GENERAL RECOMMENDATIONS

GEN1: SHARED PARKING

A key finding of the study is that reserved and exclusive parking accounts for a majority of all parking downtown. Many of the facilities with high levels of reservation—especially facilities that are entirely reserved—feature relatively low levels of utilization during parts of the weekday and almost all of Saturday.

Overall, the study's recommendation is that downtown has too much of this individual reservation to allow its existing parking to be used efficiently. While recognizing that much of this parking is under private management and not subject to regulation or influence, CARTA/CPA, the City, and their public and private stakeholder partners should set broad policies and take specific action to encourage and facilitate more sharing of parking than occurs today.

This approach reduces the need for additional parking; facilitates dense, walkable areas; reduces extra traffic and congestion from users circling for parking; and often creates additional revenue streams for the parties sharing their facilities.

As a first step, CARTA/CPA or River City should lead the development of shared parking agreements, which could take a wide variety of formats, including:

» Leasing privately held parking directly and opening it to the public for transient parking use.

» Opening all or a portion of a facility to public use throughout the day or at certain days/times. For example, church parking can support other uses on most days except Sunday, and many UTC-owned spaces can support nearby evening uses outside of the working day.

» The City or CARTA/CPA providing services "in kind" (i.e. enforcement, maintenance, signage) in exchange for opening parking to the public.

» City or CARTA/CPA brokering deals between private entities to share their parking, i.e. a bank and restaurant employees. Limiting the pool of potential parkers can sometimes be more attractive to those who have excess parking, although this does require a level of additional enforcement.

There are several locations that would benefit from this approach, where underutilized and restricted parking has availability throughout the day. Specifically, these may include locations like:

» Currently restricted permit parking in Center City South garages (refer to recommendation CCS3 on page 68)

» UTC and other restricted facilities in the MLK area (MLK4, page 98)

» Unum facilities that could support evening and weekend demand (CCN3, page 58)

» The Sportsbarn garage in the Riverfront district (RIV3, page 76)

GEN2: PERFORMANCE-BASED PARKING SYSTEM

Performance-based parking uses price to match demand and achieve consistent availability in parking facilities. Adjusting rates distributes demand so that spaces that are less optimal are cheaper, while those that are right in the heart of activity are more expensive.

To be clear, **this is not a general recommendation that CARTA/CPA raise parking prices.** Key elements of a performance-based approach include the following actions:

» Focus on branding and messaging, and emphasize that the price will drop in many locations.

» Arrange meetings with stakeholders, including parking operators, merchants, and business owners in key locations.

» Set an availability target for both on- and off-street parking. For example, parking industry standards say that parking is "efficient" when on-street spaces are 85% full, and off-street are 90% full.

» Establish rate increment changes, for example $0.25. This would mean that the price could only increase by that amount each time there was an adjustment.

» Create zones for price changes.

» Encourage private facilities to participate in the system.

» Invest in quality signage and wayfinding that helps people find parking that meets their needs.

Specific areas that may benefit from this approach include:

» Martin Luther King Corridor (refer to recommendation MLK1 on page 96)

» Center City North (CCN1, page 57)

» Center City South (CCS2, page 68)

» Riverfront (RIV1, page 75)

» Southside (SOU2, page 84)

This recommendation is closely related to GEN3 on the following page, which defines detailed criteria for taking action on parking regulations to ensure availability and efficiency. Overall, the study recommends that CARTA/CPA use a performance-based system to evaluate parking utilization and demand and establish thresholds for adjusting price or other forms of regulation (such as time limits) accordingly.

With any adjustment to parking regulations it is important to collect data to understand their impact, and can be even more important to report that back to the public. This could be as simple as taking a peak parking count before and after implementing changes. A simple one-page flier or web announcement can report how parking patterns have changed in response to regulatory changes, and what next steps might be.

Based on the results of data collection, the study recommends that CARTA/CPA adjust prices on its on-street spaces to match demand. As the program rolls out, these adjustments should not be too frequent to avoid confusion: six months or a year are suitable initial increments between price changes. The table below outlines suggested thresholds and procedures for CARTA/CPA to use in adjusting pricing and regulations.
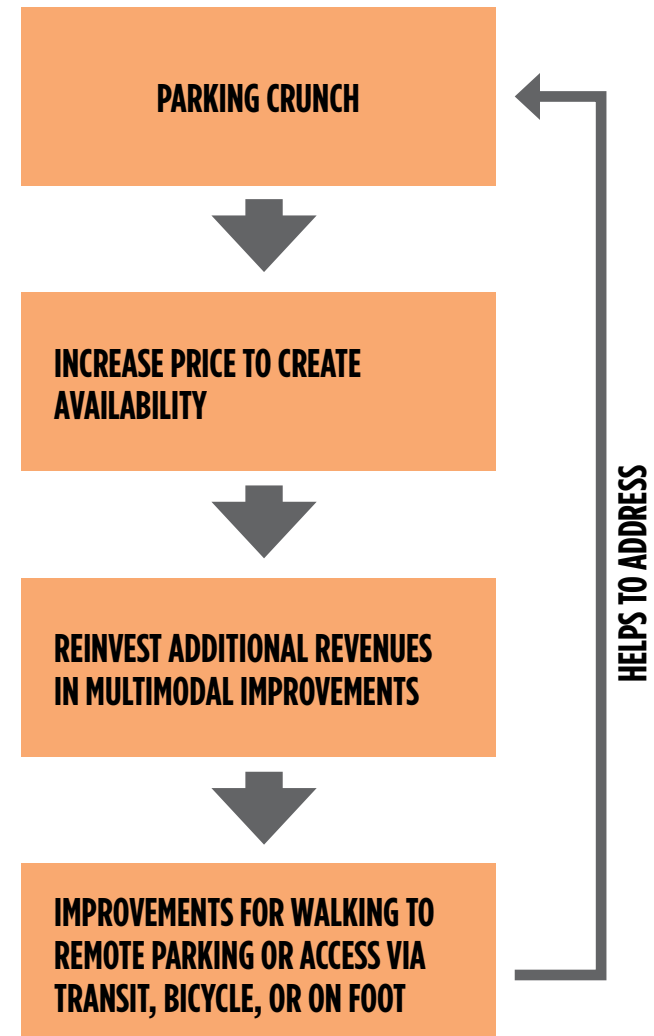
Utilization Level	Below 60%	60 - 75%	75 - 85%	85 - 90%	Above 90%
Action	Reduce or eliminate price	Flag this block length for consideration	None required	Flag this block length for consideration	Increase price
Details	Underperforming parking could be more efficiently used; price may not be needed to manage availability	If consistently underutilized, reduce price.	This is an efficiently utilized parking resource	These spaces are valuable, and the price may need to increase to create availability.	When fewer than 1 in 10 spaces are available, access is limited and users report frustration.
Procedure	Potentially switch to time limits to avoid spillover (particularly in residential neighborhoods)	CARTA/CPA takes monthly or quarterly utilization counts. When four consecutive block lengths are at or below this level for six consecutive hours, CPA recommends price reduction for that area.	CARTA/CPA takes monthly or quarterly utilization counts based on findings of the study data collection effort and monitors block lengths in this range to understand trends.	CARTA/CPA takes monthly or quarterly utilization counts. When four consecutive block lengths are at or below this level for six consecutive hours, CPA recommends price reduction for that area.	CARTA/CPA takes monthly or quarterly utilization counts. Recommend increase in price for at least three consecutive block lengths.

GEN4: REINVEST FUNDS IN MULTIMODAL IMPROVEMENTS

Income from parking should support parking-related initiatives, which includes overall mobility. Every person who parks is on foot at some point during their trip, and for every person who chooses not to drive, another space is available for someone who needs it.

CARTA/CPA already represents a best practice in that the joint organization manages parking and transit together, allowing for coordination such as linking the free shuttle to parking facilities. Additional investments in the multimodal environment may include:

» Improvements to the pedestrian environment, particularly between key parking facilities and activity hubs (see Recommendation SOU1 on page 83). This may include sidewalk widening, lighting, benches, curb ramps, etc.

» Enhancing the environment for people on bicycles, including working toward a complete network of designated on-street bike lanes, secure bicycle parking, and bicycle repair stations.

» Event management materials as necessary, such as temporary signage or enforcement

» Funding study and/or operations of additional CARTA shuttle or transit routes

» Real-time availability indicators built into directional signage for large parking facilities.

PARKING CRUNCH

INCREASE PRICE TO CREATE AVAILABILITY

REINVEST ADDITIONAL REVENUES IN MULTIMODAL IMPROVEMENTS

IMPROVEMENTS FOR WALKING TO REMOTE PARKING OR ACCESS VIA TRANSIT, BICYCLE, OR ON FOOT

HELPS TO ADDRESS

GEN5: POTENTIAL TRANSIT SERVICE ENHANCEMENTS

CARTA has had long-term plans for reorganizing its route system around the future development of a central multimodal passenger facility; this should present multiple opportunities for changes to transit service that can help to address current parking needs and provide access from high-parking-demand areas to remote parking supply:

Although the study remains neutral to specific transit technology and vehicle types and this section is intended to discuss transit service connections in a broad sense, it is important to note that CARTA's Electric Shuttle service has been highly popular to riders throughout its existence and was frequently mentioned during stakeholder discussions as a desirable form of transit connection. This is due largely to its lack of a rider fare and its high frequency. While shuttles may be appropriate to serve some of the specific transit connections discussed in this section and later in the study, the study speaks broadly about transit and does not draw material distinctions between the Electric Shuttle and regular fixed-route bus service. Either could be used to make key connections, provided that the service is attractive to parking customers so that they choose more remote parking locations.

It is important to note that CARTA is currently limited in its ability to pilot new service without direct financial contributions to fund it—the agency provides service for the larger Chattanooga urban area, not just downtown, and currently provides this service no additional surplus in its operations resources. Simply stated, adding transit service in one location, whether a new route or an increased frequency on an existing route, must mean reduction of service somewhere else in the system.

Through recommendations such as this one, CARTA is in a position to evolve into more of a holistic mobility service provider, and its management of public parking downtown already gives it a position of leadership over key elements of the downtown transportation system. However, it does not have sufficient resources to do this today, and is limited even in its ability to pilot short-term programs such as fare holidays, reduced-cost transit passes, or new shuttle connections.

CARTA/CPA should work with the City and its agency partners to build consensus on how it can provide these kinds of mobility services to address parking needs and understand what level of additional support would be needed to achieve this potential.
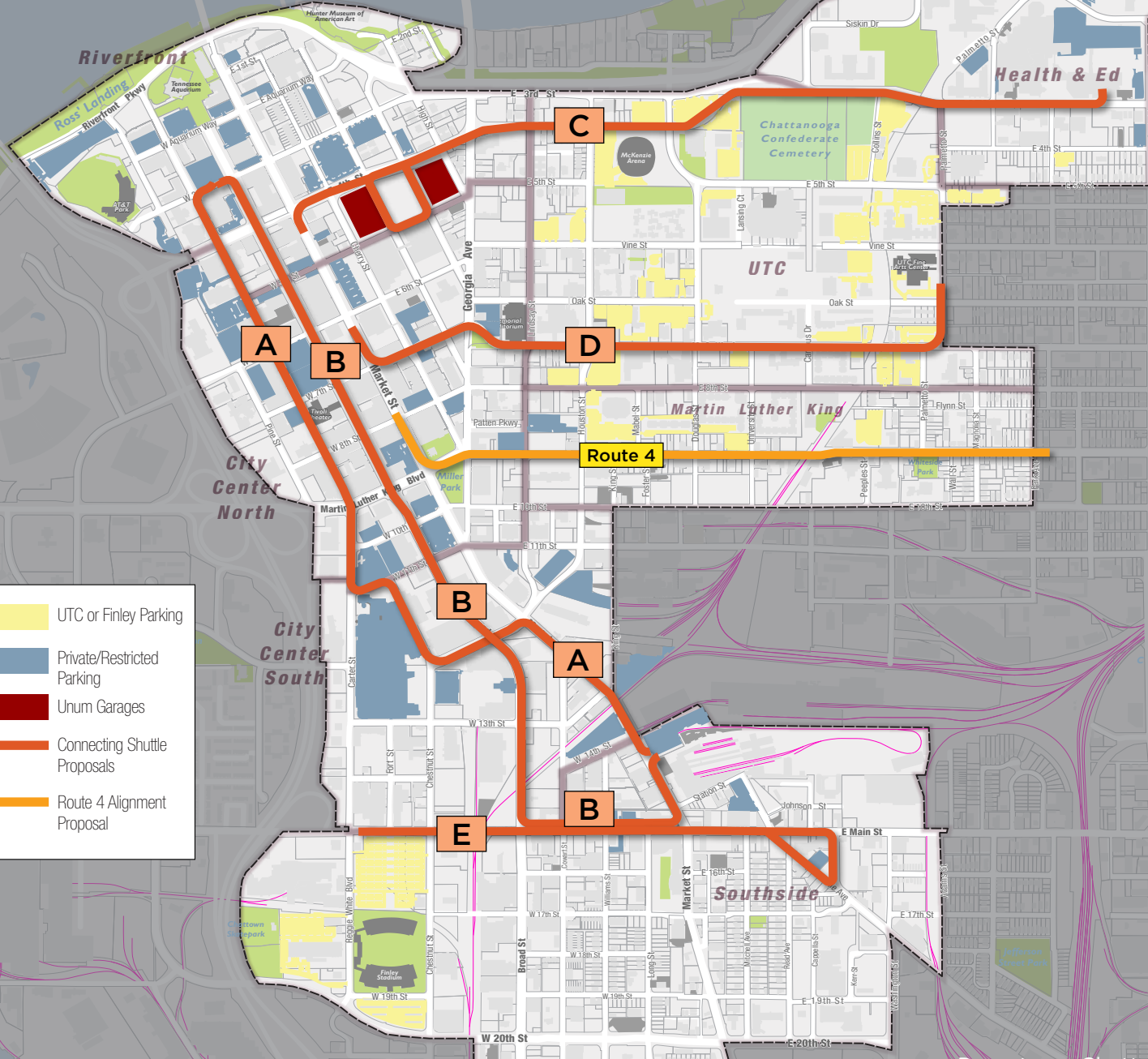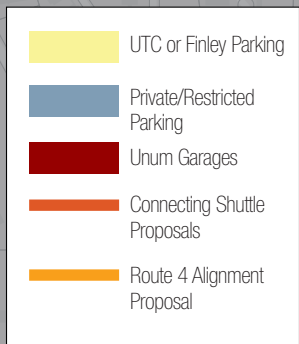
Although the concepts discussed in this section would significantly increase transit connections through the study area, they should be explored further as part of a comprehensive route system and operations analysis and considered from a broader perspective of all multimodal connections. Further steps to develop these concepts include:

» Funding study and/or operations of additional CARTA shuttle or transit routes

» Improvements to the pedestrian environment, particularly between key parking facilities and activity hubs (refer to Recommendation SOU1 on page 83 for a more detailed example of this concept).

» Enhancing the environment for people on bicycles, including completing downtown's network of designated on-street bike lanes, secure bicycle parking, and bicycle repair stations.

POTENTIAL TRANSIT SERVICE CONCEPTS

The study has explored a series of concepts for enhanced transit service intended to address critical parking need. Two of these are discussed in further detail in subarea-specific recommendations in Chapter 5.

The following pages discuss principal advantages and disadvantages to each of these concepts.

Legend:
- UTC or Finley Parking
- Private/Restricted Parking
- Unum Garages
- Connecting Shuttle Proposals
- Route 4 Alignment Proposal

CONCEPT A: CHESTNUT SHUTTLE

This operating concept moves the current Electric Shuttle alignment from Broad Street to Chestnut Street, placing it within closer reach of downtown's main hotel corridor and connecting this directly to the Convention Center (already a major source of the shuttle's ridership). However, the corridor is not readily sized to fit the shuttle, which would operate in mixed traffic in a single lane and would require added right-of-way (or removal of existing street facilities such as bicycle lanes) to fit larger-footprint enhanced stops. This route provides more direct service to underutilized parking in City Center South.

CONCEPT B: BROAD STREET SHUTTLE WITH SOUTHSIDE TURN

As most of the shuttle's alignment is currently on Broad Street through the City Center district, this concept continues that alignment and connects to the CARTA South garage through a turnaround alignment along Main Street. This is intended to provide service to a part of the Southside and Main Street corridor, although extending the shuttle south on Broad Street removes it from direct access to publicly accessible parking south of Martin Luther King, Jr. Boulevard. Riders not wishing to visit the Southside may find the indirect routing to the CARTA South garage to be inconvenient.

Concept A Tradeoff Analysis
Benefit for Parking Needs
Moderate: allows parking in remote locations for hotels and attractions; offers increased utilization of Southside garage (in City Center South district)
Advantages
Direct service to downtown hotels and Convention Center
Places alignment further from Market Street and reduces competition between services
Establishes a distinct route in overall downtown modal priority system (Chestnut for shuttle, Broad for bicycles, Market for fixed-route buses)
Disadvantages
With current street design/right-of-way, insufficient space for adding enhanced stops that are currently in use on shuttle
Reusing/relocating current Broad Street stops adds significantly to implementation cost

Concept B Tradeoff Analysis
Benefit for Parking Needs
Low: with southern realignment, shuttle provides less direct service to parking facilities than current alignment, though short run on Main Street may help to serve Southside needs by reducing travel time to remote parking locations
Advantages
Almost entire alignment on a single street, extending current Broad Street corridor
Provides additional service in Southside and may eliminate need for additional Main Street connections
Disadvantages
No direct service to parking or major destinations between 11th Street and CARTA South garage; still requires Market Street alignment to reach CARTA South
Longer alignment adds to operating costs

CONCEPTS C AND D: 3RD STREET AND MCCALLIE SHUTTLES

Envisioned as 'sister' routes to connect the Health & Ed and UTC districts to larger parking facilities in City Center that may have potential to be shared, these two routes may be feasible with support from organizations that currently fund CARTA shuttle service (the Route 14 Moc shuttle, funded by UTC) or that provide their own private transportation services (Erlanger). These would be fully public routes accessible to all riders, though with significant peak hour service increases to meet demand of remote parking customers. **Refer to the recommendation on Page 51** for more detail on this concept.

Concepts C and D Tradeoff Analysis
Benefit for Parking Needs
High: Provides multiple direct connections between high parking need areas (Health & Ed District and UTC central campus) to a larger supply in the City Center districts
Advantages
Streamlines current shuttles to two public fixed routes operating on key corridors
Allows increased mobility options in these areas beyond the parking customers for whom they are intended
Focusing southern UTC shuttle service on McCallie can allow CARTA to realign both directions of Route 4 revenue service to Martin Luther King, enhancing service on that corridor
Disadvantages
Changes current UTC service patterns around campus
New service requires additional operating funds

CONCEPT E: MAIN STREET SHUTTLE

The Main Street corridor in the Southside is a burgeoning commercial district that has a large concentration of nightlife and evening entertainment, but is removed for a large off-street parking supply. This shuttle service is envisioned to provide easier access to the Finley Stadium lots, a large supply of parking that is currently not fully used.

This service may be less important once other Southside recommendations are implemented (**refer to those beginning on Page 75**), and its lack of an apparent funding source means that operations will be challenging to implement.

Concept E Tradeoff Analysis
Benefit for Parking Needs
Moderate: Southside business and entertainment district has access to a broader parking supply at Finley Stadium lots, though this is only needed during specific hours
Advantages
Utilizes existing parking to serve a growing commercial district
Increases mobility options along Main Street corridor
Disadvantages
No immediately apparent funding sources for new capital requirements (added vehicles) or operations; Southside business district does not have the financial momentum or leverage of larger employers to the north
Part-time service only
Does not connect to CARTA South garage as proposed

GEN6: ELIMINATE TIME LIMITS AT CERTAIN PRICE LEVELS

Time limits tell parking customers that they need to leave a given location, and create frustration for both users and enforcement when there is demand to stay longer than time limits allow. Setting the price on spaces to match parking demand allows people to buy the amount and type of parking that they need, and price is a much more effective regulator of demand and availability than time limits that may not be able to respond to the purposes of parking in a particular area.

The study recommends that when price levels are increased beyond current rates that time limits in those same locations are eliminated. This allows price to be the sole regulator of how long parking customers stay and reduces the level of obligation that on-street parking customers face.

Technology improvements such as pay-by-phone services, already in use in Chattanooga, facilitate active downtowns by allowing people to extend parking time as necessary, for example, if a meeting runs long or they want to visit one more shop or restaurant.

Refer to Recommendations CCN1 (page 57), CCS1 (page 67), and RIV1 (page 75), which recommend locations where price increases may help to regulate use of space and provide availability in higher-demand areas.

This recommendation works closely with GEN3 (page 36), in which thresholds are defined for when price increases should be considered.

GEN7: PURSUE PUBLICLY ACCESSIBLE SUPPLY

In certain areas, many customers parking in Chattanooga have experienced a parking shortage. Although spaces may be available, they are often restricted to specific user groups, and the general public can access less than half of the 43,000 parking spaces in the study area.

In addition, downtown Chattanooga is growing. While the modeling associated with this study is a planning-level exercise, it does conclude that certain areas in greater downtown will need new parking, while others may need new publicly available supply. In other areas, there may be opportunities to consolidate parking as land redevelops.

To the greatest extent possible, new parking supply should be open to the public and integrated into the urban environment. This means that parking should not be restricted to certain user groups and instead should be available at market rates, which will be the most efficient use of new spaces. Moreover, retail, housing, or other active uses should wrap around new structured parking to maintain a healthy and vibrant urban environment.

OFF-STREET SUPPLY

This study includes a detailed assessment of six locations for new parking facilities, intended to function as shared public resources that support both private businesses (serving a role of parking for employees and customers) as well as the general public interested in visiting a destination. Even beyond these sites, **the study recommends that the City and CARTA/CPA set a policy that any new structured parking constructed in downtown will include at least some of its supply as shared public use.**

ON-STREET SUPPLY

In addition to the off-street sites that the study has explored, **the study also recommends assessing the potential for added on-street parking on key downtown thoroughfares, especially multi-lane streets that do not need their full traffic-moving capacity for the entire day.**

The study recommends that the City establish a program to provide businesses and property owners the ability to apply to have off-peak curbside parking. This is intended as a way to get better use out of the curbside space that is needed to accommodate traffic during peak times but not needed for that purpose during off-peak, and several locations that appear to fit this description, such as 4th Street in Riverfront and Market Street in the Southside, are located in parts of downtown with retail activity and high demand for convenient, short-term parking. The study did not perform traffic analysis that would determine full feasibility of this, but generally recommends that any locations the City determines to feasibly support off-peak parking in curbside lanes to be considered. The following could serve as criteria for such a policy:

» Off-peak on-street parking can be provided by request of businesses along a single block as long as at least 75% of existing property or business owners are party to the request.

» Off-peak on-street parking can be provided by City action if at least one lane per direction remains for general traffic in off-peak times and traffic volumes in that direction are 500 vehicles per hour or less. In all cases, the City will be responsible for collecting traffic data to make this determination.

GEN8: UPDATE TECHNOLOGY TO SUPPORT MANAGEMENT GOALS

Parking technology is changing and growing, and Chattanooga should capitalize on this to create a seamless user experience. For many recommendations, improved customer service is key. For example, in order to create a performance-based pricing system that matches price with demand, customers need to know where to find lower cost parking for long term stays. In addition, people parking don't mind paying a little bit more if the payment process is seamless, so Chattanooga's system should support multiple payment options. Specific recommendations for future technology include:

» Signage and wayfinding that incorporates real-time availability and pricing information for large parking facilities.

» Payment technologies that support multiple payment types, including cash, credit card, and mobile devices. This should include the option for secondary parties to sponsor parking, such as merchants purchasing parking for their patrons or parking gift cards.

» Online resources that provide real-time availability and pricing information to allow for trip planning.

» Ability to provide information on all facilities, including on-street, structured parking, and surface parking.

» In any implementation, allow a "grace period" for people to adopt new systems – for example creating a "first ticket free" policy when changing payment systems.

» Meeting with local stakeholders such as large employers, merchants, and residents as well as press releases ahead of any new technology rollout.

Beyond these immediate improvements, technology upgrades should facilitate improved management, which in turn will improve the parking experience for the user. Key considerations when implementing new technologies include:

» Data sharing and "open source" data in particular, as many connected devices can provide valuable information on how the system is working and adjustments CARTA/CPA and/or the City should make, as well as allowing technologies to integrate with one another.

» Back-end systems that are simple and user-friendly, so that existing parking staff can easily access needed information.

» Integration with existing systems, such as electric shuttle information, location information for bikeshare and/or other mobility systems, and potentially payment.

Overall, it will be important that the City use the goals of this study (or a set of newly defined goals) to guide the implementation and evaluation of any new technology related to parking and mobility. This will ensure that negotiations with vendors, evaluations of new ideas, and implementation of new systems have objectives are align with other citywide and local efforts.

A simple and complete signage and wayfinding system should easily guide people parking to resources that meet their needs. For example, employees may want to find lower-cost long-term parking, while visitors may be price neutral and simply want to get close to the front door. A parking information system should align with other mobility information systems (i.e. bus stops, bikeshare locations, pedestrian wayfinding) and consider the following elements:

Before arrival

» Online resources that indicate where key parking facilities are. This is particularly important for event management to help direct large numbers of parkers who may be unfamiliar with the system.

» Working with local businesses, transportation managers and associations, and event managers to link their information to a common resource that provides parking information, ideally on the CARTA/CPA website.

» Providing GPS-ready addresses that help drivers find parking facilities instead of driving directly to the front door of their destination.

At arrival

» Real-time auto-oriented directional signage at strategic locations to direct people to large facilities, such as CARTA North and South. These signs should incorporate both availability and price.

» Directional signage with a consistent look (i.e. font, colors, branding as Public) that directs people driving to other parking facilities. Signage should include at least general information on price ("discount" v. "premium") and should match signage at facilities.

» Signage at facilities that clearly designates public parking. For shared parking facilities that are restricted at certain times of day and/or privately owned, signage should clearly indicate when the parking is available to the public.

» Simple signage that is user-oriented and clear about what times parking is allowed, rather than focusing on when parking is restricted.

During stay

» Pedestrian-oriented signage that helps people who have parked return to their vehicles

» Parking information on printed materials. This can be distributed by local businesses as well as with parking tickets/warnings to help people find the resources they need.

This approach will help broaden the reach of the parking system as it helps people to understand how it works, and directs drivers to parking resources that may be located just a block or two away from a given destination. For example, in the MLK district, the CARTA North garage is a large parking resource within a five minute walk of many restaurants and the museum. Clearly providing a path for both people driving and walking to and from that facility will help increase awareness of that resource.

GEN10: CURBSIDE MANAGEMENT FOR EMERGING MOBILITY

As technologies change, Chattanooga's limited curbside space will become valuable in different ways than it is today. The growth of transportation network companies (TNCs) such as Uber and Lyft, expansion of bikeshare, the rise of online retail and its attendant reliance of goods delivery, and the character of land use and development in downtown will all put pressure on the curb in Chattanooga. A simple example from today is the increase in restaurant uses in the MLK district, which means more leisure visitors who may want to drive directly to the door no matter the price.

In addition, expected future transportation technologies will bring still further competition for curbside space. Autonomous vehicles, whether personal or shared, are broadly understood to facilitate front-door access that will rely more heavily on streets and curbsides than traditional off-street parking facilities.

The amount of curb space in greater downtown Chattanooga is not likely to change drastically into the future even as these technologies shift, and therefore it is important that the management of this limited resource is consistent with Chattanooga's goals and objectives for the downtown it wants. Priorities for the curb in the future may include:

» Building on and maintaining the database created by this study, which is a comprehensive understanding of curbside regulations.

» Prioritizing prime spaces for passenger loading, either for valet or rideshare services. These spaces can be used to incentivize efficient mobility choices, for example only allowing shared rides to drop off in primary spaces and requiring drive alone trips to use less convenient locations.

» Allowing flexibility, so that a space may be available for personal vehicle parking or truck loading during the day, but valet parking in the evening.

» Repurposing curbside parking lanes to serve transit or bicycle facilities that allow more people to move in a limited amount of space.

The City and CARTA/CPA should set the following policies in guiding how future curbside use in downtown Chattanooga is regulated:

» **Request trip information and data from TNCs to understand where dropoff and pickup locations are concentrated downtown.** This information should be used to plan for curbside locations where TNC loading is prioritized, and TNC passengers should be guided by signage and other wayfinding to these locations. This does not assume that these locations will take on all TNC loading activity, but is intended to help concentrate the activity in the most high-demand locations.

» **Prioritize centralized delivery of small freight.** Study the use of freight dropoff locker locations currently in limited use by online retailers and freight delivery companies; work with these providers to identify potential locations for package delivery to reduce the need for front-door delivery throughout downtown.

» **Consolidate special curbside uses to the greatest extent possible.** Examples include freight loading and passenger/valet loading zones in dining and entertainment districts. Regulations allowing freight deliveries in morning hours only can use these same curbside spaces as passenger loading in evenings, when businesses are open.

GEN11: EVENT MANAGEMENT

Special events create unique demands on the parking system. In addition to crowds trying to park in a concentrated location, there are often many visitors who are unfamiliar with the downtown parking system and extremely peaked demand.

CARTA/CPA currently coordinates with CDOT regularly on downtown events. Event parking should include:

»   Maintaining an online map of parking resources that event materials can reference. CARTA/CPA or a management company can update the map in real-time to show which facilities still have availability.

»   Designating parking facilities that can be used for event parking

»   Planning for disabled parking, potentially via valet

»   Temporary on-street directional signage

»   Enforcement/Police presence

»   Signage during an event, such as for facilities that are full

»   Advance sales of parking, separately but alongside ticket sales. Keeping the costs separate will allow people to choose more expensive, convenient parking or discount parking options. However providing the opportunity to purchase this in advance is an opportunity to manage access and help people plan.

»   Extending shuttle hours along established routes

»   Creating marketing materials that link existing CARTA bus routes and underutilized parking resources