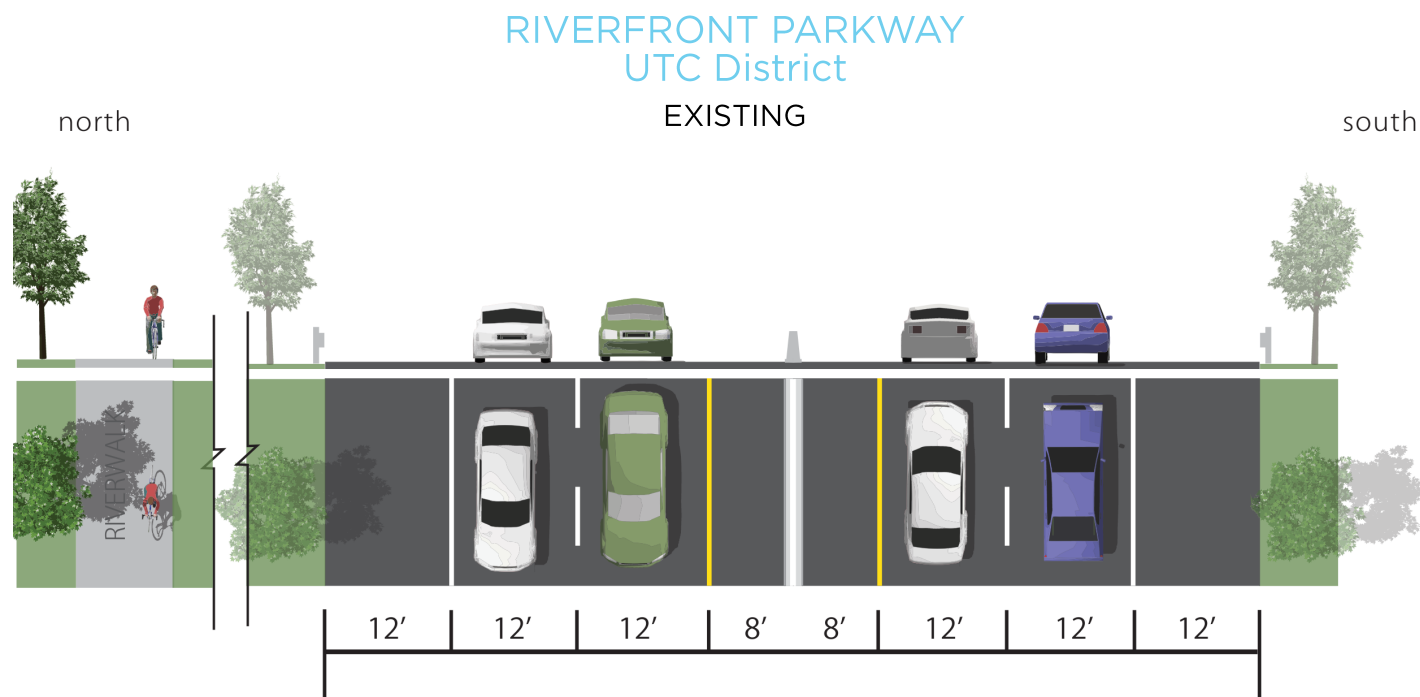


Figure 6-3. Riverfront Parkway Cross-Section | UTC, Existing

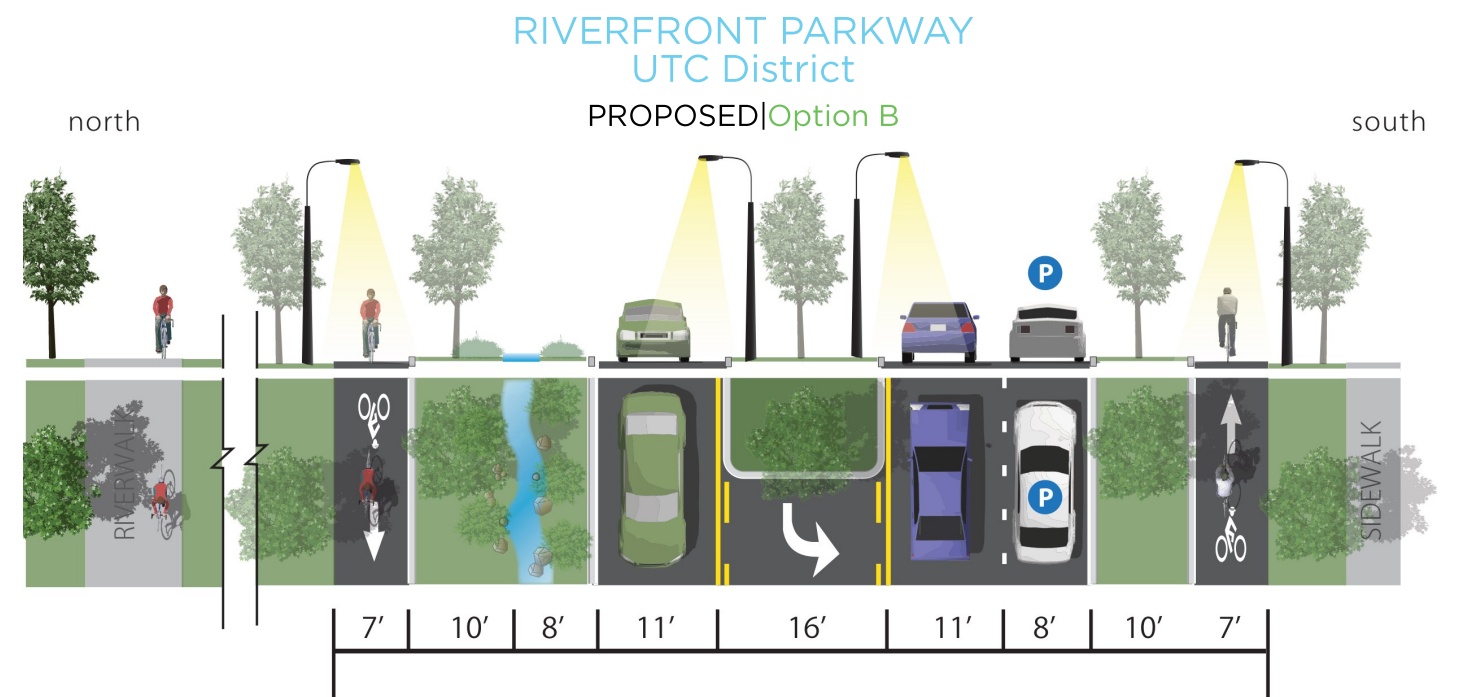


Figure 6-5. Riverfront Parkway Cross-Section | UTC, Proposed—Option B

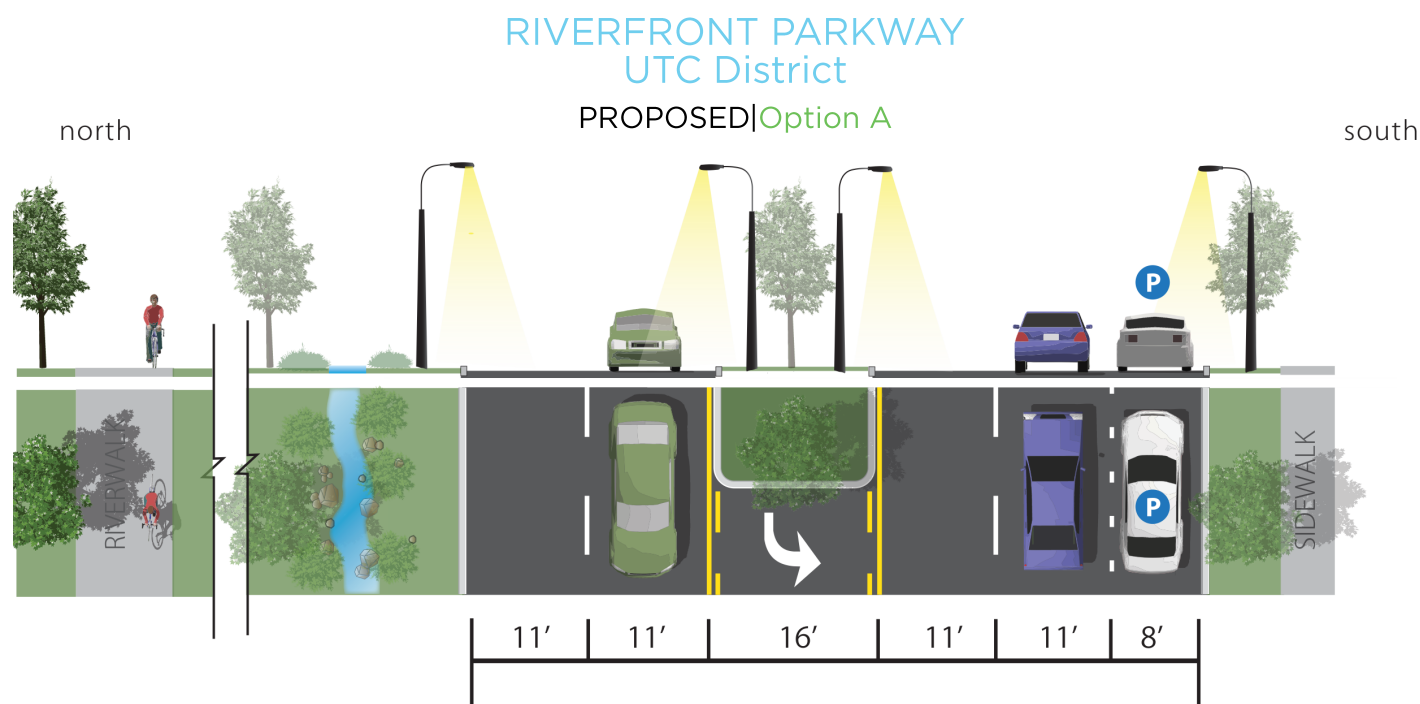


Figure 6-4. Riverfront Parkway Cross-Section | UTC, Proposed—Option A

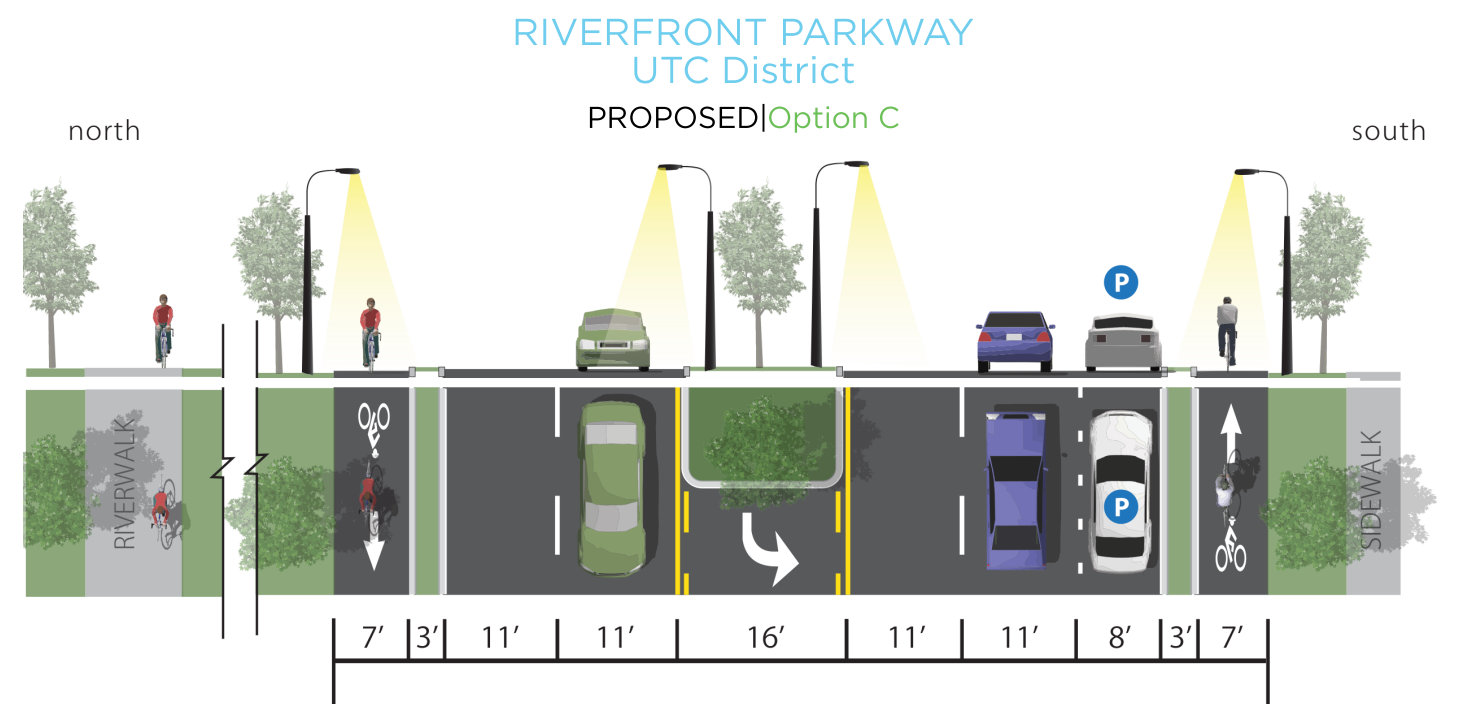


Figure 6-6. Riverfront Parkway Cross-Section | UTC, Proposed—Option C

# TRANSPORTATION IMPROVEMENTS

Within the Siskin and Erlanger hospital district, on-street parking is proposed on both sides of Riverfront Parkway (Figures 6-7 and 6-8) to support future redevelopment and address parking needs. To enhance connectivity along Riverfront Parkway, bicycle lanes (separated or along shared use-paths), as well as sidewalks, are planned along both sides of the roadway. In addition, landscaping features may include bioswales, planters and trees to capture and utilize storm water runoff for irrigation .

As part of future phases of the project, a traffic signal warrant analyses will be performed for each at-grade intersection along Riverfront Parkway. Where justified, left and right-turn lanes will be provided along with pedestrian crosswalks and traffic signal amenities. Landscaping and hardscaping, a continuous two-way left turn lane, or a combination of both will be explored for the median area.

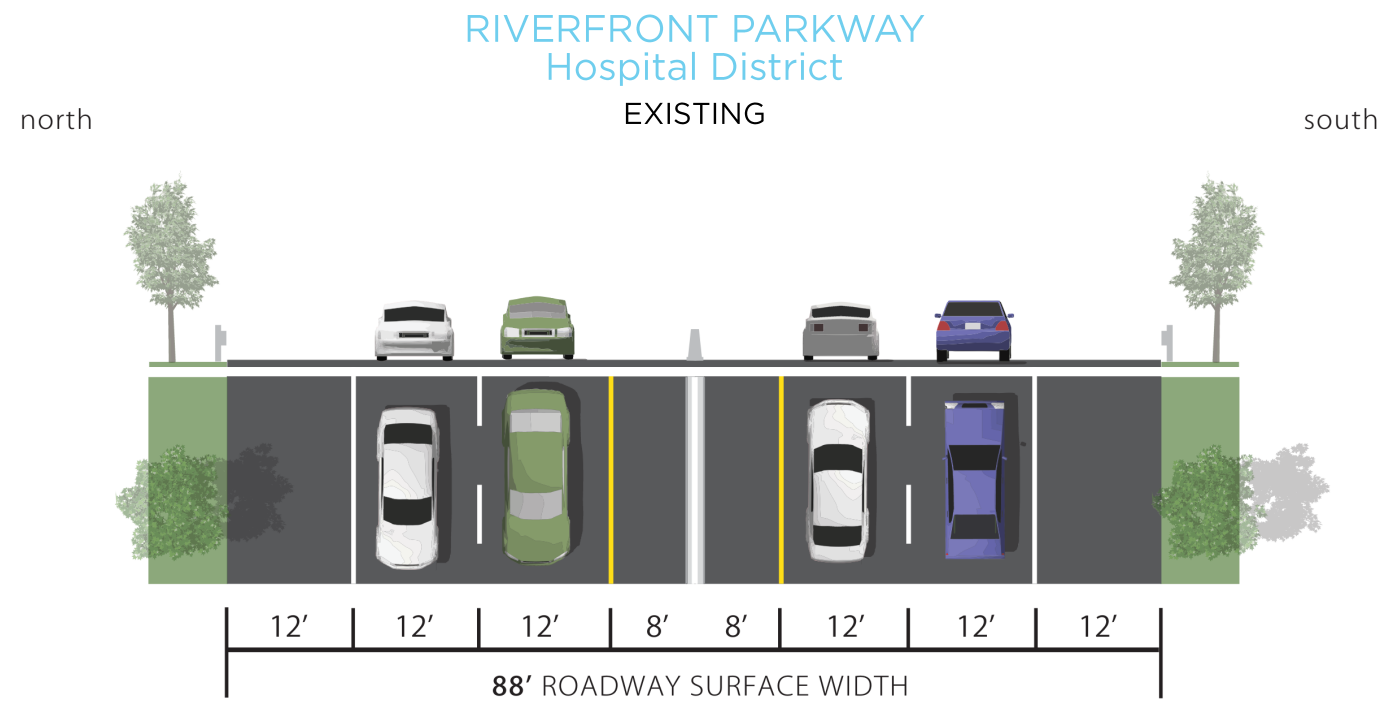


Figure 6-7. Riverfront Parkway Cross-Section | Hospital District, Existing

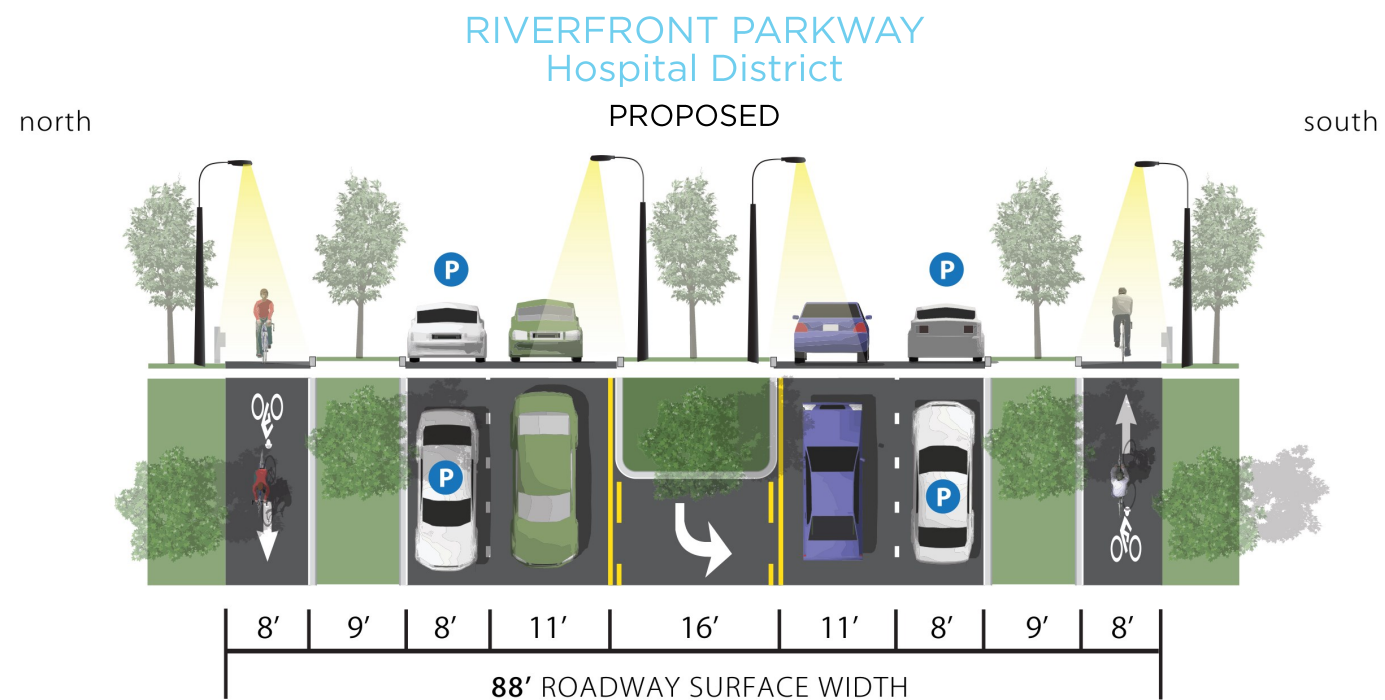


Figure 6-8. Riverfront Parkway Cross-Section | Hospital District, Proposed

## 3rd and 4th Street

The 3rd Street and 4th Street corridor is proposed as either a two-lane or four-lane roadway with curb and gutter. The portion of 4th Street between Lindsay Street and Houston Street (within the University of Tennessee district) is constrained due to the proximity of historic residential buildings and an existing retaining wall (Figure 6-9). There are also right-of-way constraints along the northern side of 3rd Street within the Siskin and Erlanger hospital district.

The decision on a two-lane or four-lane lane cross-section for the corridors will be driven by the anticipated traffic volumes, balanced with the desire to accommodate on-street parking, bike lanes, and other amenities within the existing right-of-way. Because of the constraints along 4th Street between Lindsay Street and Houston Street, additional amenities beyond sidewalks are likely not possible should a four-lane cross-section be selected. If a two-lane cross-section is selected for 4th Street (Figure 6-10), a combination shared-use path could enhance the area and make the corridor more pedestrian- and bicycle-friendly.

For either cross-section, opportunities for streetscaping throughout the 3rd and 4th Street corridor will be explored to enhance both the median and edges of the roadway.

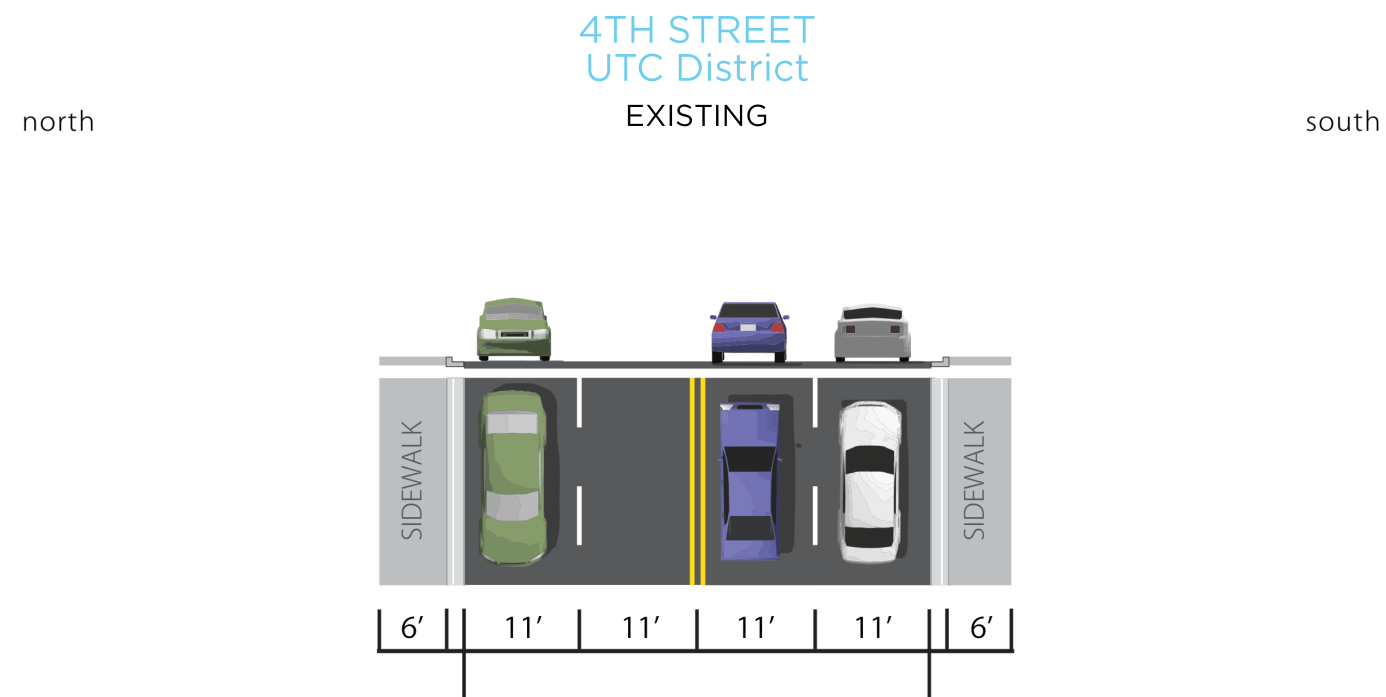


Figure 6-9. 4th Street Cross-Section | UTC, Existing

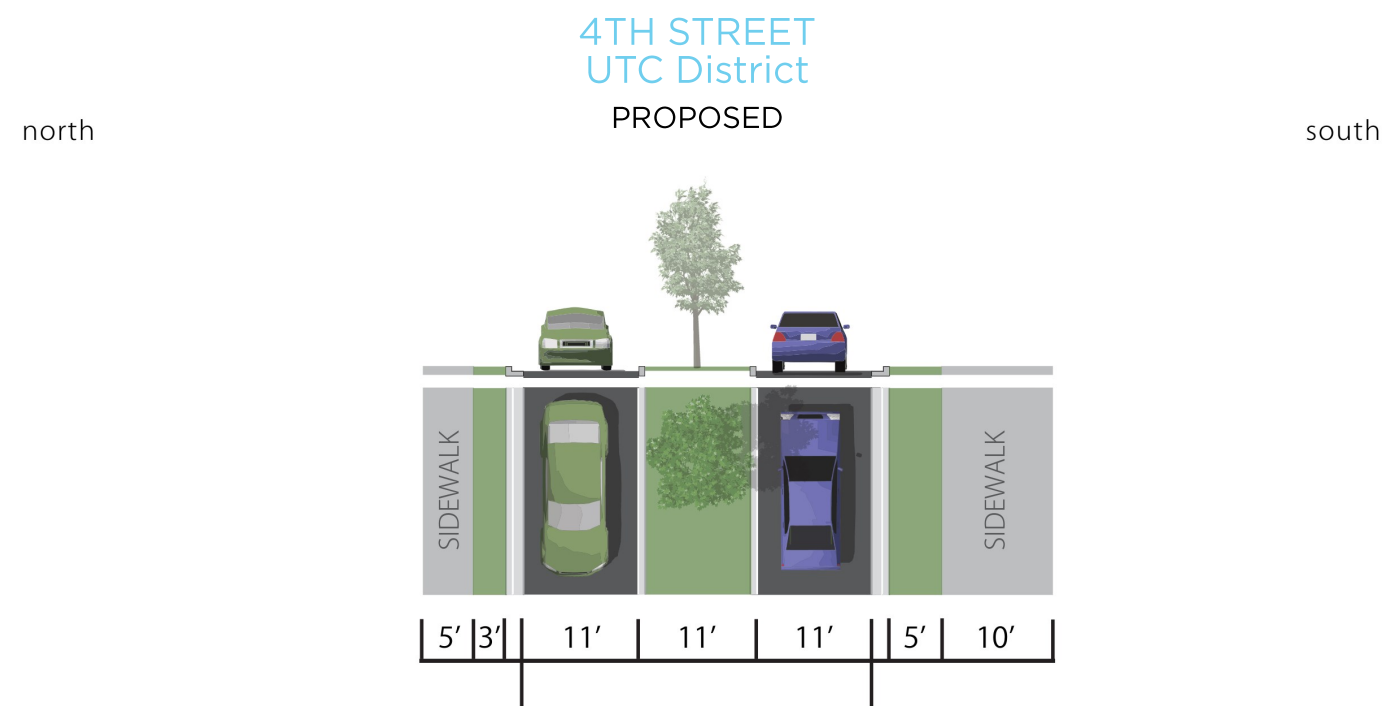


Figure 6-10. 4th Street Cross-Section | UTC, Proposed—Option A

# TRANSPORTATION IMPROVEMENTS

## 3RD STREET CSAS District

north

EXISTING

south

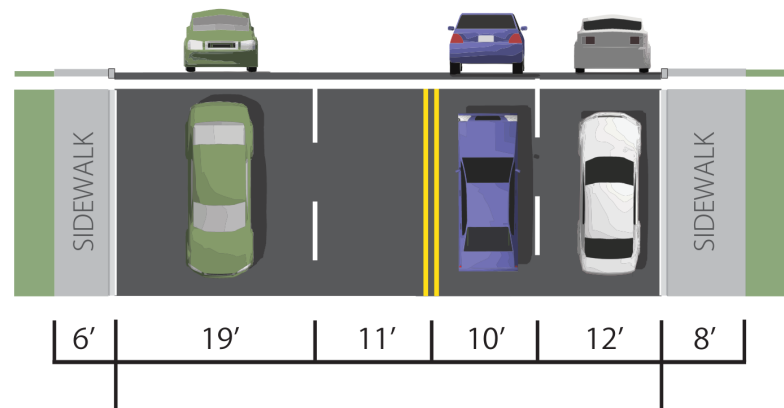


Figure 6-11. 3rd Street Cross-Section | CSAS, Existing

Within the Chattanooga School for the Arts and Sciences district, 3rd Street (Figure 6-11) is constrained due to the proximity of the school and the cemetery. However, proposed roadway improvements that include a median / center turn-lane, along with a

separated bicycle lane (Figure 6-12) and sidewalks on both sides of the roadway will be explored for this section. An alternative option is the inclusion of a raised cycle track (Figure 6-13).



## 3RD STREET CSAS District

north

PROPOSED

south

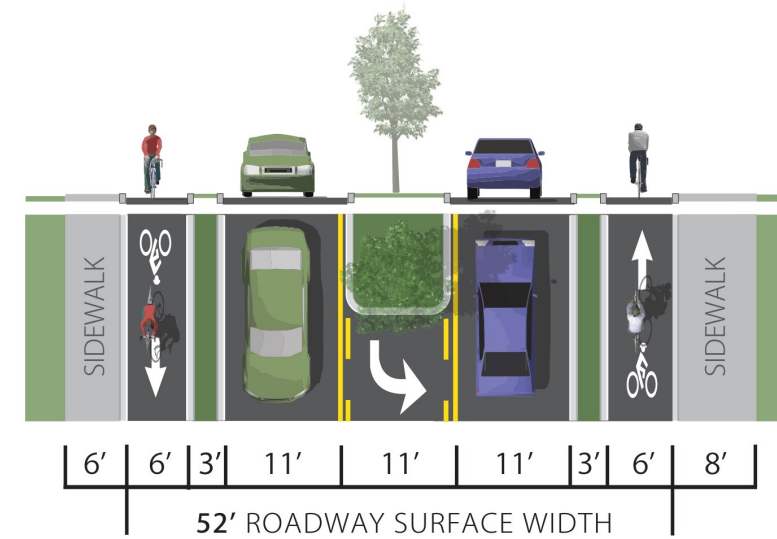


Figure 6-12. 3rd Street Cross-Section | CSAS, Proposed

## 3RD STREET CSAS District PROPOSED | Raised Cycle Track

north

south

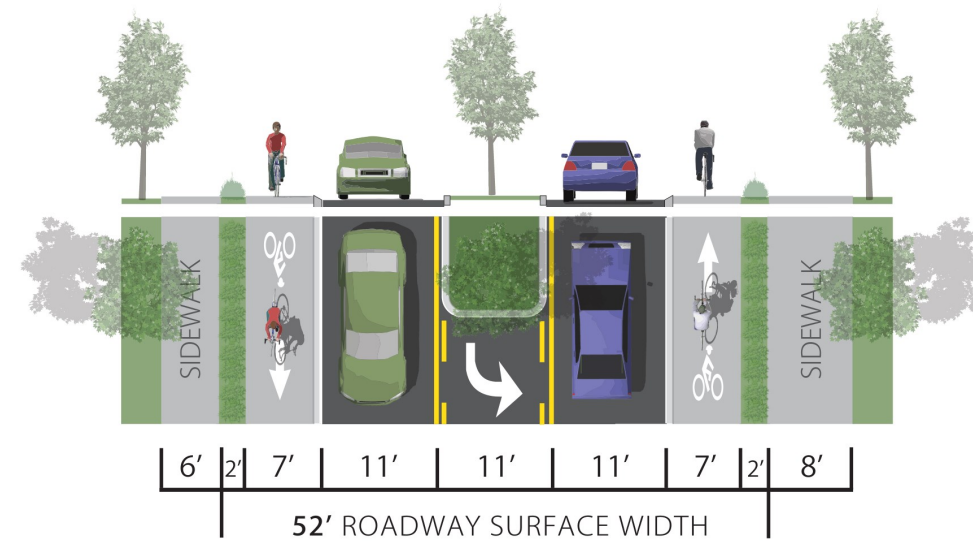


Figure 6-13. 3rd Street Cross-Section | CSAS, Proposed-Raised Cycle Track

Within the Siskin and Erlanger hospital district, a combination of on-street parking, bike lanes and sidewalks are planned for 3rd Street, as well as a new connection to the Tennessee Riverwalk (Figures 6-14 and 6-15). Should a two-lane section be selected, parallel parking, pedestrian bulb-outs, and transit pullouts / stops will be implemented. Left-turn lanes should also be provided, where warranted.

The proposed streetscape improvements within the hospital district will be closely coordinated with the Erlanger Hospital masterplan.

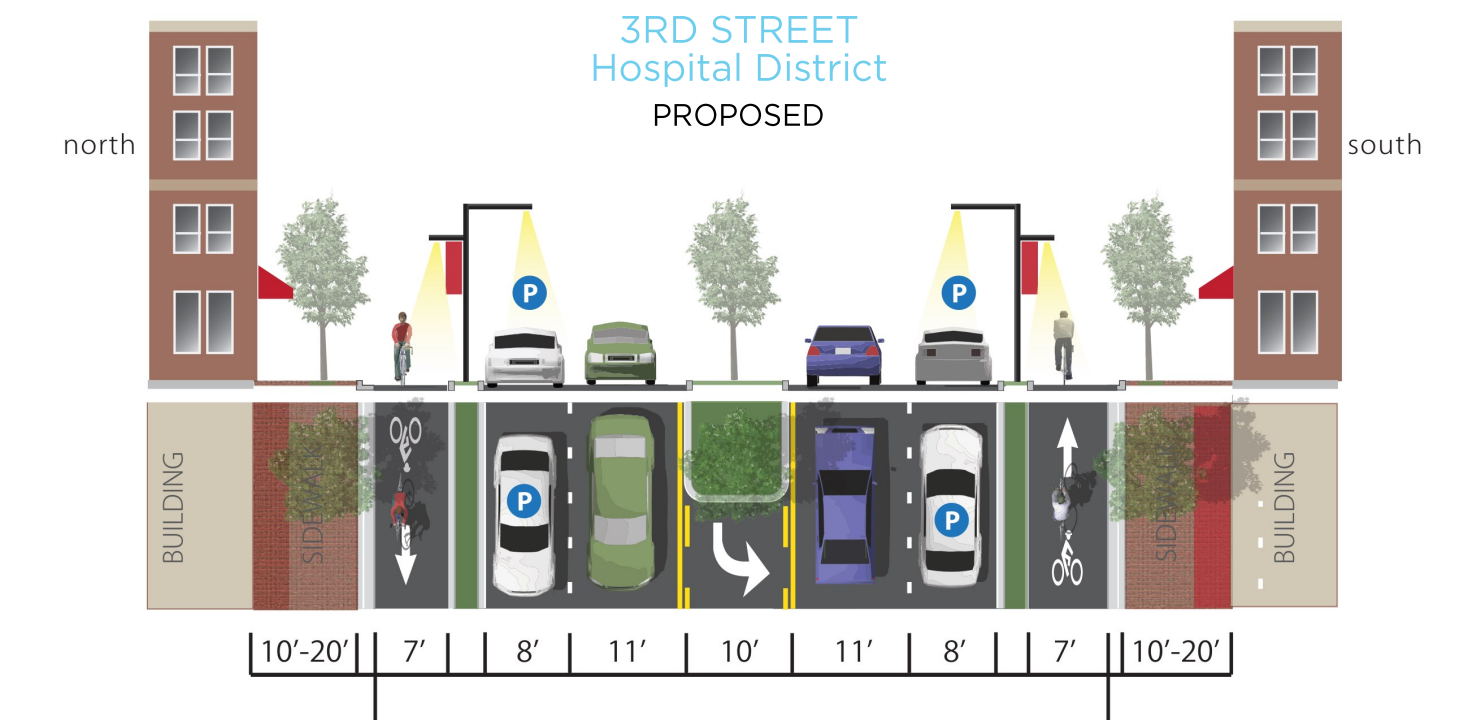
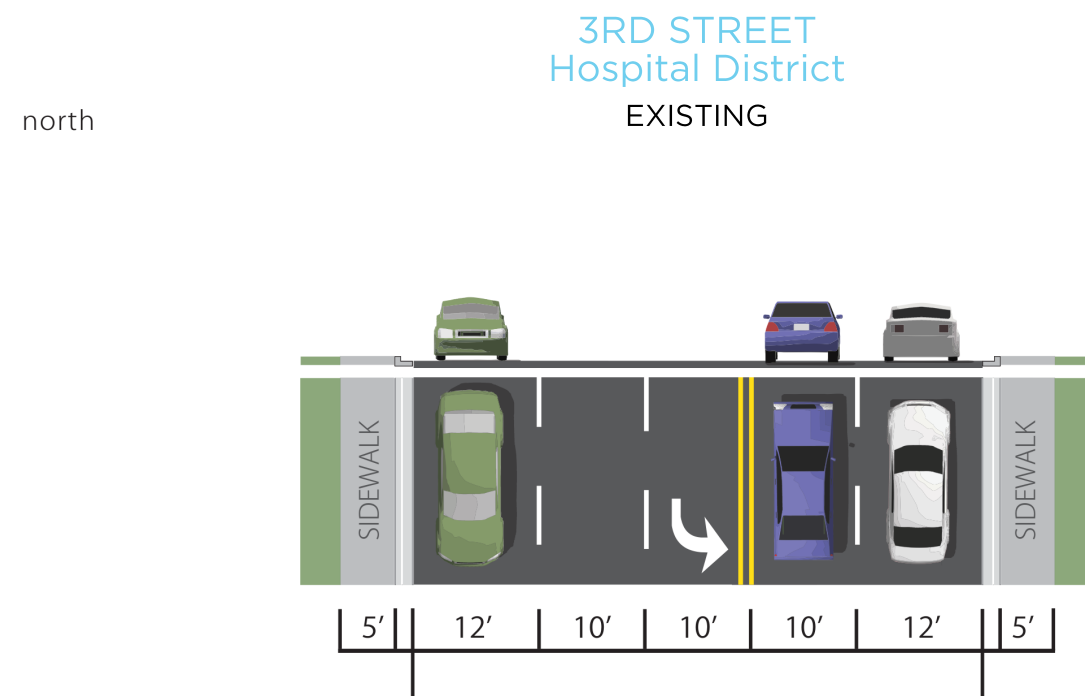


Figure 6-14. 3rd Street Cross-Section | Hospital District, Existing

Figure 6-15. 3rd Street Cross-Section | Hospital District, Proposed

# TRANSPORTATION IMPROVEMENTS

## INTERSECTIONS

### Riverfront Parkway and Mabel Street

Currently, Riverfront Parkway is on an elevated overpass at Mabel Street. Traffic heading westbound on Riverfront Parkway toward the University of Tennessee at Chattanooga or the Siskin and Erlanger hospital district must exit Riverfront Parkway at the off-ramp onto Battery Place, turn left onto Mabel Street, and left again onto 3rd Street. This movement creates traffic delays at this location, and during the morning peak hours traffic volume through the Battery Place residential neighborhood is substantial.

As part of each of the transportation concepts presented in this masterplan, the Riverfront Parkway off-ramp at Battery Place is planned to be closed and a cul-de-sac created at the easternmost end of Battery Place (Figure 6-16). Depending on which transportation concept is selected, there are two potential approaches to the Riverfront Parkway / Mabel Street intersection. One approach, which was met with very positive response during the design charrette and public meeting, is the removal of the bridge over Mabel Street to create an at-grade intersection. A second approach is to maintain the current bridge at Riverfront Parkway and Mabel Street. Under this approach (Figure 6-17) there would be a vehicular, pedestrian, and bicycle connection under Riverfront Parkway to Battery Place, but there would be no connection to Riverfront Parkway.

Converting the intersection of Riverfront Parkway and Mabel Street to an at-grade intersection would create a new main entrance to the University of Tennessee at Chattanooga campus, as well as an improved entrance to the Battery Place neighborhood. The economic development study envisions Mabel Street enlivened with mixed-use development, with ground-level restaurants and retail stores, and residential units on the upper floors.

The at-grade intersection would consist of either a two-lane or four-lane Riverfront Parkway intersecting with a two-lane Mabel Street. Turn lanes would be added as required and the need to signalize the intersection would be evaluated. Mabel Street is a primary pedestrian route from the University of Tennessee at Chattanooga to the athletic fields located near the river and to the Tennessee Riverwalk. The intersection will be designed with pedestrian and bicycle safety in mind, with the potential for a shared-use path along Mabel Street.

If either the Major Intersection or Roundabout concepts are selected, Mabel Street may not be able to be converted to an at-grade intersection because of the close proximity to the intersection or roundabout. Battery Place would be indirectly accessed by turning at one of the existing or proposed new intersections along Riverfront Parkway and then navigating to the Mabel Street underpass via 4th Street.

Mabel Street is proposed as a two-lane cross-section with on-street parking and sidewalks. Consideration for a wider shared-use path could be added to the cross-section to accommodate pedestrians and bicyclists.

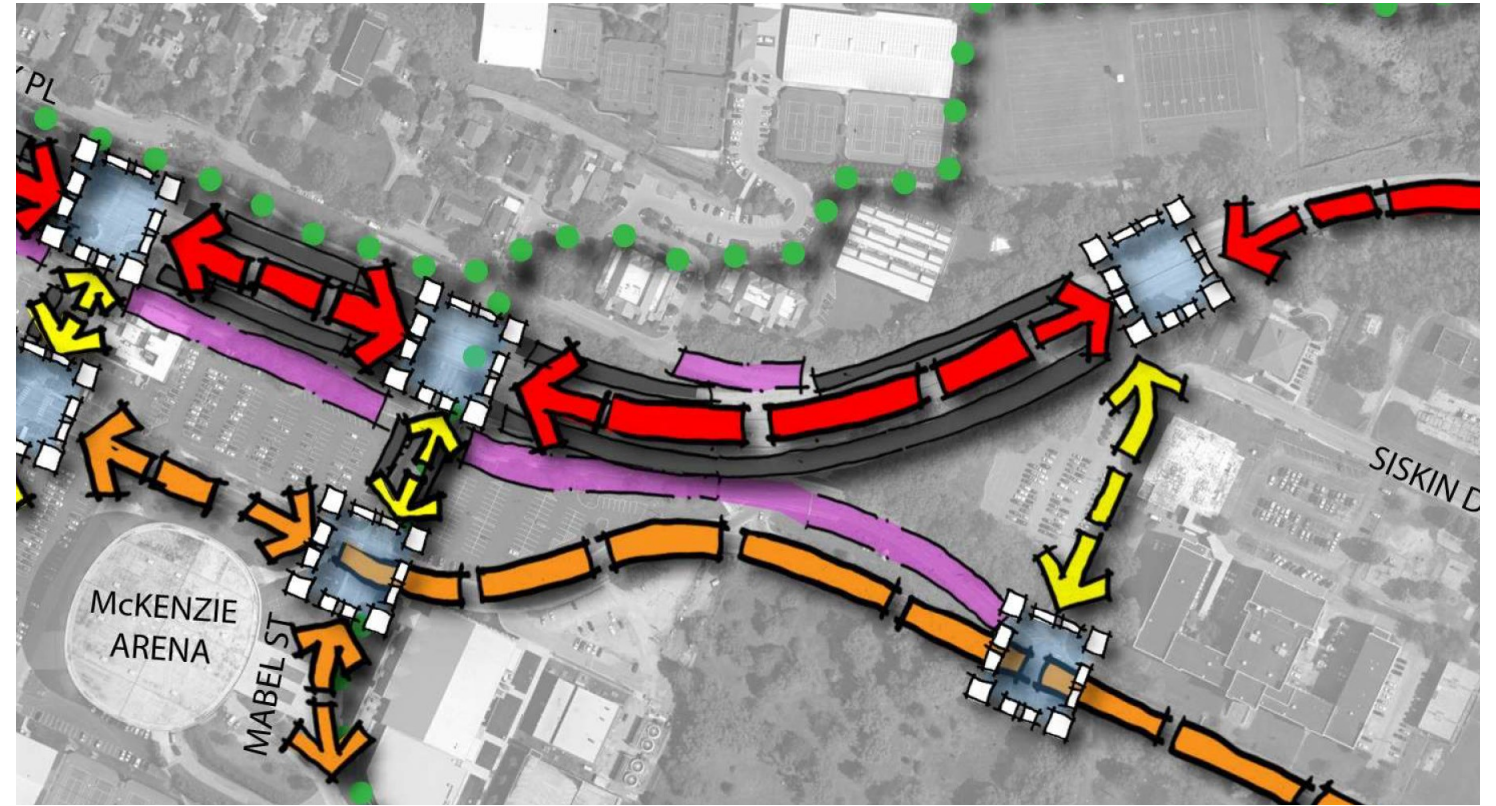


Figure 6-16. Riverfront Parkway and Mabel Street | At-grade Intersection Concept

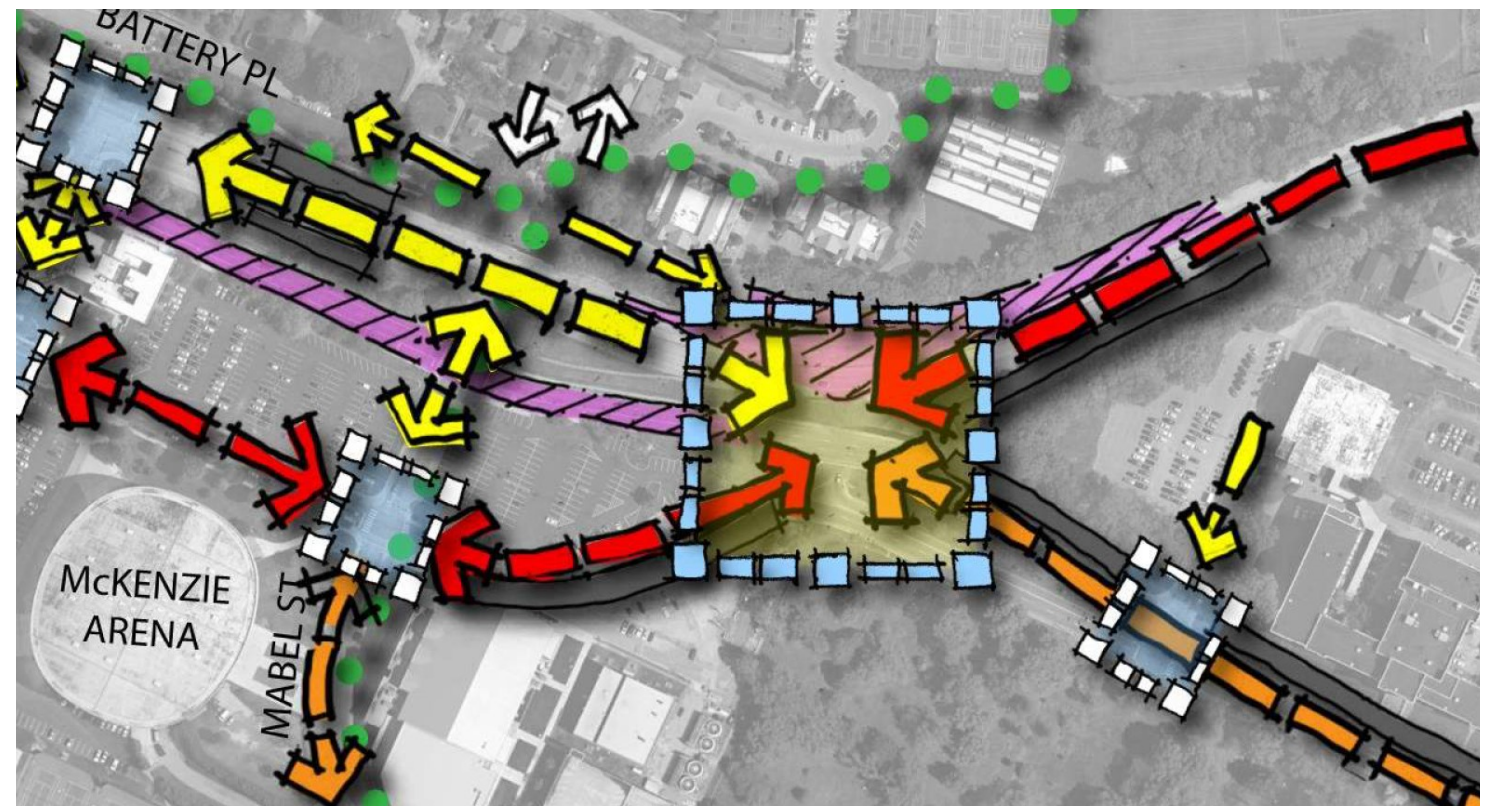


Figure 6-17. Riverfront Parkway and Mabel Street | Maintain Existing Bridge



### Riverfront Parkway and Georgia Avenue

When Riverfront Parkway was originally constructed, the objective was to minimize the number of intersections to allow a free flow of traffic to the industrial areas west of downtown. Currently, Riverfront Parkway bridges over Georgia Avenue, with no direct connection. Drivers headed westbound along Riverfront Parkway who wish to cross the river on Veterans Bridge must first turn south onto Lindsay Street, west on 4th Street, and then north on Georgia Avenue. Drivers headed eastbound along Riverfront Parkway who wish to cross Veterans Bridge must travel along Aquarium Way or Lookout Street to 4th Street and then turn north on Georgia Avenue. The close proximity of residential properties near the intersection of Riverfront Parkway and Georgia Avenue, as well as the proximity of the Tennessee Riverwalk pedestrian bridge create a constraint for any potential off-ramp to directly connect Riverfront Parkway and Veterans Bridge.

As part of this masterplan, it is recommended that an at-grade intersection (Figure 6-18) be constructed at Riverfront Parkway and Georgia Avenue. Under this concept, the Riverfront Parkway bridge over Georgia Avenue would be removed as well as the approach embankments, but the existing Tennessee Riverwalk pedestrian bridge would remain.

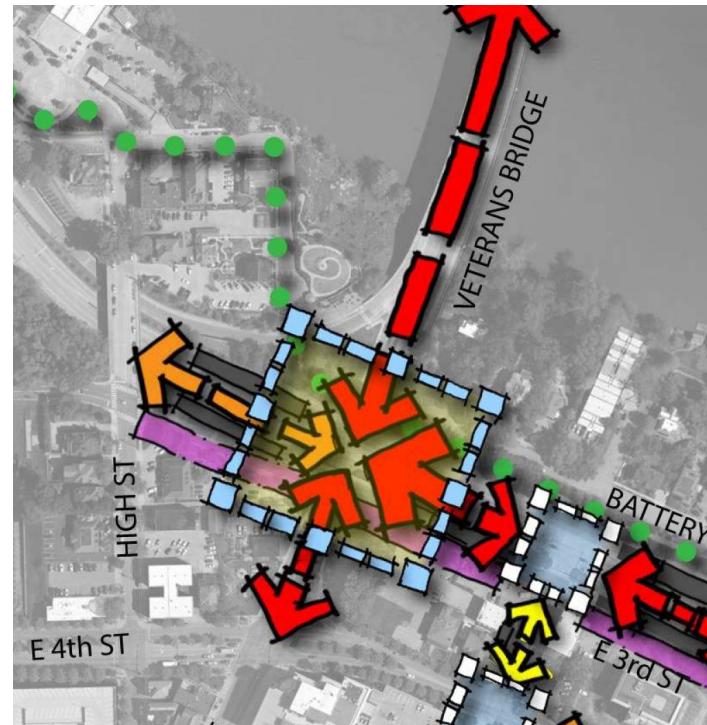


Figure 6-18. Riverfront Parkway and Georgia Ave-

An at-grade intersection would provide direct access from Riverfront Parkway to Veterans Bridge. Eliminating the need for drivers to navigate a circuitous path to access Veterans Bridge would relieve some of the peak hour congestion related to these movements at 4th Street and Georgia Avenue. The intersection would consist of either a two-lane or four-lane Riverfront Parkway east of the intersection, a two-lane Riverfront Parkway west of the intersection, and the existing four-lane Georgia Avenue / Veterans Bridge. Turn lanes would be provided as needed on both Riverfront Parkway and Georgia Avenue. Riverfront Parkway would have a combination of on-street parking and/or bike lanes and sidewalks. The existing southbound ramp from Veterans Bridge to Riverfront Parkway would be converted into a bicycle and pedestrian shared-use path.

### NEW CONNECTIONS

An overarching goal of the 3rd and 4th Street Improvements project is improved connectivity to the downtown grid and better connections to the Siskin and Erlanger hospital district. Improved connectivity can help disperse traffic and address the need for more direct emergency service routes to the hospitals. Today, emergency vehicles traveling westbound on Riverfront Parkway exit at Battery Place, turn on Mabel Street, and turn again on 3rd Street to reach Erlanger Hospital.

The extension of Central Avenue to connect with Riverfront Parkway, a separate project currently being undertaken by the City of Chattanooga, will provide additional connectivity beyond what is proposed in this masterplan. The extension of Central Avenue would provide some traffic volume relief on Riverfront Parkway, as well as the other roadways currently used to access the Siskin and Erlanger hospital district.

The three new intersections proposed can either individually or combined be incorporated in the three overall transportation concepts (Interconnected Grid Intersection, Major Intersection, Roundabout) presented in this masterplan. Each of the proposed new intersections present implementation challenges including property acquisition, noise, geometric alignment and security. These challenges, along with buy-in from the adjacent property owners, will factor heavily into the feasibility of each proposed new intersection as additional evaluation is undertaken during the next phases of the project.

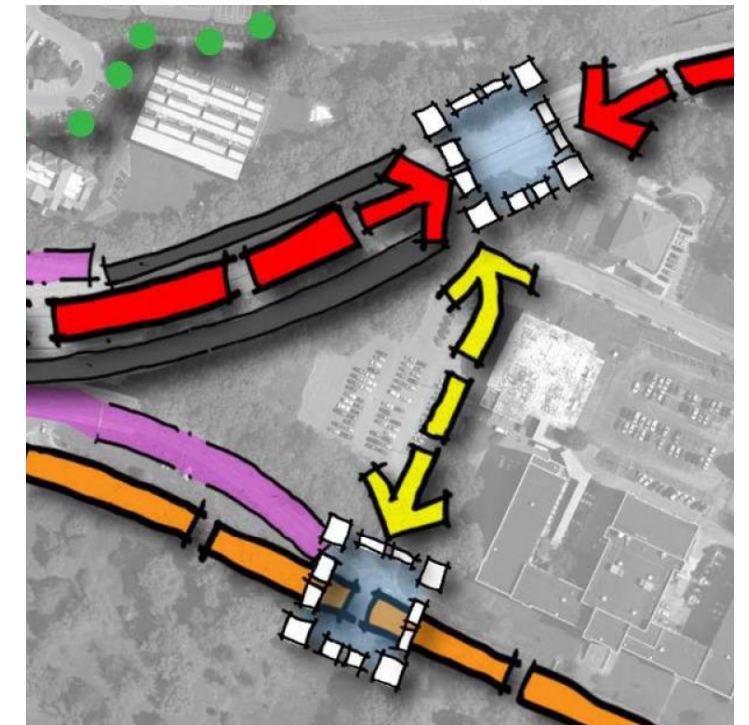


Figure 6-19. Riverfront Parkway / Siskin Drive

### Riverfront Parkway / Siskin Drive

Siskin Drive runs along the western edge of the Chattanooga School for the Arts and Sciences and provides the main entrance to Siskin Rehabilitation Hospital and St. Barnabas Nursing Home. Siskin Drive turns east near Riverfront Parkway toward St. Barnabas Nursing Home. The road turns east through the hospital property to the Health Department parking garage, eventually tying into Blackford Street to the east.

The proposed new connection of Siskin Drive to Riverfront Parkway (Figure 6-19) is a continuation of the northbound leg of Siskin Drive from 3rd Street along the western edge of the Chattanooga School for the Arts and Sciences. This proposed connection would provide direct access to Riverfront Parkway for the Chattanooga School for the Arts and

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Sciences, Siskin Rehabilitation Hospital, and St. Barnabas Nursing Home. This new connection is challenging due to the significant grade difference between the elevation of the northernmost portion of Siskin Drive and Riverfront Parkway. In addition, depending on which of the overall transportation concepts are chosen, this connection may not be feasible due to its close proximity to either the Major Intersection or the Roundabout.

## Riverfront Parkway / Palmetto Street

Palmetto Street currently does not extend north of 3rd Street. This new connection concept involves a two-lane extension of Palmetto Street from 3rd Street to Riverfront Parkway. Portions of this connection would follow the section of Siskin Drive through the Siskin Rehabilitation Hospital and St. Barnabas Nursing Home property, connecting where Siskin Drive turns north, and continuing northward to a connection with Riverfront Parkway. This proposed connection (Figure 6-20) may involve acquiring property from Siskin Rehabilitation Hospital and St. Barnabas Nursing Home and could potentially involve an electrical substation and property acquisition from the Chattanooga School for Arts and Sciences.

Siskin Rehabilitation Hospital and St. Barnabas Nursing Home recently lost some parking and are considering construction of a structured parking facility to address their current and future parking needs. There is existing on-street parking in front of the Siskin Rehabilitation Hospital and a shared parking lot on the electrical substation property. Implementing this connection would need to involve close coordination with Siskin

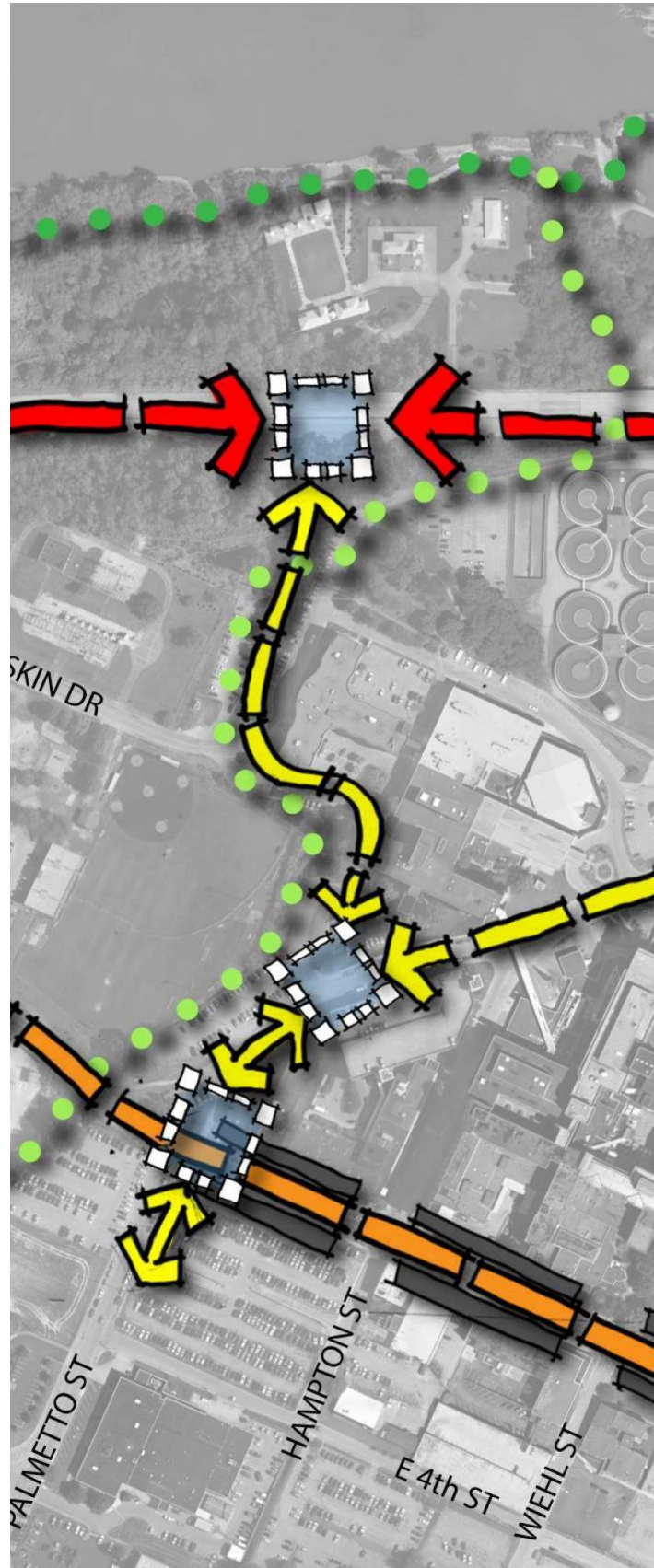


Figure 6-20. Riverfront Parkway / Palmetto Street

Rehabilitation Hospital and St. Barnabas Nursing Home to evaluate potential impacts (safety, noise, loss of parking, etc.) and how those impacts could be mitigated. The proposed typical section for the roadway would feature a combination of on-street parking and/or bicycle lanes, as well as sidewalks. An opportunity to extend the existing greenway, which currently ends at the Chattanooga Hamilton County Health Department parking lot, under 3rd Street to connect to Riverfront Parkway and the Tennessee Riverwalk will also be explored.

## Riverfront Parkway / Blackford Street

This new connection concept (Figure 6-21) is envisioned as a two-lane extension of Blackford Street, near the electrical substation and the mechanical building for the hospital. This roadway currently terminates at the entrance to the Tennessee American Water Company property. This proposed connection would follow the alignment of the maintenance road through the Tennessee American Water Company property to connect with Riverfront Parkway.

Because water treatment plants are a potential security risk, any new connection would involve fencing or other protective measures to ensure security of the facility, as well as ingress / egress for facility maintenance and operations. The new connection would feature bike lanes and sidewalks along both sides of the road. The advantage of this connection is that it provides direct access into the Siskin and Erlanger hospital district from Riverfront Parkway.

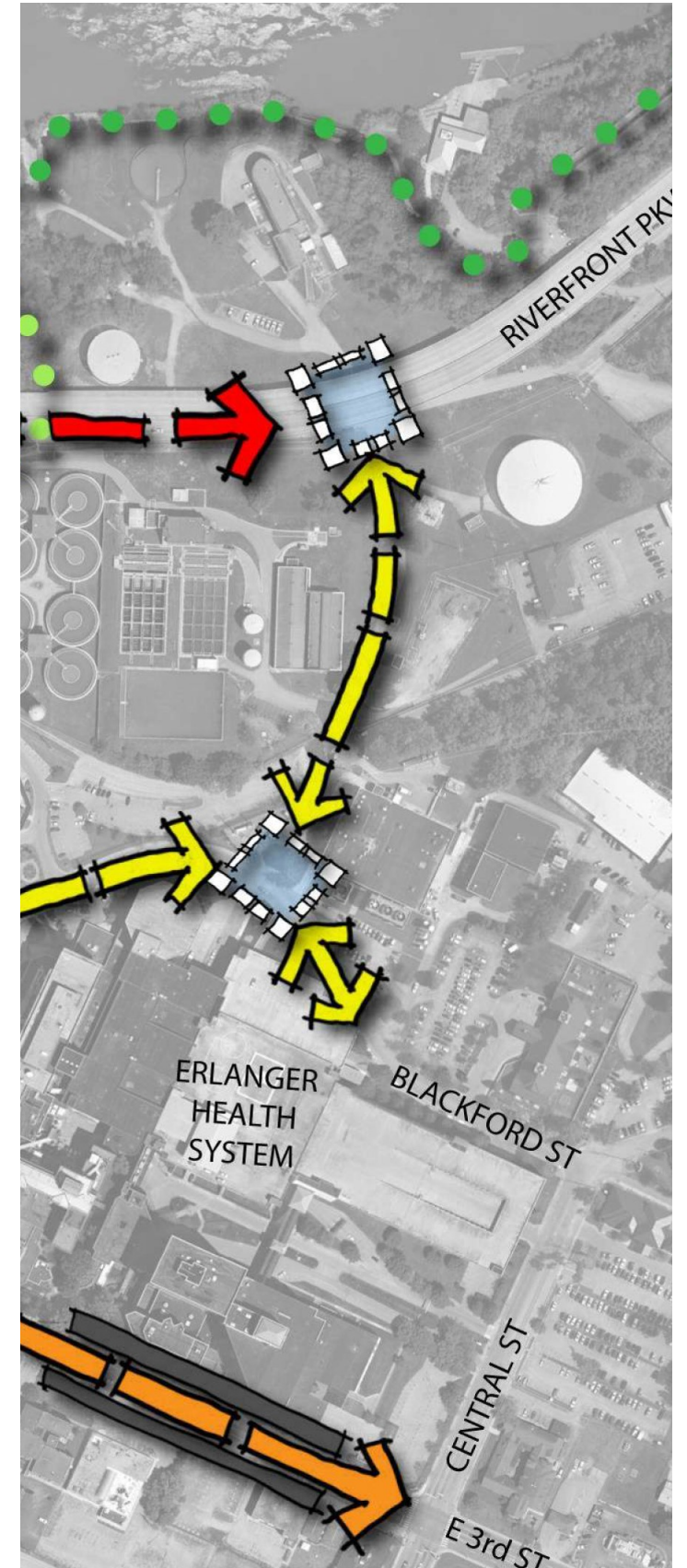


Figure 6-21. Riverfront Parkway / Blackford Street

ONE-WAY TO TWO-WAY CONVERSIONS

Supporting the goals of the 3rd and 4th Street Improvements project to improve connectivity to the downtown grid, reduce driver confusion, and increase safety, it is recommended that Lindsay Street and Houston Streets be converted from one-way to two-way operation. This approach will provide full access to both roadways from Riverfront Parkway and when combined with efforts the City has underway, would allow two-way operation from Riverfront Parkway to Market Street.

Lindsay Street

Lindsay Street is currently a two-lane southbound roadway from Riverfront Parkway to Market Street with a combination of on-street parking and sidewalks. The portion of the roadway between 4th Street and Riverfront Parkway is constrained, with on-street parking only on the east side. Sight distance is an issue in this area for drivers exiting the residential complexes along the east side of Lindsay Street.

Recommended improvements to Lindsay Street include converting the existing one-way roadway (Figure 6-22) to a two-way roadway (Figure 6-23). All of the proposed improvements would be developed to fit within the existing right-of-way and would involve a combination of travel lanes, on-street parking and bicycle lanes, where possible.

LINDSAY STREET  
Riverfront Parkway to Vine Street

EXISTING

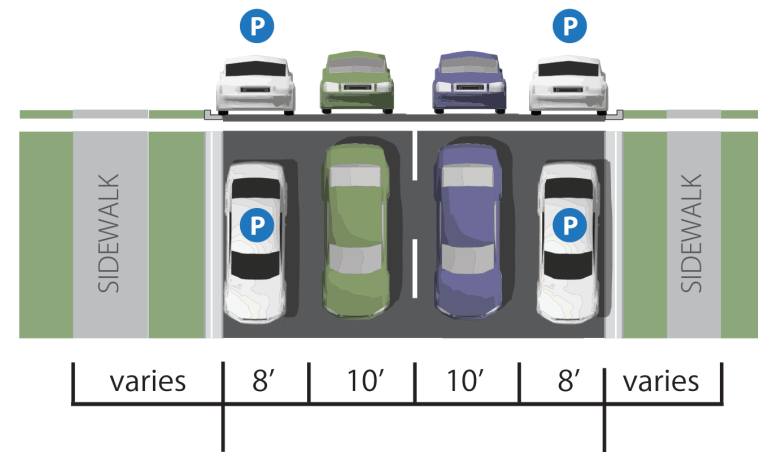


Figure 6-22. Lindsay Street Cross-Section, Existing

LINDSAY STREET  
Riverfront Parkway to Vine Street

PROPOSED

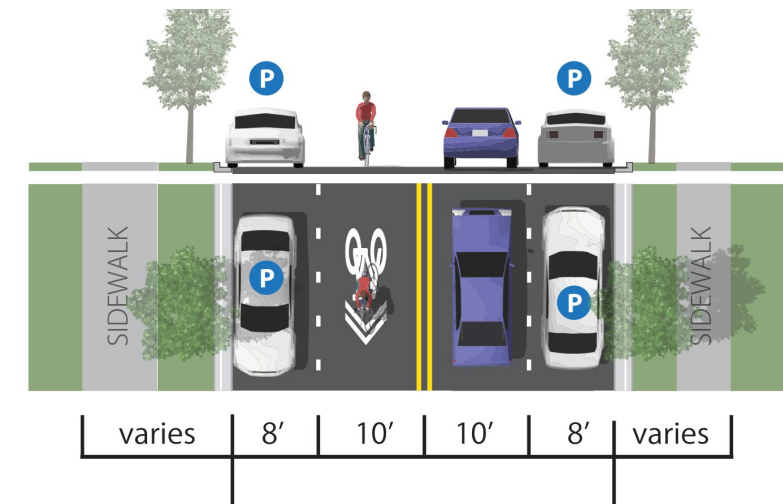


Figure 6-23. Lindsay Street Cross-Section, Proposed



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## Houston Street

Houston Street is currently a two-lane northbound roadway from Market Street to Riverfront Parkway with a combination of on-street parking and sidewalks. The portion of Houston Street north and south of 5th Street is constrained by a ramp along the west side of the roadway which provides access to 5th Street.

5th Street is a one-lane westbound roadway with undefined on-street angled parking. The existing residential complexes use the on-street parking to supplement the very limited off-street parking that is available. The section of the ramp north of 5th Street is closed off with bollards and not in use since Houston Street is one-way northbound. The narrow right-of-way and on-street parking along 5th Street provides limited opportunity for bi-directional traffic.

Recommended improvements to Houston Street include converting the existing one-way roadway (Figure 6-24) to a two-way roadway (Figure 6-25). All of the proposed improvements would be developed to fit within the existing right-of-way and would involve a combination of travel lanes, on-street parking and bicycle lanes where possible.

Within the retaining wall/ramp section, Houston Street is proposed as a two-lane roadway with a sidewalk on the eastern side. On-street parking will not be possible unless the ramp (providing access to 5th Street) and associated retaining wall are removed. Prior to and after this section, Houston Street would be a two-lane roadway with a combination of on-street parking and

HOUSTON STREET  
Riverfront Parkway to Vine Street  
EXISTING

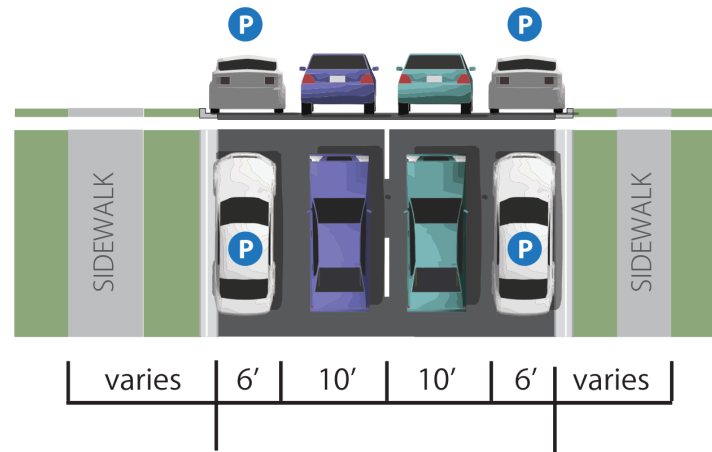


Figure 6-24. Houston Street Cross-Section, Existing

sidewalks. This improvement will provide better connectivity and allow for an additional entrance / exit from Riverfront Parkway to the University of Tennessee at Chattanooga.

Should a decision be made to remove the 5th Street ramps, the existing 5th Street could be converted to a T-shaped turnaround at Houston Street; however, on-street parking along 5th Street would need to be eliminated. Should the current configuration of 5th Street remain, the ramps would be reopened and developed as right-in / right-out movements onto 5th Street from Houston Street with a

HOUSTON STREET  
Riverfront Parkway to Vine Street  
PROPOSED

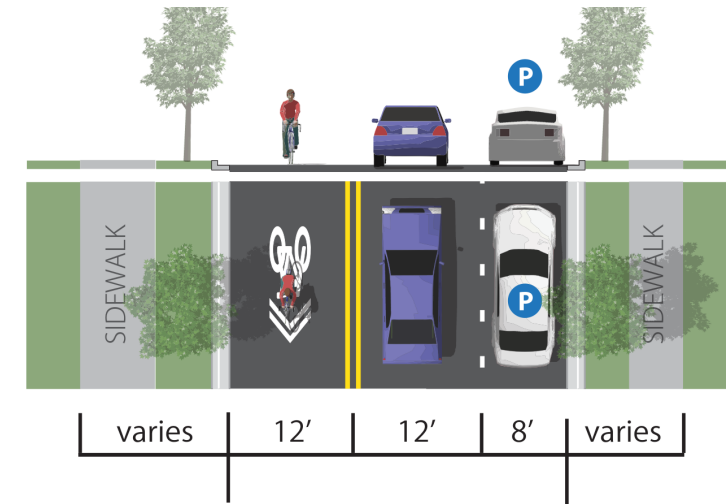


Figure 6-25. Houston Street Cross-Section, Proposed



TRANSIT

The 3rd and 4th Street corridors currently carry numerous CARTA transit routes, primarily due to 3rd Street’s connection to the east and its status as a main street through many of Chattanooga’s neighborhoods. The potential of transit as a key mobility strategy along both 3rd Street and 4th Street will require ongoing coordination between the City of Chattanooga, CARTA and major employers and organizational entities in the area, but the design of the streets can nonetheless set a critical foundation for incorporating transit along the corridor.

Currently CARTA operates fixed-route bus service along the corridor but has few, if any, passenger amenities (i.e., shelters, information signs or kiosks, or general wayfinding) at existing stops. CARTA also operates the Moc shuttle (Route 14) which currently serves the University of Tennessee at Chattanooga area as a campus circulator (Figure 6-26), with ten minute average headways and every third run of the service connecting directly to the downtown central business district.

Changes to the configuration of 3rd Street, 4th Street, and Riverfront Parkway may affect vehicle carrying capacity. Improvements to the transit service in the area can be well-positioned to absorb travel demand in the corridor. This is especially true for certain kinds of short trips between complementary land uses and trips to offset the need for peak-period travel.

The spacing of major destinations (downtown, the University of Tennessee at Chattanooga, the Siskin and Erlanger hospital district) along the corridor suggests that 3rd Street can serve as a particularly important transit spine. To reinforce this connection, enhancements to improve the transit rider experience should be part of the overall design for the corridor.

Design for the corridor should consider its inherent potential for enhanced transit service to connect these key corridor destinations. This includes a primary route alignment along 3rd Street and, depending on feasibility and long-term CARTA plans for service development, an alignment on a new Riverfront Parkway or on a reconfigured 4th Street. Potential station or enhanced stop locations are shown in Figure 6-27.



Transit Stops and Amenities

Sufficient space should be provided along the corridor for bus stops, even if only for select stops at key locations, to improve the passenger experience and encourage additional ridership. CARTA should expand the real-time information displays that it currently uses on downtown routes along the 3rd and 4th Street corridor and should work with employers and other corridor businesses to distribute real-time mobile applications, display screens, and other technology. The future street design for the 3rd and 4th Street corridor should allow space for these facilities and maximize ways to incorporate transit service information for riders so that the corridor can achieve its potential as a transit link.

Bus Bays for Layover Stops

CARTA has expressed a preference for bus bays along key corridors so that heavy passenger loading activity does not disrupt

regular traffic operations and so that drivers have designated locations for short breaks, brief layovers, or pauses in runs.

There are different ways that the corridor design could accommodate these. One approach currently used is to substitute on-street parking with bus stops, as CARTA has done on Martin Luther King Boulevard. These might also be designed as far-side bus stops with dedicated bays in the traveled way that allow buses to pass through an intersection to load and unload passengers, even if layovers occur somewhere else.

Enhanced Transit Operations

Numerous stakeholders discussed the extension of the CARTA Electric Shuttle to the corridor, reflecting the popularity of that service in downtown Chattanooga where it connects CARTA’s north and south parking facilities. This potential transit option would benefit from the same capital investments that would enhance other transit services, such as

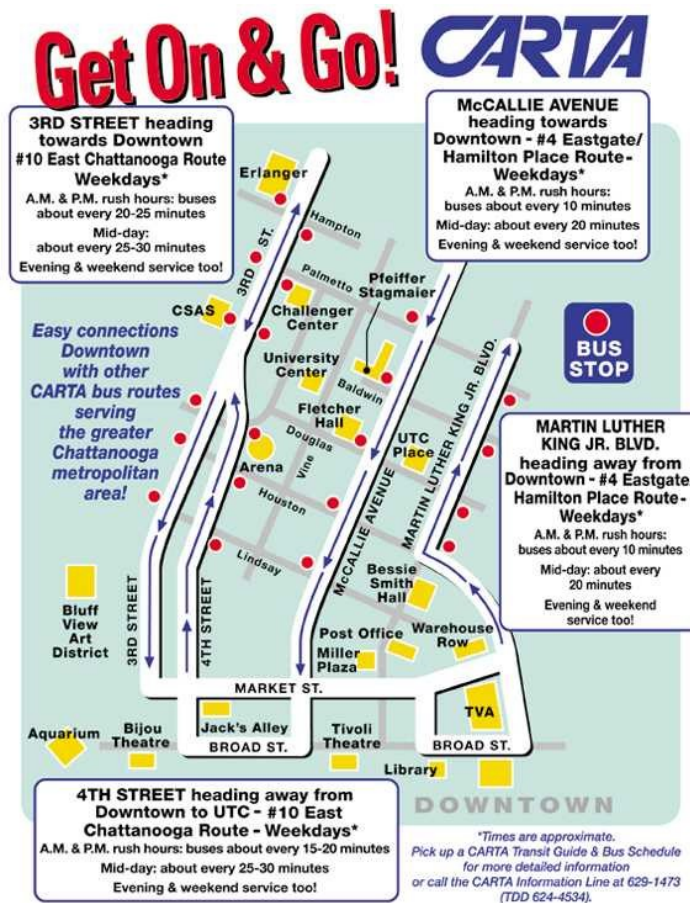


Figure 6-26. CARTA Mocs Express Routes

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signal priority, station amenities, and layover locations. The City and CARTA already have a well-understood transit stop design that requires a relatively modest amount of curbside and sidewalk space in the right-of-way.

The City of Chattanooga is currently advancing the installation of prioritized traffic signals along the Brainerd Road corridor to improve transit operations and reduce travel times. The City should explore the installation of prioritized traffic signals as part of the 3rd and 4th Street Improvements project.

## Premium Service Opportunities

There are other opportunities for transit along the corridor that are either being studied separately or would be addressed in parallel efforts. These opportunities should be considered as part of the future transit enhancements in the corridor.

### Enhanced Bus Service

The City should work with CARTA to develop service (that can evolve over time) along the 3rd and 4th Street corridors to provide faster, potentially limited stop service with similar operating characteristics to bus rapid transit

(BRT). Given the right-of-way constraints on much of the 3rd Street corridor, this service should be designed to operate in mixed traffic and not within a dedicated guideway. Design approaches for the service should include enhanced stops, which may feature passenger waiting areas and off-board ticketing machines, strategic design of intersection geometrics to accommodate transit vehicle turns, and curbside design that allows flexibility in stop placement (especially near-side or far-side stops at intersections).

## Rail Transit Connections

The City's ongoing studies of rail transit potential have focused on repurposing existing rail corridors lying primarily to the east and south of the 3rd and 4th Street corridors. The design of the 3rd and 4th Street corridor should support the City's ultimate vision of providing a connected bus and rail transit system. Depending on the type of rail transit vehicles that may be used, design should allow for sufficient space for rail stations in or adjacent to the right-of-way, which will likely include ramps to elevated platforms.

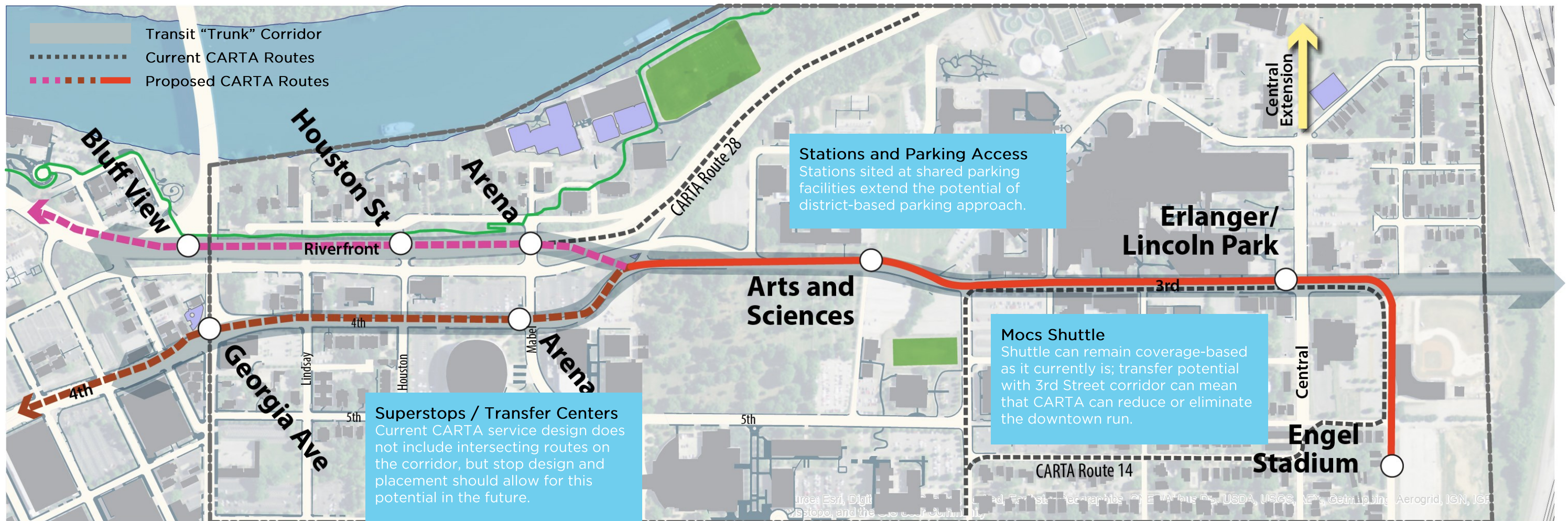


Figure 6-27. Corridor Transit Recommendations

## BICYCLES

Bicycle accommodations are an important component of providing a full array of multi-modal options within the 3rd and 4th Street corridor. Within the corridor, there currently is only one shared bicycle lane marking on 3rd Street near Hampton Street and the only off-road facility is the Tennessee Riverwalk, located to the north of Riverfront Parkway and along the Tennessee River.

During the initial stakeholder charrette, students from the University of Tennessee at Chattanooga voiced a desire to be able to bike into the downtown area from the University, but cited the lack of a dedicated bicycle facility connecting these two areas. According to the students, bicyclists who currently venture into downtown are using either Vine Street or Oak Street. Neither have a dedicated bicycle facility, but both are lower speed and lower volume roadways which make better routes for bicycling.

The toolkit for on-road bicycle facilities has expanded in recent years from traditional shared lane markings for low speed and low volume roadways and conventional bike lanes, to provide higher end facilities such as buffered bike lanes and separated bike lanes (Figure 6-28).

Buffered bike lanes provide a painted buffer along either the vehicular travel side, parking side, or both, and are fairly inexpensive to implement if there is available right-of-way. Separated bike lanes are the highest standard for on-road bicycle facilities. Separated bike lanes can either be one-way or two-way and are similar to buffered bike lanes where a buffer is created between the bicycle traffic

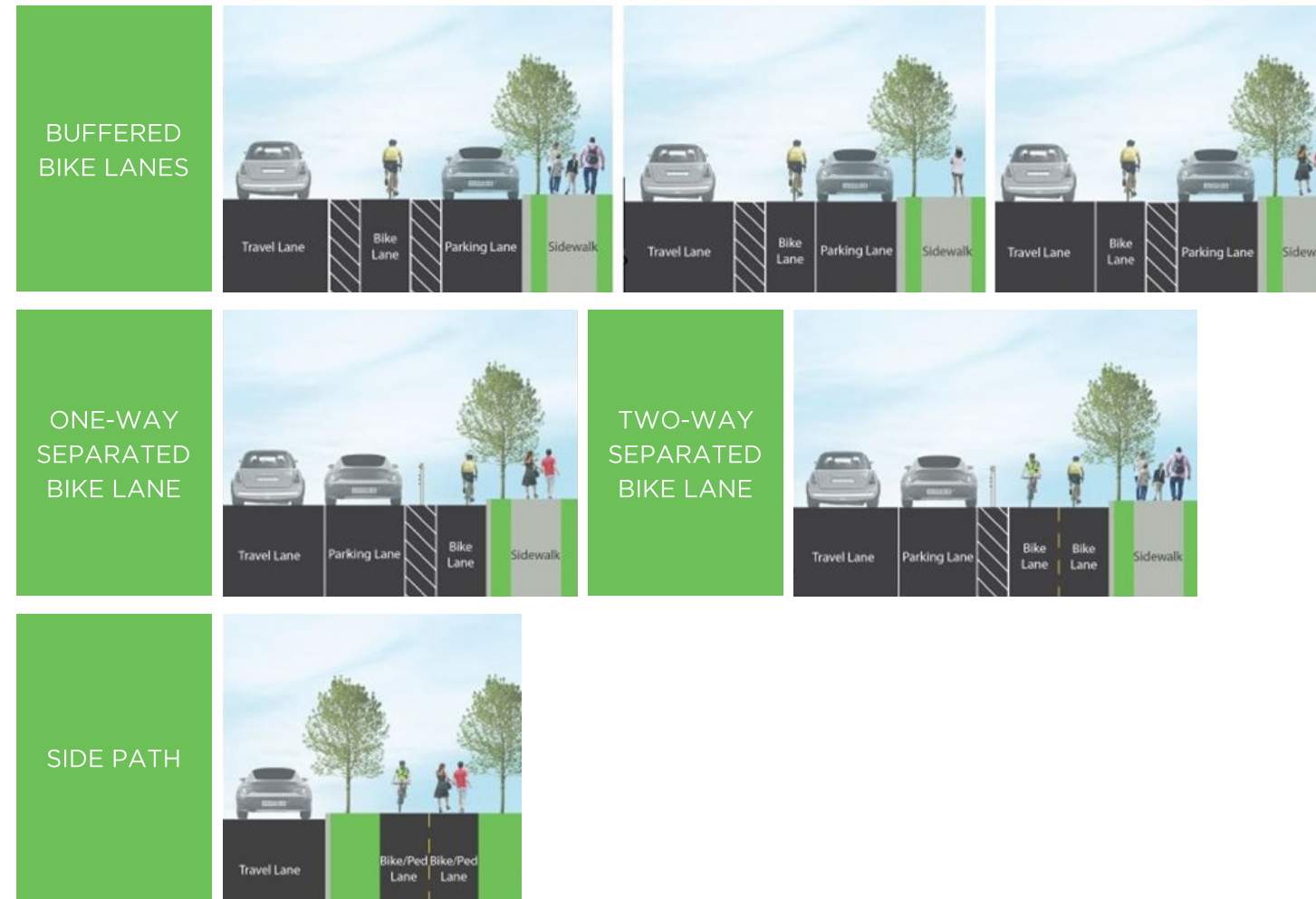


Figure 6-28. Alternative Bicycle Facility Options

and vehicular traffic or parking, but the buffer is enhanced by physical protection.

Protection options can range from lower cost alternatives, such as flexible delineators, to an extruded curb, raised delineators or a raised hardscape or planted separator, which are higher cost alternatives. An example of a separated bike lane which was recently implemented on Broad Street, is shown in Figure 6-30.

An alternative to an on-road facility is a sidepath, which functions like a greenway, but is physically closer to the roadway, where both pedestrian and bicyclists share the facility in a

two-way operation. One key consideration is that bicycle facility treatments at intersections reflect the type of facility provided on the associated roadways.

At the design charrette and public meeting, there was little comment from the public and stakeholders on the type of bicycle facilities desired, nor was there substantial discussion where bicycle facilities should be included on specific roadways. As a result, the recommendations included in this masterplan are based on right-of-way constraints and knowledge of projected traffic operation throughout the corridor. The City has

indicated their facility of choice is a one-way separated bike lane as there are less design complications at signalized intersections and at the termini of the facility, as opposed to two-way facilities.

When determining where a bicycle facility is to be installed for a specific project, an important factor is connectivity to other facilities and destinations in the area. Based on the *Chattanooga Bike Implementation Plan*, the proposed east-west facilities within or near the study area (Figure 6-29) are as follows:

- Two-way separated bike lane along Riverfront Parkway from Georgia Avenue to East Aquarium Way.
- Conventional bike lanes along Riverfront Parkway from Georgia Avenue to the east.
- Conventional bike lanes along 5th Street from Mabel Street to the east.
- Conventional bike lanes along Vine Street and Douglas Street to Georgia Avenue.
- Two-way separated bike lane along East Martin Luther King Boulevard from Georgia Avenue to the east.

Proposed north-south facilities within or near the project area (Figure 6-29) are as follows:

- Conventional northbound bike lane along Veterans Bridge (existing).
- Two-way separated bike lane along Veterans Bridge on the west side.
- Conventional bike lanes along Georgia Avenue from Veterans Bridge to East MLK Boulevard.
- Conventional bike lanes along Douglas Street from 5th Street to East Martin Luther King Boulevard.

# TRANSPORTATION IMPROVEMENTS

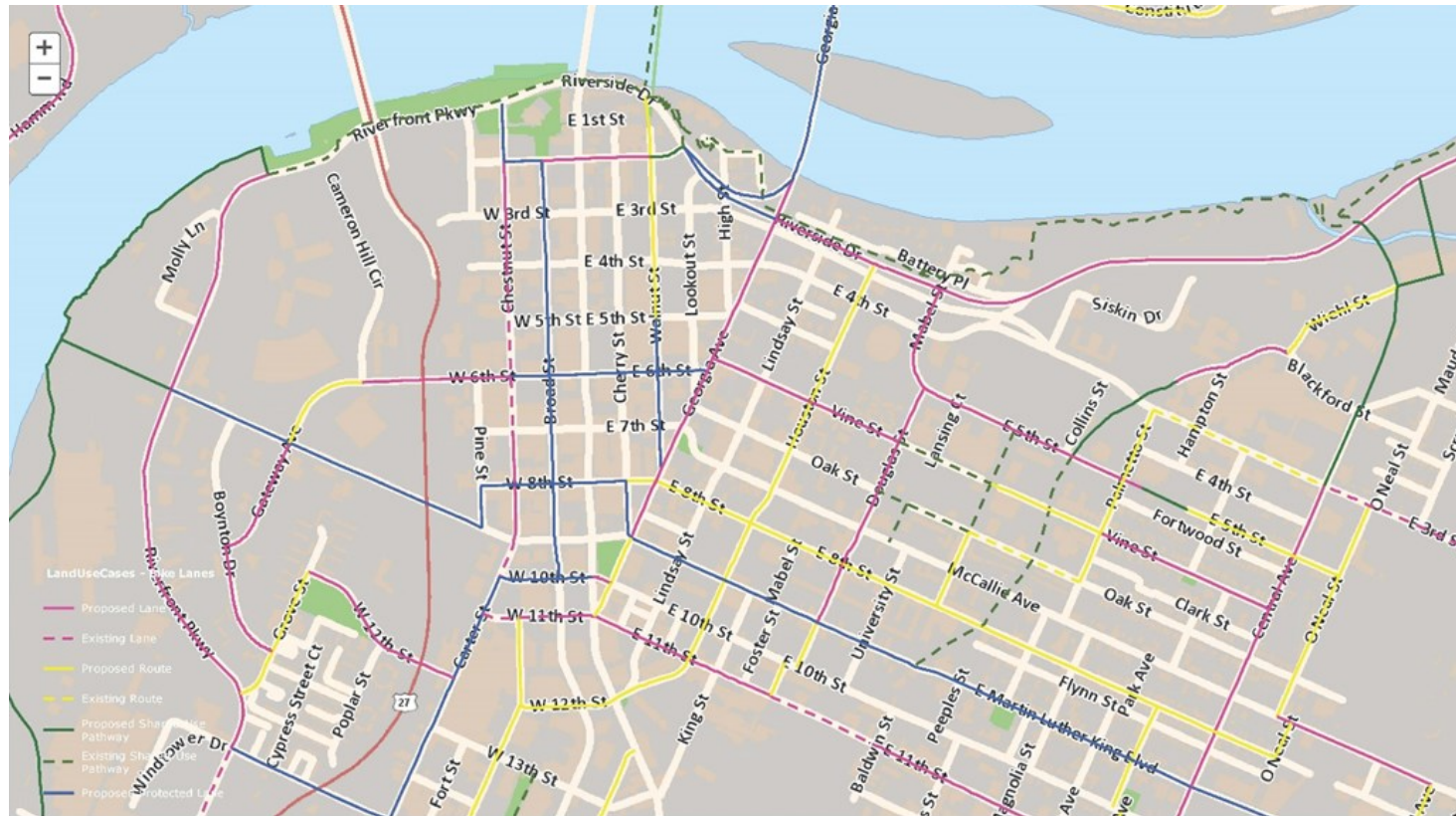


Figure 6-29. Bicycle Routes identified in the Chattanooga Bike Implementation Plan

- Existing University of Tennessee at Chattanooga Greenway from 3rd Street to East Martin Luther King Boulevard.

The corridors analyzed as part of the 3rd and 4th Street Improvements project for where bicycle facilities could be implemented included Lindsay Street, Houston Street, 3rd Street, 4th Street, and Riverfront Parkway.

## Lindsay and Houston Streets

Lindsay and Houston Streets are proposed to be converted from one-way to two-way. Given the right-of-way constraints, even continuous conventional bicycle lanes are not feasible due to the existing on-street parking and potential need for new left-turn lanes. Conventional bike lanes could be implemented with the loss of on-street parking between

intersections, but the stakeholders voiced clear preference for more parking opportunities.

If the proposed volumes and operating speeds of these roadways warrants it, shared-use markings could be implemented, if desired. The other proposed north-south bicycle facilities outlined in the Chattanooga Bike Implementation Plan appear to be better choices than the Lindsay and Houston Street corridors.

## 4th Street

4th Street currently has four lanes from Georgia Avenue to Lindsay Street and three lanes between Lindsay Street and Lansing Street. Many comments received during the design charrette and public meeting were

focused on turning 4th Street into a neighborhood street and diverting more of the through traffic, specifically truck traffic, onto Riverfront Parkway. Given the right-of-way constraints, even continuous conventional bicycle lanes may not be feasible along 4th Street.

Like Lindsay and Houston Streets, if the proposed volumes and operating speeds warrant it, shared-use markings could be implemented, if desired.

## 3rd Street

3rd Street between Lansing Street and Central Avenue currently alternates between three and five lanes within the study area. A one-way separated bike lane may be feasible in certain portions of the corridor. There is a potential pinch-point at the Chattanooga School for the Arts and Sciences that will need to be studied further during later phases of the project.

## Riverfront Parkway

Riverfront Parkway has the most available right-of-way of any of the corridors within the study area. Even under the four-lane concept for Riverfront Parkway from the east project limits to Georgia Avenue, one-way separated bike lanes can easily be implemented. In fact, additional width may exist to provide a raised, planted separator that could also serve as biofiltration swale.

The connection point between the facilities on Riverfront Parkway and 3rd Street will need to be determined after a specific roadway option is identified. Connections between the proposed bicycle facilities on Riverfront Parkway and 3rd Street with the various

bicycle facilities in the area, both existing and proposed, will also be explored.

## Greenway

A direct connection from the University of Tennessee at Chattanooga Greenway to 3rd Street will need to be analyzed during future phases of the project, as it currently runs under 3rd Street via an underpass. In addition, the proposed extension of the greenway from 3rd Street to the Tennessee Riverwalk will also need to be explored as part of a comprehensive bicycle network.

These proposed connections will help to create a well-connected bicycle network that will serve numerous destinations, both within and outside the study area.



Figure 6-30. Separated Bike Lane (Broad Street)



## PARKING

As an eastward extension of downtown, the 3rd and 4th Street corridors serve a moderately high-density built environment with a mix of residential, office and institutional land uses. The dominant land uses along the corridor are institutional facilities affiliated with the University of Tennessee at Chattanooga and the Siskin and Erlanger hospital campus, including the many government and civic office land uses located nearby. Churches, non-profit organizations and social services, and small-scale commercial uses are also common land uses in the area. Residential neighborhoods — featuring many multi-family buildings with limited off-street parking — extend from Houston Street and Lindsay Street east to Central Avenue.

Throughout the planning and design charrette process, parking was a frequently-cited concern among area residents and stakeholders. The University of Tennessee at Chattanooga owns and operates a system with over 30 lots and garages and over 4,000 parking spaces. In addition, on-street parking (managed by the Chattanooga Parking Authority) and numerous private off-street facilities (most not available for public use) serve a majority of the demand, but do not meet the growing parking needs of the University of Tennessee at Chattanooga community. The Fort Wood neighborhood east of the University of Tennessee at Chattanooga campus is Chattanooga’s only neighborhood with a resident parking permit program, initiated in part from neighborhood concerns regarding the spillover parking from the University.



Changes to the roadway capacity along the 3rd Street and 4th Street corridors must keep parking in mind, primarily due to the high level of commuting to the University of Tennessee at Chattanooga and other nearby destinations. Parking has direct impact on the overall operations of the 3rd Street and 4th Street corridors in that it potentially adds travel demand — from motorists circling through the area in search of parking to vehicle queues and congestion related to peak-level access of parking facilities. A consolidated parking strategy for the area is a key factor in ensuring that the corridors serve travel demand safely and efficiently.

The sites shown in [Figure 6-31](#) are not currently shared parking facilities, although discussion with stakeholders and members of the public identified these and other potential candidates for future parking. Addressing parking management from a district-based approach will more efficiently serve the overall corridor’s parking needs, allowing for shared use of the same facilities and a greater amount of service provided for the same infrastructure investments. This coordinated approach should also include the use of traffic signal coordination and wayfinding to promote alternative access to parking and ensure that the 3rd and 4th Street corridors continue to meet travel demand.

In addition, the economic development study for the 3rd and 4th Street corridor identified the potential development of a multi-story, shared parking garage, along with office and retail space, and the incorporation of recreational facilities on the upper level in the current location of the CSAS athletic field.

## Additional On-Street Parking

Changes to the cross-sections, especially on Riverfront Parkway, will likely yield additional space for on-street parking. This change offers an important asset for the overall corridor area, especially for the University of Tennessee at Chattanooga, in that it increases supply of short-term visitor parking and allows existing off-street facilities to be repurposed for other needs. It also provides convenient parking for new commercial land uses in the area that may result from corridor redevelopment and reduces reliance on providing on-site parking to meet expected parking needs.

## Wayfinding for Parking

Many private employers in the corridor provide their own parking, although several of these (University of Tennessee at Chattanooga, Siskin, and Erlanger) are facing constraints and are currently exploring new sites for additional parking. A shared system of parking that allows joint use of facilities might help to forestall the need for new parking facilities to be constructed. At a minimum, such a shared system would help to ensure that new parking is used at greater efficiencies.

A key strategy to achieving this is implementation of a unified wayfinding system that serves the following functions:

- Informs commuting and visiting motorists of parking locations
- Provides availability information in advance of decision points
- Identifies alternative parking locations

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- Guides users throughout the transportation network to reach alternative parking locations

Wayfinding for parking could be incorporated into the larger recommendation of development and implementation of a city-wide wayfinding system.

## Management of Private Lots

In past planning efforts, private parking owners (especially major employers) presented with the idea of opening parking to public use would express concerns over maintenance and security of their facilities.

The City should engage a third-party entity to offer management services to private facilities to expand overall parking supply for the area and update informational materials to help inform potential customers of available parking resources.

In other cities, third-party agencies, which may be public or private organizations, have developed successful arrangements with private facility owners for shared parking use. Fort Lauderdale is one such example, with shared agreements between the city's parking authority and one government agency (the Broward County School Board) and a private

parking property manager (the Las Olas Company). The third-party organization provides maintenance services, including security, cleaning, enforcement of agreed-upon time limits, and basic facilities maintenance, to the County School Board and collects customer payment for using the facilities. In exchange for providing these services, the Las Olas Company collects a portion of the revenue that the public parking generates. Varying levels of management services are offered for different amounts of revenue collected.

## Mobile Technology

Incorporating the same equipment and mobile payment option throughout the area creates a uniform parking and enforcement environment. The Chattanooga Parking Authority currently uses the ParkMobile payment system. The benefits to neighbors and visitors include less frustration and a more pleasurable parking experience in the public and private sectors.

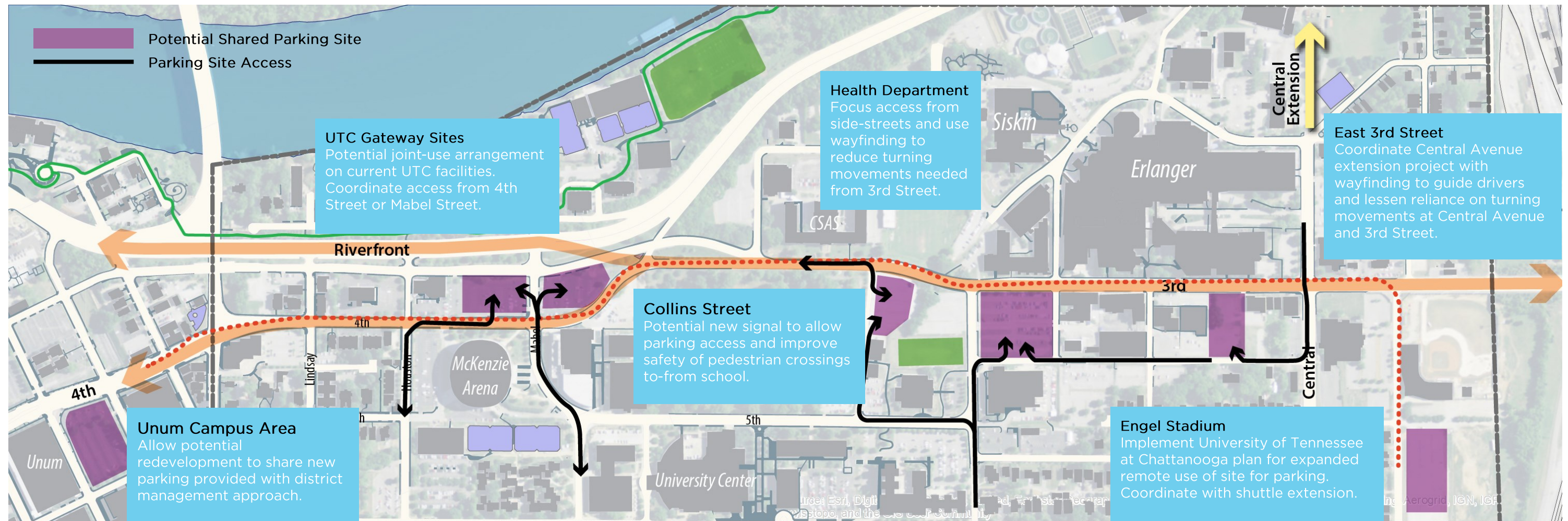


Figure 6-31. Corridor Parking Recommendations

GREENWAY

The proposed extension of the University of Tennessee at Chattanooga Greenway would connect the existing greenway through campus with the Tennessee Riverwalk along the route proposed when the greenway was originally constructed. This connection was not built in the past due to a lack of funding.

This greenway extension would provide a more direct, safer connection for greenway users than the current connector, which follows existing sidewalks along 5th Street. The extension is proposed as a multi-use path consistent with the current University of Tennessee at Chattanooga greenway design, which consists of an eight- to ten-foot wide concrete path, signage, lighting and landscaping.

The existing greenway utilizes low level bollard lighting through the University of Tennessee at Chattanooga campus, due to the amount of ambient light coming from the existing buildings and street lights adjacent to the path. Pedestrian pole lights will be required in remote wooded areas of the proposed extension where ambient light sources are not sufficient.

The extension (Figure 6-32) is proposed to begin at the current terminus adjacent to the University of Tennessee at Chattanooga Intramural Field behind the Challenger Center and between 5th Street and 3rd Street. The greenway extension would cross under 3rd Street at the existing underpass between the Chattanooga School for the Arts and Sciences' athletic field and Palmetto Street and follow the proposed improvements planned for connecting Siskin Drive to Riverfront Parkway.

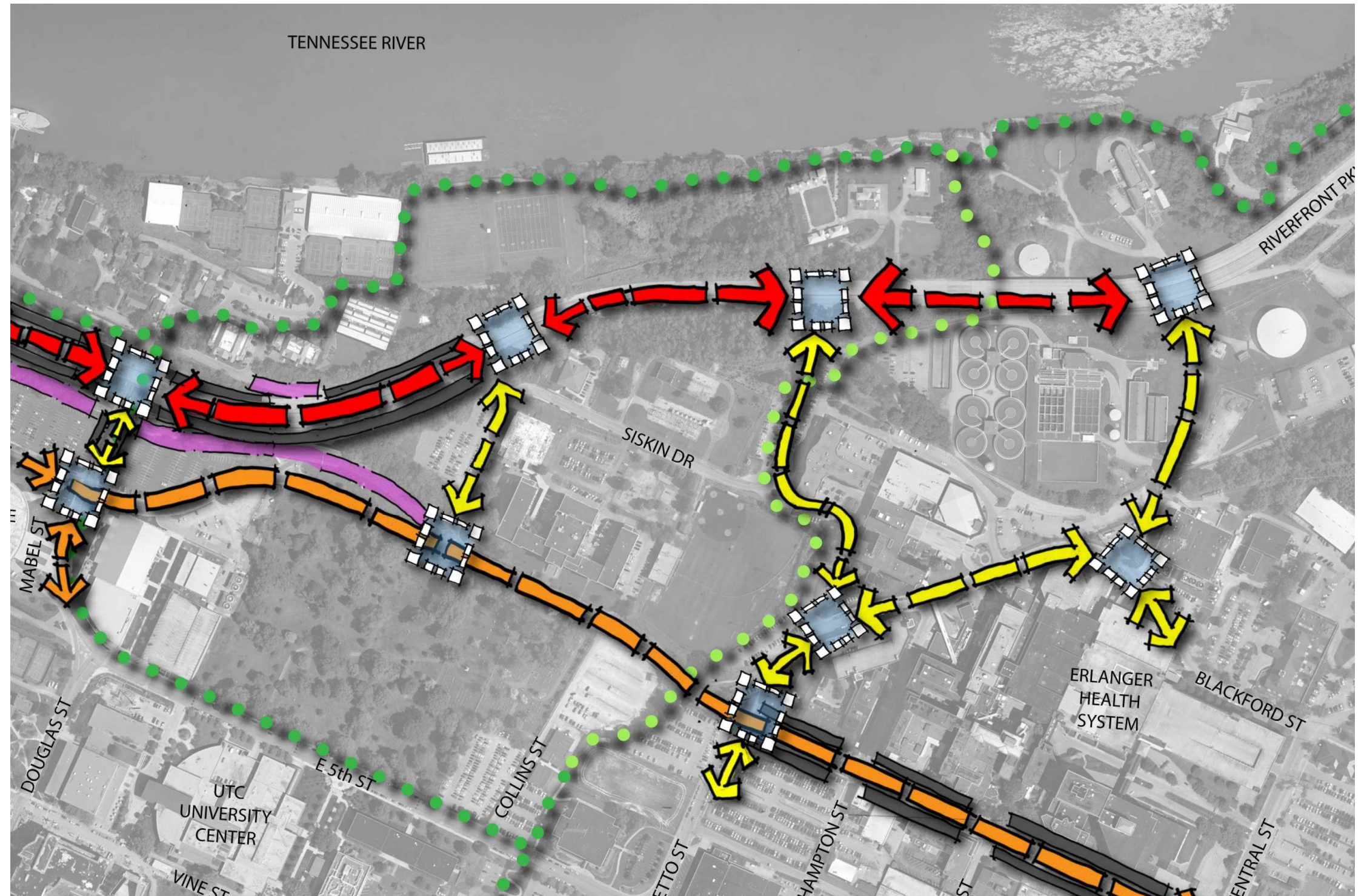


Figure 6-32. Proposed Greenway Extension

The path would then parallel Riverfront Parkway and cross under Riverfront Parkway at the existing underpass at the Tennessee American Water Company.

The greenway would then continue in a northeasterly direction towards the Tennessee River, where it would connect to the existing Tennessee Riverwalk.

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## WAYFINDING

Wayfinding helps people navigate from place to place and directs them to their destinations. Wayfinding can provide meaningful direction to motorists, pedestrians, and bicyclists alike. Properly designed, wayfinding provides visual directional cues as part of a coordinated and continuous system of signs that direct road users to key civic, cultural, visitor, and recreational attractions and other destinations within a city.

Existing wayfinding signing within the City of Chattanooga includes a broad range of sizes, conditions, and effectiveness (Figure 6-33). Within downtown, signing for the Riverfront area directs drivers to their desired destinations while the maps at Bike Share Stations provide pedestrian scale signage. In other areas, standard brown and white signage tends to be smaller, less visible, and in some cases, poorly maintained. Some of the existing signage no longer meets retroreflectivity standards, is obscured by vegetation, or is otherwise noncompliant with the MUTCD.

A recommendation of this masterplan is the development and implementation of a city-wide wayfinding system compliant with the MUTCD standards for community wayfinding signs for motorists, pedestrians, and bicyclists.

To sign all of the appropriate destinations within an area and keep the amount of instruction and sign clutter to a minimum, only attractions and public service facilities that generate substantial public visitations should be eligible. Attraction eligibility requirements should be developed in conjunction with the wayfinding system. Within the context of this study corridor, wayfinding could be beneficial for the Siskin and Erlanger hospital district, the Chattanooga Schools for Arts and Sciences, the University of Tennessee at Chattanooga, the Bluff View Arts District, and the Tennessee Riverwalk.

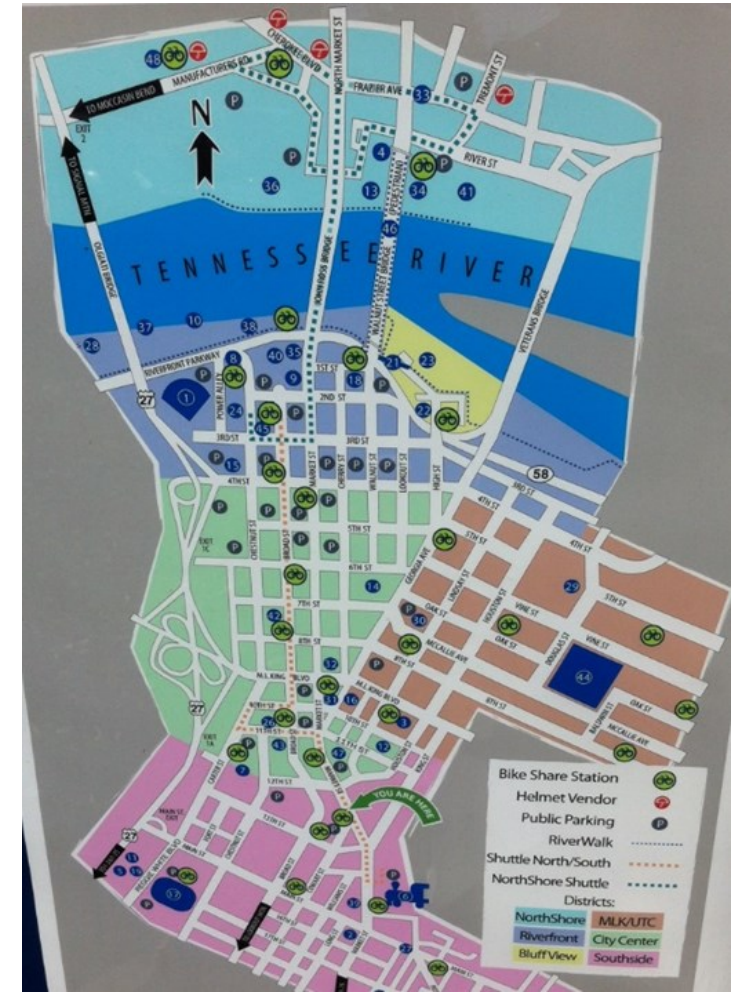
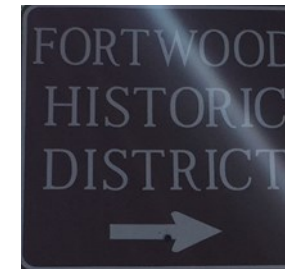


Figure 6-33. Existing Corridor and Downtown Wayfinding Signage