



TOWN OF CARRBORO

NORTH CAROLINA

MEMORANDUM

DELIVERED VIA:  HAND  MAIL  FAX  EMAIL

DATE: November 8, 2013

TO: David Andrews, Town Manager  
Mayor and Board of Aldermen

FROM: Jeff Brubaker, Transportation Planner JSB

RE: Scope, issues, potential strategies, and next steps for completing a parking plan, including a request for Board feedback

The Board of Aldermen has, over the past several years, discussed parking issues on numerous occasions. This has spurred Board interest in completing a parking plan.

Per Section 15-292.1 of the Land Use Ordinance, once a parking plan has established the amount of a payment-in-lieu fee for parking spaces, developers in the B-1(C), B-1(G), and B-2 zoning districts can forego providing parking spaces by paying the fee. This will likely also result in changes to LUO provisions that currently excuse the users of existing buildings in certain locations from operating with little or no parking.

This memo outlines a parking plan geographic scope, a scope for data collection and analysis, stakeholder and public participation methods, parking issues that should be addressed in the plan, and potential strategies to address the issues. It also provides a ballpark cost estimate for completing the plan. Appendices include additional information on previous plans and studies, a map of the geographic scope, best practices, and other information.

For this meeting, the Board is asked to provide initial feedback and guidance on the parking plan ideas outlined in this memo. Based on Board feedback, a revised parking plan scope will be brought back to the Board at a subsequent meeting. At this meeting, staff expects to request that the Board consider authorizing staff to create and advertise a request for proposals (RFP) for consulting services to assist in completing the plan.

The expected deliverable of a parking planning process is a document that offers recommendations relating to the major themes of parking in Carrboro: demand, supply, management, enforcement, and user experience. Ideally, this document will offer a full toolbox with which to achieve equitable access to everyday destinations and special events for all residents regardless of their abilities and mode of transportation, chosen or necessitated.

## Geographic scope

Defining the study area, or geographic scope, of a parking plan is a necessary and important early step in the planning process. While downtown is the major destination and thus the focal area for trip attraction parking demand, there are some reasons to consider a larger study area:

- Policies implemented downtown may affect adjacent neighborhoods – for example, via spillover or costs that would result from developing new public parking areas.
- Parking space users live in all parts of town and beyond. Gauging their perceptions and attitudes about accessing and parking downtown (or other areas) will influence thinking about parking management strategies.
- The Land Use Ordinance (LUO), Article XVIII, requires parking for all uses in all areas of town. Recommendations from the review of this article potentially will pertain to all uses within town limits.
- Commercial areas outside of downtown, such as Carrboro Plaza and Willow Creek Shopping Center, also generate parking demand. However, anecdotally, they appear to provide an ample amount of parking. The application to develop the Lloyd property is also proposing a substantial amount of pooled parking, as well as a residential parking deck.
- The planning process may wish to target specific non-downtown areas of parking demand, such as the two (newly fee-based) Chapel Hill Transit park-and-ride lots.

With this in mind, the proposal is to have a three-tiered system, recognizing that the whole Carrboro community can play a role in the plan – but also acknowledging that the downtown area is a principal trip attractor.

1. **Focus area:** central business district, principal trip attractor, the same extent of the 2008 DCRP study area. If the plan demarcates zones and sub-zones as that study did, this would be a good base of comparison. The focus area is approximately two-thirds of a mile across, consistent with guidance on study area size.<sup>1</sup> This area would receive the most rigorous data collection and analysis.
2. **Impact area:** quarter-mile spatial buffer around the focus area; includes neighborhoods adjacent to downtown. This area could be impacted by policies and projects in the focus area. The impact area is approximately one mile across, consistent with guidance.
3. **Study area:** the whole town. This is the proposed geographic scope of the resident survey. (A visitor survey is also proposed to capture out-of-towners' opinions.) All residents (plus interested visitors) should feel welcome to participate in the process. LUO parking requirements affect all areas of town.

The downtown focal area is not intended to limit all detailed analysis and recommendations to only one area. Other areas may be candidates for supplemental studies, e.g. Chapel Hill Transit park-and-ride lots.

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<sup>1</sup> Sonoran Institute. (2013). Strategic Parking Management (Webinar – Aired September 18, 2013). <http://communitybuilders.net/webinars/strategic-parking-management/>

## **Scope of data collection and documentation**

Data collection – quantitative and qualitative – will be a critical part of any parking plan. Without it, uninformed debate occurs. A robust data collection effort will provide invaluable information and ensure greater participation and buy-in.

Below are major themes, public involvement activities, data collection activities, and other analyses

### **Major themes**

- Supply
- Demand
- Management
- Enforcement
- User experience

### **Public involvement activities**

#### *Parking and access charrette*

- Allows participants to collaborate on solutions to particular parking management problems

#### *Stakeholder interviews and input*

- Allows stakeholders to report specific parking issues/concerns and suggest remedies
- Could include representatives from the business community, nonprofit organizations, advisory boards, citizens, Chapel Hill Transit, Farmers' Market, Town staff, and others

#### *Public forums*

- Educate the community on best practices and case studies from other communities
- Possible forum topics
  - Downtown parking strategies for smaller communities
  - How the price of parking affects travel mode choices
  - Parking supply needs and financial analysis
  - Carsharing forum: carsharing, peer-to-peer carsharing, ridesharing, connection with transit

#### *Social media*

- Facebook page
- Twitter hashtag
- Wiki map – allows users to geolocate parking comments

## Data collection and analysis activities

It is essential that recommendations on parking management should be informed by data and analysis. The following are data collection activities that should be considered in the scope of the parking plan.

### *Parking audit*

Tiers: focus area, impact area, possibly special study areas such as CHT park-and-ride lots

- Process that records parking utilization or occupancy at a given point in time
- Can provide a rough estimate of parking duration
- Public and private lots
- Can be compared with the results of 2008 DCRP study
- See Appendix D for a list of the steps involved.

### *Targeted, detailed turnover studies*

Tier: focus area

- Logs exact duration of parking at each space and what destination motorists visited
- Can detect how often public parking lots are utilized for daily park-and-riding and other >2-hour parking durations
- Example: E. Weaver St. on-street parking space turnover study – June and October 2013

### *Customer/visitor survey*

Tier: focus area

- Could include Carrboro residents and visitors
- What mode do customers use to access businesses?
- If they drove or biked, where did they park?

### *Cruising for parking study*

Tier: focus area

- One study estimated that cruising for parking in a single, 15-block commercial district created an excess of nearly 1 million vehicle miles traveled annually.<sup>2</sup>
- Survey motorists upon arrival
  - How much time did it take you to find a parking space?

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<sup>2</sup> Shoup, Donald. (2004). *The High Cost of Free Parking*. Chicago: APA Planners Press, p. 353. Study is from the 1980s and focused on on-street spaces. Cruising could also be part of searching for off-street spaces if lots tend to be full.

- Did you have an idea of where you were going to park before you began your trip? Was there parking available at that first-priority location when you arrived there? In other words, did you find parking on your first try?
- If you did not find parking at this first location, retrace the path you took to find parking at another location.
- Could be subsumed in the customer/visitor survey
- Window survey of first car stopped at a red light
  - Ask one question: are you looking for parking?

*Survey of business owners/managers*

Tier: focus area

- Could be an update of the 2008 DCRP study questionnaire

*Resident survey*

Tier: study area

- Determine resident perceptions about downtown parking
  - How often do residents visit downtown?
  - Are they encouraged to drive downtown because free parking is provided?
  - Are they discouraged from driving downtown because of a perception of a lack of parking?
  - Are they aware of the locations of public parking lots?

*Loading zone utilization analysis*

Tier: focus area

- Determine duration of delivery vehicle standing/parking and destinations served.
- As necessary, interview delivery drivers.
- This was done as part of the June/October 2013 E. Weaver St. on-street parking study.

**Other analyses and information**

*Land Use Ordinance parking requirements*

Tier: study area

- Analyze parking ratios to determine how they compare with observed peak parking demand.
- Analyze any differences in parking demand for similar uses in downtown, or on bus lines, versus other areas of town.
- Review effectiveness of LUO provisions and offer appropriate recommendations.

- Example: 2013 DCRP workshop analyzing parking, open space, and housing+transportation affordability

*Walkability micro-audit*

Tier: focus area

- Analyze walking conditions from parking lots to destinations
- Are there any barriers, obvious or subtle, en route from lot to destination that dissuade would-be visitors from parking in one or more lots? For example:
  - Presence or absence of lighting?
  - Presence or absence of sidewalks?
  - Presence or absence of interesting/welcoming places or spaces?
  - Presence or absence of street furniture and landscaping?
  - Presence or absence of ADA-compliant pedestrian access routes?
- Evaluate the accuracy and frequency of existing wayfinding signage.

**Topics to address**

*Residential parking*

- Do the residential parking minimums in the LUO adequately reflect vehicle ownership rates in various parts of town?
- Are residential parking minimums needed in the central business district?
- How does requiring parking affect affordability?
- Are any residential on-street parking permit programs needed? How would they be administered and enforced?

*Local business employee parking*

- If not on-site, where should employee parking be located?
- There is likely to be adequate parking for employees at offices and retail establishments outside of downtown
- The Carr Mill Mall employee lot on Sweet Bay and Roberson Sts. contains 253 spaces. The 2008 DCRP study suggested that some Carr Mill Mall employees park in the Carr Mill Mall customer lot rather than the Sweet Bay-Roberson employee lot. The latter is also likely used to some extent by the general public. Currently, access control equipment may be in the process of being added to lot entrances by Carr Mill Mall management.

*Customers and visitors*

- What are businesses' ideal scenarios for customer parking?
- What spaces should be managed for short-term use?

- What parking spaces will be available for long-term (e.g. whole day) visitors? The Town currently does not offer any provision for public parking more than two hours. Greater than two-hour parking occurs but is not enforced.
- To what extent are commercial parking minimums needed in the central business district?

*Special events*

- Should the Town make any changes to how it accommodates peak parking for special events such as the Music Festival, 4<sup>th</sup> of July, Carrboro Day, and Christmas Parade?
- Can the plan make any recommendations for improving the experience of parking for going to the Farmers' Market?
- There is a park-and-ride shuttle for the Music Festival, and on-street parking occurs on streets such as Fidelity St. and Laurel Ave.

*Sustainability*

- On October 8, 2013, the Board of Aldermen reviewed progress on the development of the Strategic Energy and Climate Plan. The Community Transportation section of the plan includes a consideration to “[c]onsider GHG emissions during development of Town parking management plan.”
- The public and stakeholder input process can help to determine if sustainability and GHG mitigation be a goal of the plan.

*Illegal parking*

- It is apparent that some park-and-riding is being done in public, two-hour-limit lots by faculty, staff, and-or students of UNC in order to avoid the newly-instituted official park-and-ride lot fees. How should this be addressed?
- What are other motivations and purposes for the long-term parking that occurs?
- Long-term parking reduces turnover and customer access to businesses.

**Strategies that may be used to address the issues**

*Comprehensive, coordinated management of public parking spaces*

- Is more formal management needed?
- Would this be undertaken by the Town, a pseudo-public entity, or private organization such as a business association?

*Enforcement of public parking space restrictions*

- What enforcement strategy should the Town adopt?
- Who should enforce?
  - CPD?
  - New parking enforcement division created by the Town?
  - Contract parking enforcement with the Town of Chapel Hill?

- How much would these enforcement strategies cost on an annual basis? Would this cost exceed revenue?
- Strategic Parking Management (ITE webinar)<sup>3</sup> recommendations:
  - Friendly and fair
  - Ideally not conducted by law enforcement officers
  - Go light on first time offenders; go heavy on scofflaws.
  - Escalating fines (currently in place in Carrboro)
  - Use hand-held, on-board technology (not chalking tires)

*Joint use*

- Is the Town and-or businesses taking advantage of joint use opportunities to make parking supply more efficient?
- Is the LUO provision for shared parking adequate?

*Unbundling*

- Can apply to residential and office uses
- Typically reduces parking requirements by 10 to 20%<sup>4</sup>
- Example: [San Francisco Planning Code, Art. 1.5, Sec. 167](#)

*Car sharing*

- Relationship to unbundling
  - A study of the combined effects of carsharing and parking unbundling found that the “presence of both carsharing and unbundled parking within a building significantly reduces household vehicle ownership rates, with an average vehicle ownership rate of 0.76 vehicles per household for respondents with both carsharing and unbundled parking compared to an average vehicle ownership rate of 1.03 vehicles per household for respondents with neither.”<sup>5</sup>

*Transportation Demand Management*

- How can the Town and local TDM coordinator work with employers to develop programs to incentivize alternative commute modes?
- Would any businesses be amenable to a parking cash-out program?
- How can the Town work with a regional TDM partner such as GoTriangle on programs to encourage non-single-occupancy-vehicle trips?

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<sup>3</sup> Derived from: Sonoran Institute. (2013). Strategic Parking Management (Webinar – Aired September 18, 2013). <http://communitybuilders.net/webinars/strategic-parking-management/>

<sup>4</sup> Litman, Todd. (2012). Parking Management: Strategies, Evaluation and Planning. Victoria Transport Policy Institute. July 26, 2012, p. 14

<sup>5</sup> ter Schure, Napolitan, Hutchinson. (2011). Cumulative Impacts of Carsharing and Unbundled Parking on Vehicle Ownership & Mode Choice. <http://www.nelsonnygaard.com/Documents/Reports/Cumulative-Impacts-of-Carsharing-and-Unbundled-Parking-on-Vehicle-Ownership-and-Mode-Choice.pdf>. The study focused on San Francisco residents.



*Pricing*

- How should public parking be priced?
  - Scenarios:
    - Free parking for an unlimited duration
    - Free parking but with duration restrictions
    - Free parking for the first  $x$  hours followed by a charge for  $>x$  hours
    - Free parking in certain lots, priced parking for premium location spaces, with duration restrictions
    - Priced parking – fixed rate
    - Priced parking – variable by location, occupancy, traffic, etc.
- Should an occupancy goal be established?
- If pricing is included, how should the revenues be distributed?
- What is the cost of capital and operations of priced parking?
- What are some options for payment mechanisms?
  - Manual, coin-only parking meters are simple but 80-year-old technology. Multi-space, electronic meters and pay-by-phone are more germane to today's technology.
  - Pay-and-display meters
  - Pay-by-space meters
  - In-vehicle meters
  - Pay-by-phone apps

*Supply*

- How can future parking demand be best projected? Factors:
  - Projected growth in commercial square footage
  - Price of parking affects quantity of spaces demanded
  - Larger trends in mode choice
- Based on the above information, should the Town plan to construct or lease additional parking spaces? If so, where and when?
- Evaluate how concepts for building new structured parking, or partnering on the creation of new structured parking, compare to innovative parking management strategies?

*Bike parking*

- The adopted Bike Plan includes bike parking recommendations, guided by an inventory of parking deficiencies. Should additional planning be undertaken to prioritize locations for public bike parking?

*Signage and marketing*

- How can signage be improved so that motorists are easily directed to available parking?
- How can the Town better market car and bike parking so visitors have an idea of where to park before they arrive in downtown Carrboro?

- What role can Intelligent Transportation Systems (ITS) play in signage, marketing, and providing user information?
  - Examples: Mobile applications for finding and paying for parking; real time parking availability signs

*Parking ambassadors*

- Would ambassadors be a cost-effective way of assisting visitors on where to park?
- Would parking enforcement officers also be ambassadors?
- What would be the annual cost of parking ambassadors?

*Valet parking*

- Can this ameliorate the problem of perception that parking spaces are too far away from the destination?
- What are the costs associated with a valet parking program, such as the program provided to participating businesses by the Chapel Hill Downtown Partnership (a nonprofit organization)?

*Environmental performance*

- Stormwater runoff
  - Greater surface parking supply leads to more impervious surface, increasing stormwater runoff
    - Parking lots can reduce runoff and increase absorption through use of swales and permeable pavements
- Heat island effect
  - Greater surface parking supply may lead to a darker surface that absorbs more sunlight than vegetation or a lighter-colored roof or green roof.
    - Can be reduced with parking lot shading
- Renewable energy
  - Examples of parking lots being covered with solar panels:
    - REI – Framingham, MA

*Aesthetics*

- Should any public parking lots be spruced up through screening or vegetation?

**Cost and schedule**

*Cost estimate range*

Based on communications with consulting firms and research on the costs of other communities' parking studies and plans, it is estimated that the parking plan for Carrboro will cost in the range of **\$75,000 to \$100,000** (with very-low-end and very high-end estimates being \$50,000 and \$250,000). As stated above, the Board may wish, at this meeting, to begin discussing the

budgeting aspect of the parking plan. Staff have identified fiscal year 2014-15 as the primary year of plan development. The resolution in ATTACHMENT A-2 authorizes staff to begin communicating with the MPO about the parking plan, including discussing potential MPO planning funding that could be applied to the plan's completion.

*Preliminary schedule*

- November 12: Board provides feedback and guidance and approves of communication with the MPO. The Board may also wish to solicit advisory board recommendations.
- Early 2014: Board receives update on parking plan scope after staff have incorporated initial Board/potential advisory board feedback and direction. Board authorizes RFP process.
- May to August 2014: RFP creation, advertisement, selection process, and consultant advertising
- June 2014: Board adopts FY 2014-15 budget
- August/September 2014: Kickoff meeting and beginning of data collection and public participation periods as UNC gets back in session.
- September 2014-June 2015 – Data collection, public/stakeholder input, analysis, creation of draft plan for review by public, stakeholders, advisory boards, Board. Finalization of plan after any revisions and consideration by the Board of adopting the plan.

**Appendix A: Parking-related goals, objectives, and recommendations in plans and studies**

*Carrboro Vision 2020 (2000)*

Selected objectives related to parking, including Town progress on them:

- 3.21: Town should adopt a goal to “improve the downtown infrastructure”, including “parking facilities”.
  - Town has leased spaces from 300 E. Main St. parking deck
- 3.24: “Frequent, accessible public transit is necessary for a thriving downtown. Multi-modal access to downtown should be provided. As traffic increases, Carrboro should consider perimeter parking lots served by shuttles to bring people downtown.”
  - Park-and-ride lots technically could serve such a purpose, via the CW route. However, they are predominantly for park-and-ride commuters to UNC. Furthermore, free parking in downtown Carrboro costs less than paying a daily fee to park in the park-and-ride lots.

*Downtown Carrboro: New Vision (2001)*

- Existing parking space is ample
- Territorial boundaries prevent off-street parking capacity from flexibly matching parking needs.
- Pool parking into larger, shared lots
- Clear and distinct wayfinding signage for off-street parking
- Charrette participants: preserve free parking
- Establish variable-time parking zones
- Employee free parking a short distance away from building
- Strict enforcement

*Carrboro Downtown Transportation Study (2005)*

Selected “It ain’t broke, so don’t try a big fix” recommendations:

- “A.6. Alter the traffic flow in the 100 block of Weaver Street to provide one lane of one-way westbound traffic between Main and Greensboro Streets. Add on-street parking.”
- “A.12. Convert the section of Roberson Street adjacent to Armadillo Grill to one-way southbound operation and add on-street parking.”

Selected “Complete streets” recommendations:

- B.2. Close pull-in parking on W. Main St. between W. Weaver St. and Jones Ferry Rd. and replace with “sidewalk cafes, landscaping, enhanced signage, wider sidewalks and on-street parking:.”
- “B.3. Add on-street parking on the west side of West Main Street in front of Town Hall.”
  - Note: This is not possible in the current W. Main St. cross-section without removing bike lanes or the center turn lane.

- “B.6. Reconstruct East Main Street between the railroad tracks and Franklin Street to provide one through lane in each direction, one bicycle lane in each direction, intermittent on-street parking spaces, and raised-curb pedestrian-refuge islands at strategic crossings.”

Selected other recommendations

- After creation of a parallel east-west street, place E. Main St. between the RR tracks and Franklin St. on a road diet, adding bike lanes and-or on-street parking (p. 12).
- Connect E. Main parking lot with Weaver Street Market via crosswalks and a plaza and pathway on the “Christmas tree lot” (p. 15).
- Develop wayfinding signage to direct motorists to parking lots/other destinations (p. 15).
- Make walkways and paths to-from parking lots ADA compliant (p. 15).
- Landscaping screening parking lots (p. 15).
- Locate parking lots behind new buildings (p. 15).
- Promote shared parking lots as a way to close driveways onto arterials (p. 16).
- Create new, off-street parking so as to allow north side of Roberson St. to develop mixed-use buildings, or build an alley to connect existing Roberson St. lots (p. 18).
- Diagonal on-street parking on north-south section of Roberson, after one-way southbound conversion (p. 18).
- Initiate public-private partnership to build a parking deck on the Carr Mill Mall employee lot at Roberson and Sweet Bay (p. 18).
- Remove existing pull-in parking spaces in front of the Trading Post [now Steel String] building on S. Greensboro St., or possible on-street parking (p. 18).
- Greensboro-Weaver municipal lot should include spaces arranged to be used for Cliff’s Meat Market customers so the gravel Cliff’s lot on Greensboro-Main can be used as a public space (p. 18).
- Relocate Weaver Street Market truck delivery area to a pull-off on N. Greensboro St. (p. 18).

*Carrboro Parking: An Exploratory Study (UNC DCRP, 2008)*

Summary of findings

- In general, parking demand does not exceed ideal (85%) occupancy. Data does not indicate that current demand is outpacing supply for the CBD.
- Parking demand does exceed recommended occupancy at specific sites at certain times and this situation may be exacerbated by future demand.
- Parking spaces in the CBD experience high turnover.
- There is a 20% violation of the 2-hour limit in public lots.
- Most CBD visitors want to park in lots adjacent to the businesses they are visiting.
- The prevalent perception among business owners and others is that there is a parking shortage in the CBD.
- Although there is not a parking shortage now, there will likely be a shortage in and around 300 East Main Street after the addition of approved and future developments.

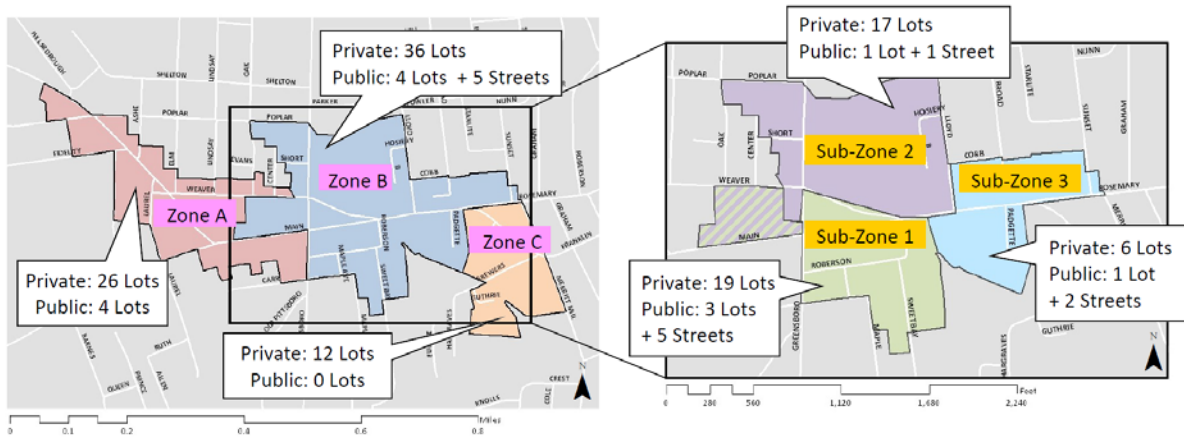
- A cost-benefit analysis found that improving pedestrian facilities and amenities may be most cost-effective strategy for managing parking demand.

Summary of recommendations and related progress

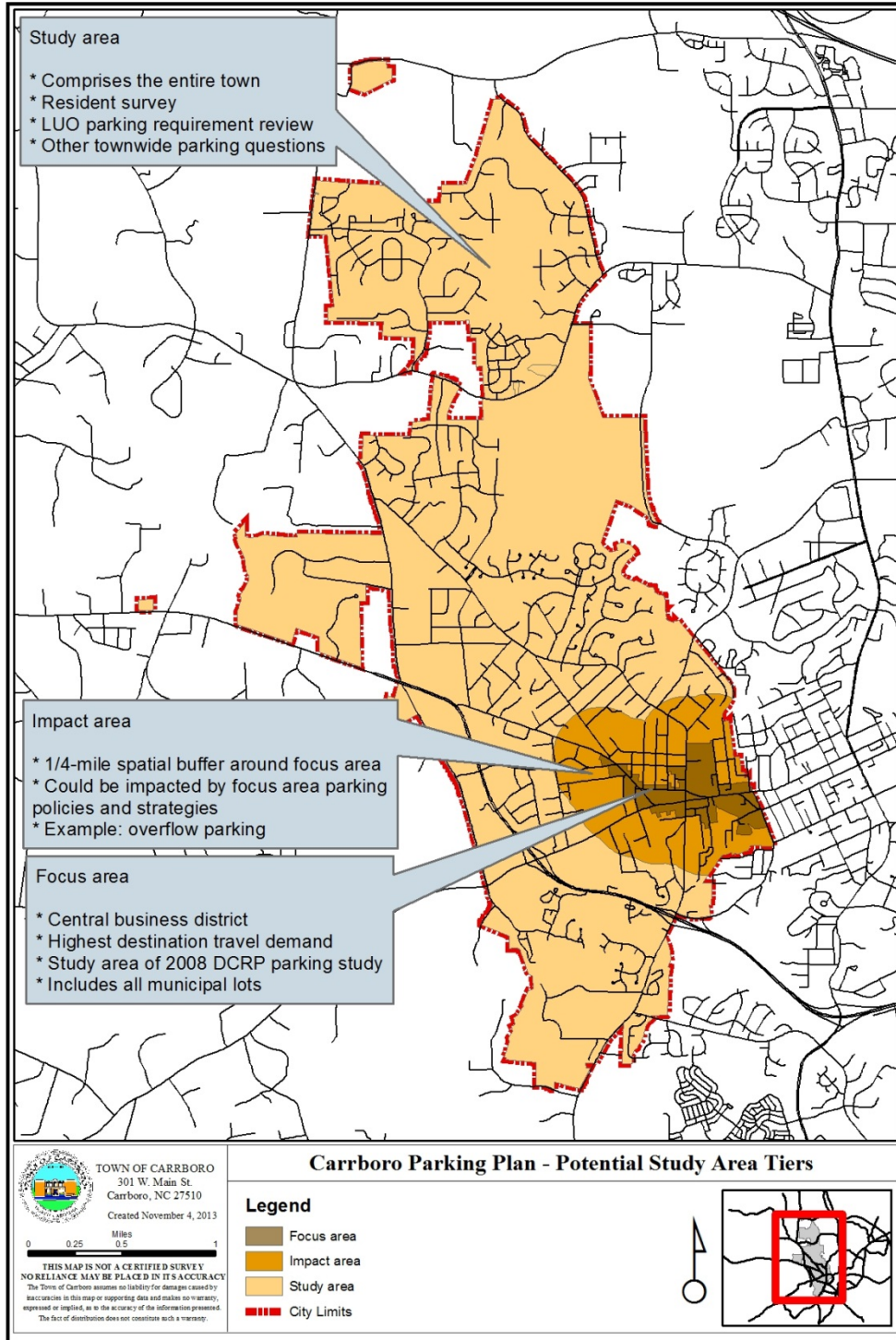
<b>DCRP study recommendation</b>	<b>Town progress</b>
Education/Signage	<ul style="list-style-type: none"> <li>• Link to public parking on website</li> <li>• Creation of web URL and mobile web page showing public parking location</li> <li>• Signage posted at all lots</li> <li>• Messages included in UNC Commuter News, July-Sept. 2013</li> <li>• Town has developed standards for off-premise signs</li> </ul>
Stricter Enforcement	<ul style="list-style-type: none"> <li>• BOA (6/25/13) raised parking violation civil penalty from \$25 to graduated \$35/\$50/\$100 civil penalty</li> <li>• PD exploring enforcement expansion options</li> </ul>
New Restrictions	<ul style="list-style-type: none"> <li>• BOA (6/25/13) restricted parking from 3:00 AM to 5:00 AM</li> </ul>
Joint Use	<ul style="list-style-type: none"> <li>• Joint use provision in LUO (15-297) unchanged since 2004</li> </ul>
Parking Cash-outs	<ul style="list-style-type: none"> <li>• GoTriangle, local TDM coordinator available to provide information and advice on parking cash-out</li> </ul>
Developer Impact Fees	<ul style="list-style-type: none"> <li>• No transportation-related impact fees</li> </ul>
Pedestrian Amenities	<ul style="list-style-type: none"> <li>• Sidewalks on Ashe, Bim, and Elm</li> <li>• In-street yield signs on Greensboro at Shelton and Carr</li> <li>• W. Main St. road diet</li> </ul>
Park-and-Ride	<ul style="list-style-type: none"> <li>• Park-and-ride lots now fee-based</li> <li>• CHT studying expansion of Eubanks Rd. PnR</li> <li>• Triangle Transit considering expansion of Southpoint PnR</li> </ul>
Parking Deck	<ul style="list-style-type: none"> <li>• 300 E. Main parking deck is open; includes public spaces, spaces reserved for hotel guests, and spaces reserved for employees of hotel and 300 E. Main businesses</li> </ul>

DCRP study area and zones

Figure 8: Number of Parking Lots Counted for Supply



Appendix B: Study area tier concept





**Appendix C: 10 principles of parking management – Victoria Transport Policy Institute**

1. Consumer choice
2. User information
3. Sharing (joint use)
4. Efficient utilization
5. Flexibility
6. Prioritization
7. Pricing
8. Peak management
9. Quality vs. quantity
10. Comprehensive analysis

**Appendix D: Components of, and questions to answer in, a parking audit**

Parking audit steps<sup>6</sup>

1. Select the audit area
  - a. Area that has reported parking issues
  - b. Functional boundary of a downtown district or neighborhood district
  - c. 0.5 miles to 1.0 miles across to comprise a walkable area
  - d. Include potential spillover areas
  - e. Include larger trip attractor at periphery
2. Design and schedule the audit
  - a. When?
    - i. “Typical conditions”, not necessarily peak use
    - ii. Account for seasonal variations
    - iii. 3-4 counts during a week
    - iv. Think forward to what the results will show
    - v. Plan on multiple audits to get the whole picture
  - b. Use spreadsheets
    - i. Organize data geographically (e.g. by parking lot)
    - ii. Record signed regulations, off-street spaces, public/private, paid/unpaid
3. Conduct the audit
  - a. Need people (auditors)
4. Interpret the results: tables, charts, and graphs
  - a. When/where is parking utilization high and low?
  - b. How does this change with each count time?
  - c. Include maps as well
  - d. What destinations are creating high utilization?
  - e. What regulations can be tweaked?
5. Share and discuss the results

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<sup>6</sup> Derived from: Sonoran Institute. (2013). Strategic Parking Management (Webinar – Aired September 18, 2013). <http://communitybuilders.net/webinars/strategic-parking-management/>

Appendix E: Other North Carolina cities' and towns' parking resources

Davidson Parking Map

**Walkable Downtown Davidson**

*Parking abounds in Davidson, if you know where to look. Parking may not necessarily afford door to door service at your destination.*

*Davidson is a pedestrian-friendly, scenic town; while walking from your car to your destination take a minute to discover why we call Davidson Hip and Historic.*

*Remember:*

*All street parking on Main Street in the Village Center is two-hour. Parking is free and the time limit is enforced.*

*There is no parking from 2—5 am on Main Street and adjacent streets.*

*Town Hall has two lots, front and back, for those doing business with the Town.*


*There are all-day spaces for those working downtown on Jackson, Concord and Lorimer.*

*Pay attention to signs when you park. Some parking is reserved for customers or restricted by size of vehicle. These restrictions are strictly enforced.*

**Downtown parking lots—location and length of time**

<p><b>All Day Parking:</b></p> <p>Main Street N of Depot</p> <p>Town Hall*</p> <p>117 Depot Street*</p> <p>Knox Court*</p> <p>Jackson Street, street spaces</p> <p>South Main, street spaces</p> <p>Concord Rd.</p> <p>Cotton Mill*</p> <p><b>3 Hour Parking:</b></p> <p>202 South Main*</p> <p><b>2 Hour Parking:</b></p> <p>Main Street, street spaces</p> <p>Knox Court*</p>	<p><b>2 Hour Parking:</b></p> <p>Davidson Public Library*</p> <p>Chairman Blake</p> <p>Post Office*</p> <p><b>Customer Parking</b></p> <p>CVS*</p> <p>South Main Square</p> <p>445/455 South Main*</p> <p>Davidson College Lots*</p> <p>140 Jackson Street</p> <p>190 Jackson Street</p> <p>Sadler Square*</p> <p><i>*indicates handicap parking available</i></p>
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**Downtown Davidson, Inc. and the Town of Davidson**



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E-mail: [sandy@downtowndavidson.org](mailto:sandy@downtowndavidson.org)

*Hip and Historic Davidson*

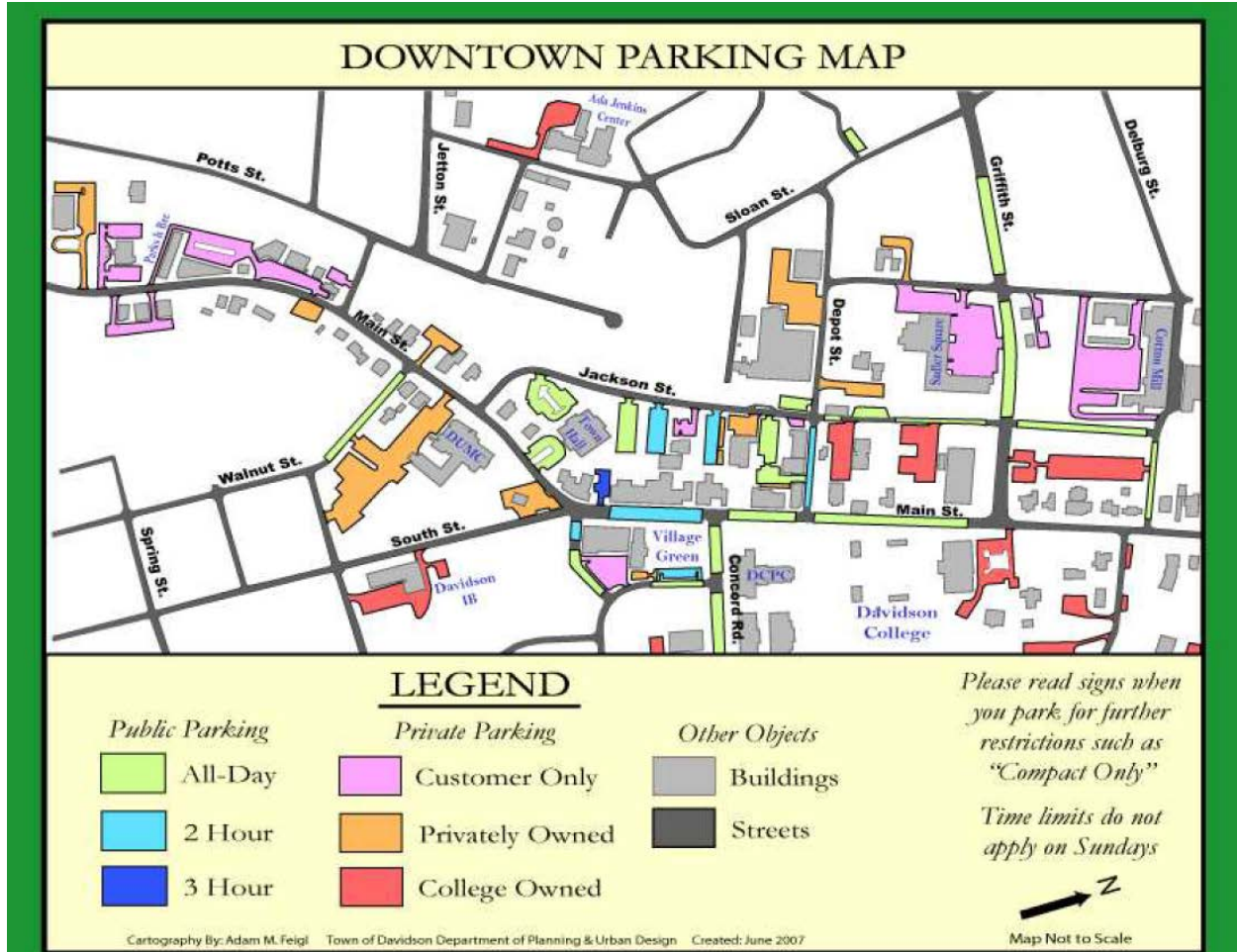
Parking Availability in Downtown



Downtown Davidson, Inc. and the Town of Davidson

704.892.2118

Davidson Parking Map p. 2



**Wilmington parking deck and surface lot rates**

Our parking decks are now using Pay-in-Lane machines for ease and convenience of payment.  
[Click here for more information.](#)

	Decks on 2 <sup>nd</sup> Street	Water Street Facility
Locations	<ul style="list-style-type: none"> <li>114 N. 2<sup>nd</sup> St (between Chestnut and Princess streets)</li> <li>115 Market St (intersection of Market and 2<sup>nd</sup> streets)</li> </ul>	<ul style="list-style-type: none"> <li>200 N. Water St (between Chestnut and Grace streets)</li> </ul>
Daily Rates	<ul style="list-style-type: none"> <li>First hour free</li> <li>\$1/hour; \$8 max</li> </ul>	

	<ul style="list-style-type: none"> <li>▪ Pay upon entry Thurs-Sat after 9 p.m.: \$5 flat rate</li> <li>▪ Decks charge 24 hours/day, 7 days/week</li> <li>▪ First hour: \$3</li> <li>▪ \$1.50/ hour thereafter</li> <li>▪ 6 a.m.-5 p.m., Mon-Fri: \$6 max</li> <li>▪ After 5 p.m. and weekends: \$5 flat rate</li> </ul>
<p><b>Monthly Rates</b></p>	<ul style="list-style-type: none"> <li>▪ Covered: \$45</li> <li>▪ Card Replacement Fee: \$10</li> <li>▪ Card Reactivation Fee: \$5</li> <li>▪ Market St. Deck rooftop: \$30</li> <li>▪ Reserved space: \$70</li> <li>▪ Rate: \$60</li> <li>▪ Reserved space: \$100</li> </ul>
<p><b>Special Event Rate</b></p>	<ul style="list-style-type: none"> <li>▪ Azalea Festival, Riverfest, July 4th, New Year's Eve: \$7</li> </ul>

**Surface Lots**

**Parking lots are located:**

- Corner of S. 2nd St. and Market St.
- Near corner of S. 2nd St. and Orange St. (Next to Hannah Block Historic USO Building)

**Rates:**

- Paid parking enforced 24/7 unless otherwise noted.

**2nd St. Lot :**

- **Hourly- \$1.25**
- **Daily- \$7**
- **Monthly- \$50**

**Notice:** Entrance to this lot is restricted each night Thursday through Sunday after midnight until 7AM. Vehicles parked prior to midnight will be permitted to stay and vehicles displaying a current monthly parking permit will be allowed to enter as needed. Vehicles exiting after midnight will be allowed to exit without hinderance, entrances closest to the Village Market will remain open for egress of the lot.

**Hannah Block Lot:**

- Hourly- \$1
- Daily- \$5
- Monthly- \$45

There are also a number of privately owned and operated lots in the downtown area that are open to the public.

**Valet parking coordinated by the Chapel Hill Downtown Partnership**

Excerpt from website (<http://www.downtownchapelhill.com/valet/>):

**Downtown Valet**

Enjoy downtown Chapel Hill with the ease of FREE valet parking at sixteen participating Franklin Street businesses. Valet stands are located on both East & West Franklin Street for your convenience. Drop-off and pick-up at either stand. Patrons enjoying other establishments can also use the valet service for a \$5.00 charge.

Valet operates Monday-Saturday accepting cars between 5:00pm-9:00pm.

East End Valet Stand: located on the north side of the 100 block of East Franklin, in front of Spanky's Restaurant.

West End Valet Stand: located on the north side of the 400 block of West Franklin Street, near the West End Wine Bar.

Appendix F: Census data

	Percent of households in Carrboro		
Vehicles available	2000 Census	2007-11 ACS estimate	
	Percent	Percent	Margin of error
None	8.1%	10.2%	2.6
1	47.9%	47.9%	3.7
2	32.9%	31.9%	3.2
3	11.0%	10.1%	2