



Planning & Development Department · City of Houston, Texas  
**Off-street Parking Requirements Data & Analysis**



Image Source : <https://www.theguardian.com/cities/2016/sep/27/cities-eliminating-car-parks-parking>

## Technical Memorandum

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Prepared by:



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## Definitions

**ADA:** Americans with Disabilities Act

**ADU:** Accessory Dwelling Unit (non-income-earning use)

**B&B:** Bed & Breakfast (income-earning use)

**BR:** Bedroom

**DU:** Dwelling Unit

**EDU:** Efficiency Dwelling Unit

**FAR:** Floor Area Ratio

**FTA:** Federal Transit Administration

**GFA:** Gross Floor Area (total building space)

**MFR:** Multi Family Residential

**MU:** Mixed Use

**SF:** Square Feet

**SFR:** Single Family Residential

**SPA:** Special Parking Area

**TDM:** Transportation Demand Management (related to demand for off-street parking)

**TOD:** Transit-oriented Development

**UFA:** Usable floor area (building space not occupied by building elements such as walls)

## Purpose and Scope

To help influence the City of Houston’s (City) shift to multi-modality, the Planning & Development Department is considering changes to the off-street parking code of ordinances.<sup>1</sup> Any rule changes must be well thought-out to maintain sensitivity to existing land uses while facilitating increased density and more affordable housing. By benchmarking the parking standards of other cities with similar urban form, effective techniques for balancing parking needs with the level and type of density needed to sustain multimodal transportation infrastructure, especially transit, can be identified and pursued.<sup>2</sup>

This report provides recommendations for implementing multimodal-supportive changes to the off-street parking code. It also summarizes the data and information, peer evaluation and analysis used to develop these recommendations. The Planning & Development Department provided variances received and approved since 2013, city ordinances and other planning documents were downloaded from the pertinent Municode or city-owned websites, and other references used are cited.<sup>3</sup> Peers were selected based on socioeconomic and multimodal system parameters that influence the demand and utilization of parking facilities. See Appendix A for more information on peer selection for this study. The land uses in the ITE Parking Generation Manual, 5<sup>th</sup> Edition, were used to organize the comparative analysis of each city’s parking requirements. The technical memorandum covers only those land uses for which changes are recommended. The analysis includes citywide, downtown area and TOD district requirements, and incorporates trends identified in the variance analysis.<sup>4</sup> Best practices are drawn from peer cities’ implementation of parking management districts and shared parking provisions.



## Ordinance Structure and Approach to Off-street Parking Regulation

Houston does not use zoning to regulate land uses within city limits. Conversely, every other major city in the US organizes land development through some form of zoning ordinance. While Houston does not have zoning districts to restrict certain uses, it does enforce development requirements through its ordinance, one of which is the off-

<sup>1</sup> Studies have shown there is a strong correlation between availability of parking and travel mode choice (Emily Badger, The problem with too much parking, The Washington Post, 15 Jan 16, retrieved 4/27/20 from <https://www.washingtonpost.com/news/wonk/wp/2016/01/15/the-problem-with-parking/>).

<sup>2</sup> Colette Santasieri, Planning for Transit-Supportive Development: A Practitioner’s Guide, Federal Transit Administration, June 2014, retrieved 6/16/20 from <https://www.transit.dot.gov/funding/funding-finance-resources/transit-oriented-development/planning-transit-supportive>.

<sup>3</sup> Many cities use the Municode online platform (<https://www.municode.com/>) to publish electronic versions of their ordinances. Dallas is the only exception among the cities included in this study; for more information see <https://dallascityhall.com/government/Pages/city-codes.aspx>.

<sup>4</sup> For the purpose of this study, the downtown area is defined as the central business district of the City of Houston. This definition does not include other major activity centers, such as The Medical Center, Uptown, City Centre, etc. As will be further articulated later in this report, the central core of the primary city is the main geographical basis of comparison for alternative requirements at a scale larger than typical districts.

street parking chapter.<sup>5</sup> To draw fair comparisons between Houston and its peers, this report bases its analysis on citywide application (each city's base ordinance parking regulations typically require more parking than those written for any special districts or overlay zones, including those for TOD or affordable housing). This report presents findings on which generic land use parking regulations in Houston vary significantly from those of its peers. It also provides recommendations for changes in the parking requirements to achieve increased density and multimodal travel patterns based on the findings. Additional discussion of best practices for reducing parking requirements in key areas, namely the downtown area, TOD and affordable housing developments, is also provided.

A review of Houston's and the peer cities' ordinances reveals there are two divergent approaches to constructing off-street parking regulations. One way is to distribute the requirements throughout the chapters governing land uses. Atlanta and Dallas subscribe to this method and provide few details in a separate off-street parking chapter. The alternative is to centralize all parking rules in one part of the ordinance. Each of the other cities, including Houston, uses this method to varying degrees. Austin provides all its parking requirements in a section of the code and appendix within its land development ordinance. Charlotte summarizes its basic requirements in a figure in the development standards chapter of its zoning ordinance and includes details for certain general, overlay, and conditional zoning districts in those chapters. Oakland comes the closest to a pure, stand-alone parking ordinance. It provides its general and district-specific parking requirements in one chapter of its planning code, with very few exceptions noted in other sections.

*While Houston does not have zoning districts to restrict certain uses, it does enforce development requirements through its ordinance, one of which is the off-street parking chapter. To draw fair comparisons between Houston and its peers, this report bases its analysis on citywide application.*

## Benchmarking Analysis

This analysis used the structure defined by the ITE Parking Generation Manual to establish a baseline of land use terminology for comparisons of parking requirements between Houston and its peer cities. The full table of Houston and peer city off-street parking requirements is provided in Appendix B. Across many of the land uses, general provisions for off-street parking do not vary widely between Houston and its peers. These uses are included in the appendix but are not discussed in the analysis.

This report focuses on areas where Houston parking requirements are substantially different from most of the peers or for which the City has received a significant number of variance applications. This can be due to either the way a requirement is structured or the effect it has in number of required spaces. Key differences that are readily apparent between Houston and its peers are shown on the Off-street Parking Requirements Highlights Table on the following page. When referring to the table, note that governing ordinances are cited at the top under the city name, uses that are defined in the ITE Manual are listed with their classification number (N/A if they are not in the manual), and uses not addressed on a citywide basis in a city's ordinance are grayed out.

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<sup>5</sup> Specific locations in the ordinances for Houston and the peer cities are identified in the Houston and Peer City Off-street Parking Requirements Highlights table and Appendix B – Parking Requirements Table.

City		Houston	Atlanta	Austin	Charlotte	Dallas	Oakland
Governing Ordinance(s)		Sec. 26-492	Sec. 16-08 to 16-17	Ch. 25-6 App. A	Table 12.202 (App. A)	Div. 51A-4.200	Ch. 17.116
ITE #	Land Use	Minimum Off-street Parking Required					
Residential							
220	Multifamily Housing (Low-Rise)	1.25-2.0 / DU (based on # BR)	1-2 / DU (based on FAR <sup>6</sup> & Sector)	1 / BR	1-1.5 / DU	1 / BR 0.25 / DU visitor	1 / DU
221	Multifamily Housing (Mid-Rise)						
222	Multifamily Housing (High-Rise)						
223	Affordable Housing				1 / DU		0.5-0.75 / DU (transit-dependent)
N/A	Single Family Detached	2 / DU ADU (≤ 900 SF) = 1	1-2 / DU ADU = 0	2 / DU ADU = 1 (> 0.25 mi from transit); 0 (≤ 0.25 mi)	2 / DU B&B = 1 / room	1-2 / DU	1-4 / DU ADU = 0-2 B&B = 1 / 2 rooms
	Single Family Attached		1 / DU (+1 / BR > 3) ADU (≤ 750 SF) = 1			2 / DU	
Institutional							
530	High School	1 / 3 occupants	1 / 4 fixed seats 4 / classroom	1.5 / staff + 1 / 3 students	1 / classroom + 1 / 5 students	9.5 / classroom	As Directed
Services							
930	Fast Casual/Neighborhood Restaurant	9 / 1K SF + outdoor area > 15%	1 / 100 SF 1 / 75 SF (>60% gross income from alcohol) 1 / 200 SF (>25% outdoor)	1 / 100 SF (≤ 2.5K) 1 / 75 SF (> 2.5K) 1 / 275 SF (Take-out)	1 / 75 SF	1 / 100 SF (main) 1 / 200 SF (accessory) 1 / 500 SF (alcohol production)	1 / 600 SF (ground) 1 / 1K SF (above) (> 3K)
931	Quality Restaurant	10 / 1K SF + outdoor area > 15%					
932	High turnover/Pub Restaurant	10 / 1K SF + outdoor area					
933	Fast food/Small Restaurant	8 / 1K SF + outdoor area > 15%					
936	Coffee/Take-out Shop	4 / 1K SF					
939	Bread/Bagel/Dessert Shop	6 / 1K SF + outdoor area > 15%					
970	Winery/Brewery/ Distillery			1 / 275 SF (< 2.5K) 1 / 100 SF (< 10K) 1 / 50 SF (> 10K)	1 / 250 SF	1 / 500-600 SF (mfg.) 1 / 1K SF (storage) 1 / 100 SF (retail)	
N/A	Bar/Lounge/Club	12-14 / 1K SF + outdoor area		See 930-939	See 930-939	See 930-939	See 930-939

Table 1 Houston and Peer City Off-street Parking Requirements Highlights

There are several land uses that stand out as opportunities for improvement: multifamily residential, accessory dwelling units, high schools, and eating and drinking establishments. Residential land uses make up most of the land area in the city.<sup>7</sup> Given its dominance of the overall urban landscape, two of the four land uses discussed belong in the residential category. Though industrial and terminal uses comprise more land area than any other uses except residential and lodging, these will not be focused on in this analysis. The goals of this study and the absence of major

<sup>6</sup> FAR is a supplementary zoning mechanism that limits the dimensions of a building on a site, depending on restrictions by zone (<https://www.planning.org/pas/reports/report111.htm>).

<sup>7</sup> It is assumed the proportions of land uses in Harris County can be applied to the City of Houston for the purpose of determining top development types by total land area. Data obtained from Harris County Appraisal District (<https://pdata.hcad.org/>).

differences in parking rules between Houston and its peers rule out this category. Likewise, office and medical uses were not selected for analysis due to similarities in parking requirements with peer cities. Eating and drinking establishments were selected from the retail and service category due to the significant difference between Houston and the peers in how parking requirements are developed. Similarly, high schools, classified under institutional and recreational, are handled much differently from city to city.

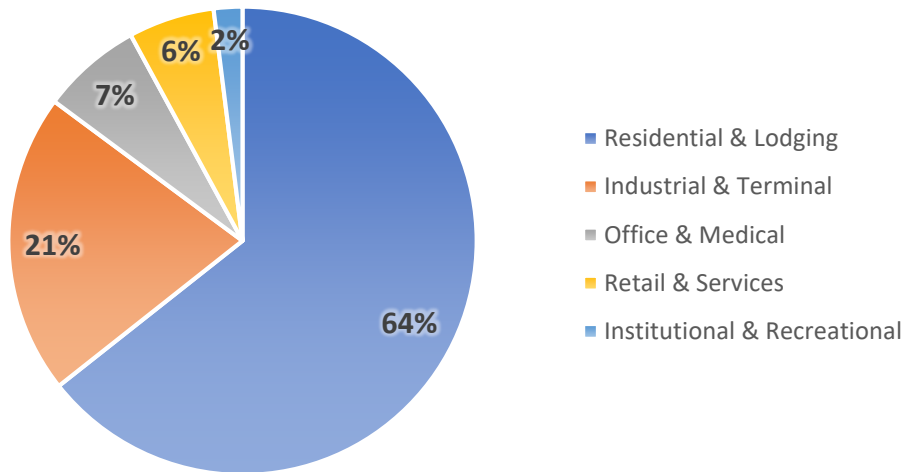


Figure 1 Land Use Distribution in Harris County

The analysis of Houston variances revealed the top five uses for which variances were granted are schools, housing (shelters), mixed use, restaurants and residential.<sup>8</sup> The highest typical parking requirement reduction rates were 40% for schools and 33% for housing. High schools were selected for this study, since they are the predominant requestors among schools and have the highest requirements of the primary and secondary schools. Shelter housing is not included in this analysis, due to the low quantities of parking spaces. However, multifamily housing is discussed, especially from an affordable housing standpoint.

Though the amounts of reductions were less, those for drop-off intensive and appointment- or capacity-limited establishments (schools, gyms, day care, salons) were usually approved. These uses are not individually addressed in this study but may be included in the general conversation regarding mixed use in activity centers, which is covered in the Best Practices for Districts section.

As a point of comparison, Charlotte has received less than 20 variance requests related to off-street parking since 2011, or less than three per year.<sup>9</sup> Most requests to reduce parking requirements that were approved were related to commercial or institutional uses. Dallas has received nearly 20 variance requests related to off-street parking reductions in the past two years, which is about 10 per year.<sup>10</sup> Approved reductions have involved recreational, hotel, office, retail, services and mixed uses or changes to existing single-family structures. Generally, approvals in both cities were based on limited reductions in required parking supported by parking demand documentation, available shared parking with other adjacent uses, alternate landscaping plans or preservation of existing mature trees. Houston’s variance rate seems high in comparison at more than 14 per year. Controlling for businesses and population in the city bears different results, as shown in the figure below.

<sup>8</sup> Variance requests received by the City of Houston from 2013 through April 2020 were analyzed for decision patterns to identify which uses typically receive approval and for what amounts of parking reductions. The results of this analysis are integrated into this report and the summary of approved variances is provided in Appendix C.

<sup>9</sup> Charlotte Planning, Design and Development. Zoning Board of Adjustment Cases 2011-Present. Retrieved 7/8/20 from <https://charlottenc.gov/planning/ZoningAdministration/ZBACases/Pages/Home.aspx>.

<sup>10</sup> City of Dallas Departmental Boards and Commissions Agendas. Zoning Board of Adjustment. Retrieved 7/8/20 from [https://dallascityhall.com/government/meetings/Pages/2019\\_BDA\\_Agendas.aspx](https://dallascityhall.com/government/meetings/Pages/2019_BDA_Agendas.aspx).



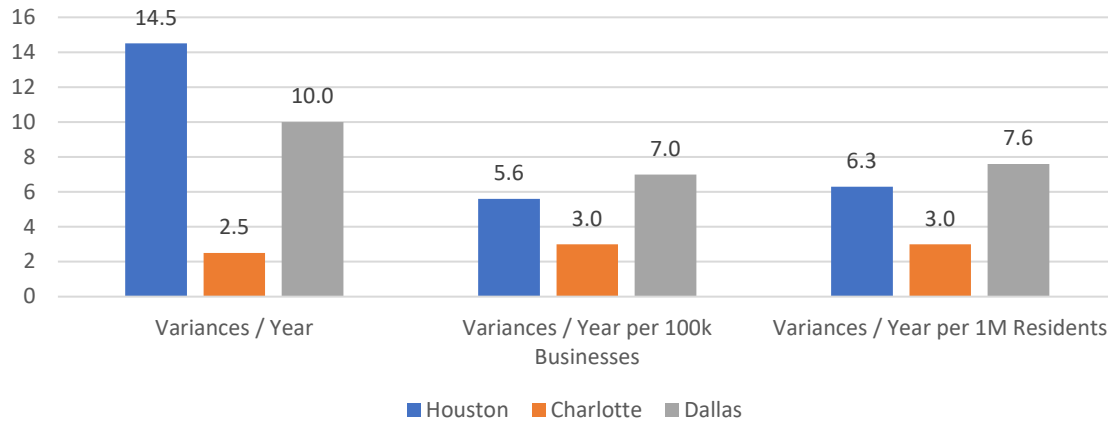


Figure 2 Comparison of Variances Processed

### Multifamily Residential

Multifamily housing in Houston is measured by the number of bedrooms per dwelling unit for calculating parking requirements.<sup>11</sup> Austin and Dallas also use bedrooms as the determinant factor. Atlanta uses a similar approach by calculating requirements based on floor area ratios, but also structures its FAR factors according to zone density. Charlotte and Oakland, on the other hand, require parking only for the number of dwelling units. Charlotte distinguishes between low-income and mixed-use dwellings, both of which require one space per unit, and all other multi-family uses, which require 1.5 spaces per unit.

City	Requirement	Range Basis
Houston	1.25-2.0 / DU	DU Size (EDU = 1.25, 1BR = 1.33, 2BR = 1.67, 3BR+ = 2.0)
Atlanta	1-2 / DU	FAR & Zone Sector
Austin	1 / BR	-
Charlotte	1-1.5 / DU	Type (MU = 1, general MFR = 1.5)
Dallas	1 / BR + 0.25 / DU (Visitor)	-
Oakland	1 / DU	-

Table 2 Parking Requirements for Multifamily Uses

The peers who require less parking either have higher rates of transit ridership to offset lower vehicle usage or intentionally lowered the requirements to better support multimodal travel. To trend towards more density and transit-oriented development, Houston’s multifamily requirements may need to look more like the peers who require fewer parking spaces per dwelling unit. Using a two-bedroom apartment as the average unit, a building with 50 units in each city will require the following parking spaces.<sup>12</sup>

City	Parking Required for a 50-Unit Apartment Building
Houston	83 (1.67 per DU)
Atlanta	50-100
Austin	100
Charlotte	50 (MU/low-income) or 75 (typical)
Dallas	113 (100 resident + 13 visitor)
Oakland	50

Table 3 Required Parking Spaces for Hypothetical Apartment Building

<sup>11</sup> Section 26-492 of the Houston Code of Ordinances.

<sup>12</sup> Nadia Balint. As Apartments Are Shrinking, Seattle Tops New York with the Smallest Rentals in the U.S. RENTCafe Blog. 11/30/18. Retrieved 6/27/20 from <https://www.rentcafe.com/blog/rental-market/real-estate-news/us-average-apartment-size-trends-downward/>



Atlanta has a wide range due to the scalable minimum parking based on FAR by zone. Oakland, as will become evident throughout this analysis, is the pacesetter in terms of reducing parking requirements and serves as a counterpoint to conservative parking supply. In the middle ground is Charlotte, with about 10% less parking required than Houston for a typical (non-mixed use) development, using a much simpler formula, and may represent the best model to increase multifamily density citywide.

### Single-family Residential Accessory Dwelling Units

In Houston, accessory dwelling units (ADUs) are limited to 900 square feet and required to have one space in addition to those for the primary residence.<sup>13</sup> The requirements for ADUs vary amongst the peers. Atlanta has no parking requirement, but ADUs are limited by permitting requirements to larger lot residential districts. Charlotte and Dallas both require one space per ADU, but do not have size limitations. Austin and Oakland both require parking but include exemptions for proximity to transit. This does not include B&Bs or any other income-producing use.

City	Required Spaces	Other ADU Conditions
Houston	1	Must be ≤ 900 SF
Atlanta	0	
Austin	1	No requirement if 0.25 mi from activity corridor
Charlotte	1	
Dallas	1	
Oakland	1-2	No requirement if ≤ 0.5 mi from transit or one block from car-share

Table 4 Parking Requirements for ADUs

The influence of multimodality is more noticeable here than in the multifamily section. Austin and Oakland both recognize that ADU residents may not need or have a car or prefer to use other means of transportation by eliminating the requirement when the ADU is near other options. Atlanta’s zero requirement is due to the low-density development where ADUs are permitted; rather than a recognition of a lower rate of car ownership the assumption may be the larger existing driveways absorb any additional demand. Similarly, there is no distinction of ADUs in dense areas of Charlotte and Dallas that has made it to their ordinances; therefore, all ADUs in these cities require the one parking space without consideration of other means of transportation.

### High Schools

Parking for high schools uses varying methods. Houston bases its requirement on a school’s occupancy.<sup>14</sup> Austin also uses this method but distinguishes between occupant types in its calculation. Atlanta and Dallas instead use a capacity approach, basing requirements on one or more building factors, such as seats, floor area or classrooms. Charlotte and Oakland use a combination of capacity and occupancy. The difference between them is Charlotte uses standard ratios while Oakland incorporates the calculations into the site development process.

City	Minimum Parking Spaces Formula
Houston	1 / 3 occupants
Atlanta	1 / 4 fixed seats or 1 / 35 SF assembly (greater) + 4 / classroom
Austin	1.5 / staff + 1 / 3 students in grades 11-12
Charlotte	1 / classroom + 1 / 5 students
Dallas	9.5 / classroom
Oakland	As directed

Table 5 Parking Requirements for High Schools

<sup>13</sup> Houston’s Subdivisions Development and Platting (Ch. 42), last adopted in 1999, restricts ADUs to larger lots (at least 1,400 SF; less than 27 units per acre) to maintain the character of single-family residential neighborhoods. The code redirects landowners and developers to the multifamily requirements when building units at greater density or smaller floor areas than prescribed for ADUs.

<sup>14</sup> Houston Independent School District (HISD) requested the basis of parking requirements be changed from number of classrooms to total occupancy in 2013.

It is difficult to compare the cities' requirements unless a baseline is established. To help visualize the real differences, a hypothetical school of 500 students and 32 staff will be used to calculate the parking spaces for each city.<sup>15,16</sup> Using the minimum rates from the previous table, the requirements are as shown in the figure below.

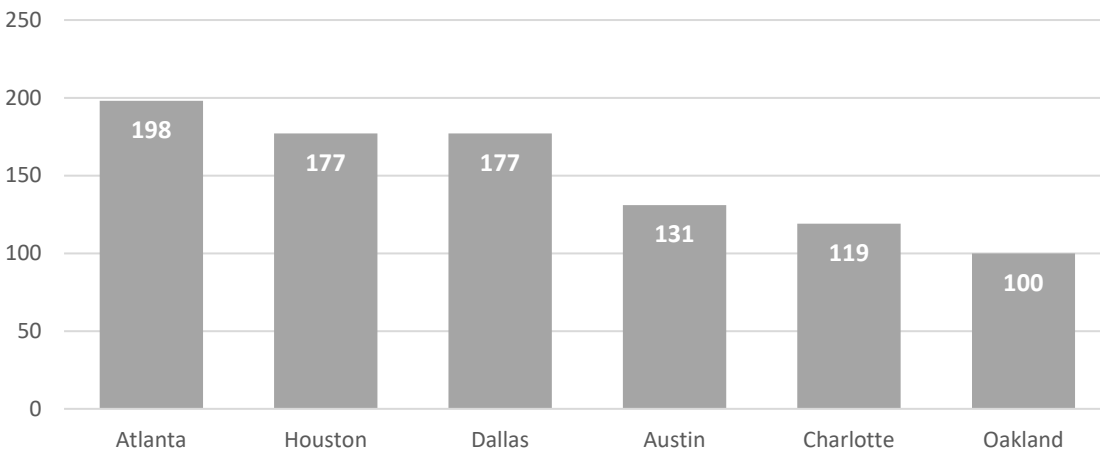


Figure 3 Hypothetical High School Required Parking

Parking for this example school in Atlanta, Houston, and Dallas is significantly higher than for the other three cities. The parking estimate for Oakland was derived from a count of spaces using satellite imagery at McClymonds High School, which has a student body of just under 500. The results suggest consideration for types of occupancy and capacity yields lower parking requirements.

As previously mentioned, most schools requesting variances were high schools. Though there was a high bar for approval, usually the demonstration of a mix of alternate modes, shared parking, consistent enrollment, and loss of sports fields or other outdoor amenities was enough justification for approval. Many applicants cited proximity to transit or pedestrian/bicycle facilities, though the corresponding reduction amount is arbitrary. Since there is no reduction allowance based on access to multimodal connections in the application process, requests varied in the amounts of reduction requested and granted. The ranges in required parking and quantity of variances approved demonstrate the difficulty in maintaining consistency for institutional uses, particularly public schools. Yearly changes in enrollment demographics combined with capital projects meant to modernize campuses often render previously accurate parking formulas obsolete.

In many cases, too little parking on campus leads to the typical problem of spillover into neighboring residential areas.<sup>17</sup> To balance residents' concerns with property and fiscal constraints limiting on-site parking, school districts may consider priced parking on campus as well as on-street in and around campus, formal and informal biking and walking programs, and working with residents to set up driveway rent programs in combination with residential area permits. In other cases, schools may be overburdened by requirements to build parking that never gets used and instead takes up space that could be used for other school programs. School districts would likely prefer to peg parking requirements to actual need in terms of staff and driving-age enrollment, among other factors. Using variable measures then creates a situation where the parking supply would need to be dynamic, as well. Each campus would need the capacity to increase or decrease parking spaces appropriately. The City may work with the school district to mitigate variability in parking demand by implementing an active transport program to encourage

<sup>15</sup> Assuming a student-staff ratio of 16:1 (<https://www.publicschoolreview.com/average-student-teacher-ratio-stats/national-data>).

<sup>16</sup> Average class sizes by state are available from <https://www.insider.com/states-with-the-best-and-worst-public-education-systems-2019-8>.

<sup>17</sup> Chicago Metropolitan Agency for Planning. Parking Strategies to Support Livable Communities. 2012. Retrieved 7/8/20 from <https://www.cmap.illinois.gov/documents/10180/96911/StepByStep3.pdf/39fa6452-2e19-4691-87bd-abac8b06c248>.

all students to use means other than by car to get to and from school.<sup>18</sup> The City’s role in facilitating this program would likely be eliminating infrastructure barriers to safe routes to school.<sup>19</sup>

### Eating and Drinking Establishments

Houston classifies its restaurants and similar establishments into several types, based on type of service and provides different rules for each. Its peers generally treat all service types as one for parking requirements, with few exceptions. Austin, Charlotte and Oakland also distinguish requirements based on floor area. Additionally, Atlanta and Austin have different requirements for places making most of their revenue selling alcoholic drinks. There are other aspects that draw adjustments to parking requirements amongst the peers, such as outdoor seating, alcohol production and upper floor area. In the table below, the types of establishments detailed in the Houston code are abbreviated for ease of use; Take-out and Dessert are truncated and the names Small and Neighborhood refer to restaurants. For each type, the ratio for parking for Houston is provided on the same line on the left side of the table. The right side displays each peer’s requirements, which are independent of kind of establishment.<sup>20</sup>

<b>Eating/drinking establishment:</b> - Take-out - Dessert* - Small* - Neighborhood* - Restaurant* - Tavern or pub** - Small bar** - Bar, club or lounge** * SF includes outdoor area if > 15% total GFA ** SF includes outdoor area regardless of share	<b>Houston</b>	<b>Atlanta</b>	1 / 100 SF 1 / 200 SF (outdoor > 25%) 1 / 75 (alcohol)
		<b>Austin</b>	1 / 275 SF (Take-out)
		Non-alcohol	1 / 100 SF (< 2.5K) 1 / 75 SF (>2.5K)
		Alcohol	1 / 100 SF (<2.5K) 1 / 50 SF (<10K) 1 / 25 SF (>10K)
		<b>Charlotte</b>	1 / 175 SF (neighborhood) 1 / 75 SF (other/alcohol)
		<b>Dallas</b>	1 / 100 SF primary use 1 / 200 SF accessory use 1 / 500 SF alcohol production
		<b>Oakland</b> (uses > 3K SF)	1 / 600 SF (ground level) 1 / 1000 SF (above ground level)

Table 6 Parking Requirements for Eating & Drinking Establishments

As for housing and high schools, examples are needed to establish a base for comparison. Using Houston’s types as the examples, with the arbitrary establishment sizes indicated, the following table shows the corresponding requirements for each of the peers.<sup>21</sup> The sizes allow the calculations to be done and provide the link between Houston’s and the peers’ approaches to parking requirements.

<sup>18</sup> Sherry E. Jones & Sarah Sliwa. School Factors Associated with the Percentage of Students Who Walk or Bike to School, School Health Policies & Practices Study, 2014. Centers for Disease Control and Prevention. 2016. Retrieved 8/18/20 from [https://www.cdc.gov/pcd/issues/2016/15\\_0573.htm](https://www.cdc.gov/pcd/issues/2016/15_0573.htm)

<sup>19</sup> SRTS Guide. The Decline of Walking and Bicycling. National Center for Safe Routes to School. N.D. Retrieved 8/18/20 from [http://guide.saferoutesinfo.org/introduction/the\\_decline\\_of\\_walking\\_and\\_bicycling.cfm](http://guide.saferoutesinfo.org/introduction/the_decline_of_walking_and_bicycling.cfm)

<sup>20</sup> Drive-through facilities are not included in this analysis. Some peers prescribe number of stacking spaces for each drive-through, whereas Houston specifies only that the configuration must be sufficient to not block public right-of-way or required parking based on review and approval by the Director (Sec. 26-474).

<sup>21</sup> For simplicity, outdoor areas, accessory uses, and above ground level factors are not included in the calculations. The neighborhood establishment rule for Charlotte applies to Take-out and Dessert Shop.

Eating/drinking Place (floor area limit)	Size (SF)	Houston	Atlanta	Austin	Charlotte	Dallas	Oakland
Take-out	500	2	5	2	3	5	0
Dessert	750	5	8	3	4	8	0
Small (< 2k)	1,000	8	10	10	13	10	0
Neighborhood (< 3k)	1,500	14	15	15	20	15	0
Restaurant	4,000	40	40	53	53	40	7
Tavern or pub (< 2.5k)	1,200	12	16	12	16	12	0
Small bar (< 4k)	2,000	24	27	20	27	20	0
Bar, club, lounge	5,000	70	67	100	67	50	8

Table 7 Parking Spaces Required for Sample Eating & Drinking Establishments

Houston compares very favorably to its peers in the amounts of parking required for each type of establishment. Comparing the results, it becomes clear Houston never owns the highest requirement. Oakland is by far the city with the lowest requirements and is the only one of the peers to be geographically constrained. For these reasons, it will be treated as an outlier for this part of the analysis. Averaging out the requirements across all the uses shown, without considering Oakland, Houston typically requires between one and six fewer spaces per establishment. This is because Houston has at least an approximately equal parking minimum to all the other peers in all but two types of places, as can be seen in the following figure.

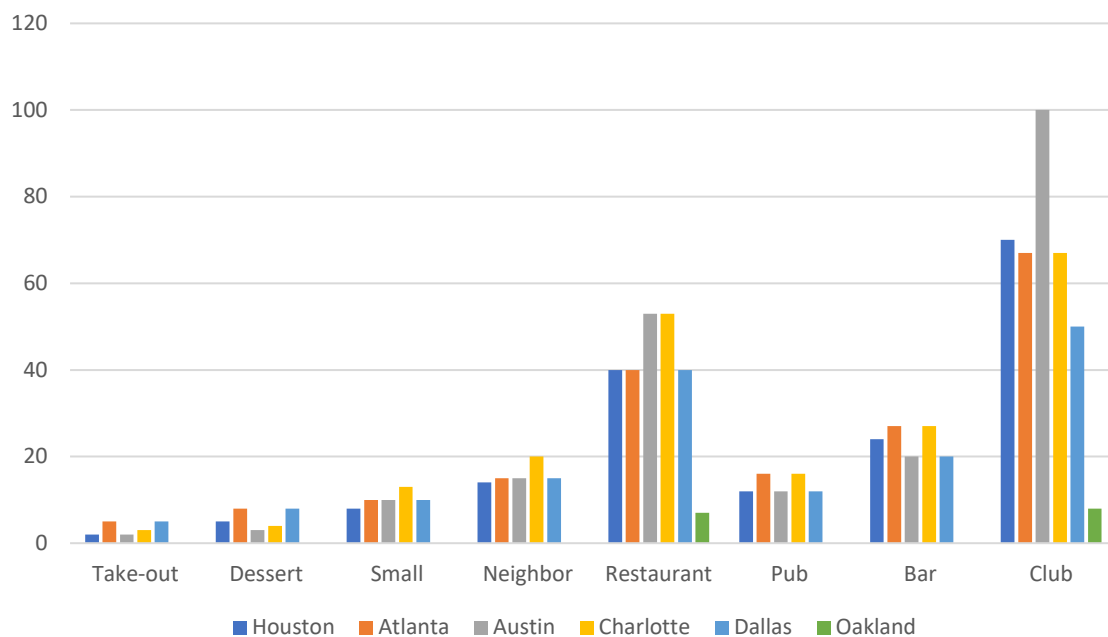


Figure 4 Parking Requirements Comparison for Eating & Drinking Establishments

By rearranging the above figure to instead show the difference in parking requirement between Houston and its peers for each type of reveals the key parking opportunities for food and drink establishments. In the figure below, data points above zero indicate the peer city requires more parking, and data points below zero mean that the peer parking requirement is less. There are two cases where Houston requires significantly more parking than one or more peers – the small bar and the lounge or club.

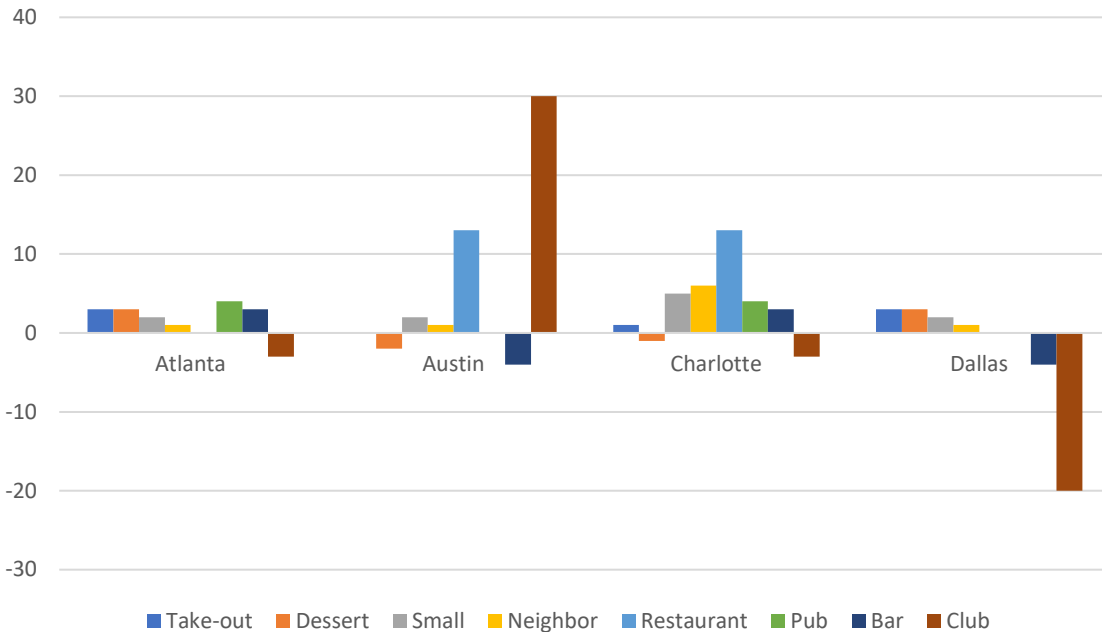


Figure 5 Houston-to-Peer Differences in Parking Requirements for Eating & Drinking Establishments

The three cities that require less parking for clubs compared to Houston are Atlanta, Charlotte and Dallas. This is simply due to the ratios. Houston requires 14 spaces for every 1,000 square feet of floor area for clubs. This is the same as one space for every 72 square feet. The highest ratio among the three peers is one in 75, for both Atlanta and Charlotte. Dallas uses one in 100. The same reason applies to the bar – Houston requires a space for every 83 square feet, whereas Austin and Dallas use one in 100.

Consolidation of restaurants and other food and drink establishments into fewer subclassifications does not seem to be any less effective at metering out parking requirements. As shown in the above analysis, the peers’ parking minimums generally track closely with Houston’s, suggesting detailed types of restaurants are not required for the parking rules to be effective. There are many possible combinations of these kinds of services, including other primary uses that employ food or beverage service as accessory uses that may not fall neatly into a preexisting list. The peer approach to application of parking ratios according to function (general size, alcohol service and delivery method, for example) appears to be the most appropriate way to deal with the potential variety of establishments.

The variance analysis showed food and beverage establishments often were not approved for parking reductions, unless clearly served by alternative modes. This is interesting because, while bars and restaurants have the most demanding parking requirements, they also cannot seem to get a break from them. Aside from the inherent drinking and driving issue, the growth in ride hailing services, and generational changes in travel behaviors, parking minimums, especially for neighborhood establishments, have helped create conditions that prevent infill development and the density the cities are looking for.<sup>22</sup>

In addition to the societal and development impacts of parking minimums on smaller scale restaurants and bars, there is an economic toll. Each parking space adds at least \$14,700 to the construction cost of one of these buildings.<sup>23</sup> Since parking requirements are typically based on data from the ITE Parking Generation Manual, which are based on surveys in suburban areas without transit service, the additional cost of land to fulfill these

<sup>22</sup> Paul Barter, Ending parking minimums – why, where, who, how. Reinventing Transport. 3 Jul 19. Retrieved 6/16/20 from <https://www.reinventingtransport.org/2019/07/ending-parking-minimums.html>.

<sup>23</sup> Donald Shoup. The High Cost of Free Parking. Routledge. 2017. P. 698.

requirements often is too much for the business owner to bear. Add to this the fact that occupancy rates for similar retail services reach 85% of the requirement at most and it becomes clear these minimum requirements are unnecessary and block smaller developments and businesses from ever getting started, let alone becoming contributing members of the community, especially in dense areas where the cost of land is even higher.<sup>24</sup>

The point is not to take away parking per se. Rather, the intent is finding ways to accommodate true demand for parking while balancing the need to stop discouraging other modes of travel. Instead of requiring standard parking spaces for peak demand, the approach may be to provide enough spaces for a sensible percentage of the peak – or what the typical demand is. The actual number of spaces can be reduced to recognize other modes, including transit, bike and pedestrian, ride-hailing, and car-sharing, among others. Surge capacity for peak periods may be provided in the form of additional off-site parking arranged for through shared parking agreements and/or valet services. For the typical business owner, valet services are expensive. This is where the City can step in; providing a planning environment in which valet and other shuttle services can be consolidated, financed and operationally flexible to serve multiple businesses.<sup>25</sup> Permitting such innovative approaches to parking solutions can take advantage of scales of economy and lower the cost of doing business while meeting the City's density goals.

### Land Uses Not Specifically Called Out in Houston Ordinance

There are some land uses classified by the ITE Parking Generation Manual for which Houston does not explicitly prescribe parking minimums. In many cases, there does not seem to be a need to break out a specific use from another, similar classification. While the peers studied do provide some additional detail in their code, the effects are typically no different from the similar use or add more required parking. For example, some peers specify requirements for room-occupancy housing, such as shelters, dormitories, and group homes. However, the results of the various parking calculation methods are not so different from each other to warrant breaking down Houston's Special Residential use. Also, only Austin and Dallas call out liquor stores separately from other retail establishments. Though Austin's requirement for liquor stores is no different from retail, Dallas does require more parking on a spaces per floor area basis.

There are two uses that are distinguishable enough from related classifications to justify separate treatment for purposes of parking requirements. Though typically associated with an underlying residential district or use, affordable housing has a clear need for distinction, since the goal is to minimize cost and reducing parking spaces is a tool to accomplish this goal. Typical residential parking requirements are unfair for low-income households, whether owning or renting, as they are either forced to pay for parking through higher housing prices, or must dedicate a significant portion of their income to owning a car for transportation (particularly if the housing does not have accessible transit). Nationwide Household Travel Survey statistics show that fewer low-income families own cars than do affluent ones.<sup>26</sup> Though a recent study showed lower than expected ridership in many poor neighborhoods,



*Affordable housing generally qualifies for reduced parking norms across peer cities*

<sup>24</sup> Donald Shoup. *The High Cost of Free Parking*. Routledge. 2017. P. 81-85.

<sup>25</sup> Washington State University. *Downtown Boise Parking Strategic Plan. Valet Parking Best Practices*. 2016. P. 150. Retrieved 8/18/20 from <http://www.ccdcboise.com/wp-content/uploads/2016/02/Document-K1-Parking-Management-and-Design-Best-Practices.pdf>

<sup>26</sup> Donald Shoup. *The High Cost of Free Parking*. Routledge. 2017. P. 165.

this could easily be due to underinvestment in accessibility infrastructure, such as sidewalks and shelters, as well as the previously mentioned housing affordability.<sup>27</sup> By requiring parking for every unit, the City is effectively making affordable housing more expensive and making low-income families buy cars they would not otherwise need to purchase. Recognizing this special land use and significantly reducing or eliminating required parking would help make affordable housing more affordable.

Three of the peers have modified parking requirements for affordable housing developments. There are two districts in Atlanta where affordable housing is the priority. In these districts, there is no minimum parking for residential units in affordable housing developments. Austin also provides reductions from parking requirements for affordable housing in its University Neighborhood Overlay district. Charlotte reduces the requirement to one space per dwelling unit citywide, as was mentioned earlier in the multifamily section. Oakland reduces the ratio of parking per dwelling unit by 25-50% (assuming multifamily housing) citywide in zones where there is a minimum.

The other use that should be dealt with differently from other uses is the winery, brewery or distillery. These establishments are a unique mix of industrial, commercial, and food and beverage uses that often serve as centers of activity. Generally, the cities address parking by the sum of the requirements for multiple uses, unless a specific rule covers the subject.<sup>28</sup> However, Austin and Dallas have implemented separate rules for breweries, with different approaches, but familiar ratios. Austin accounts for parking based on overall facility size just like a food and drink establishment. A small brewery (less than 2,500 SF), has the same ratio as a take-out restaurant. As it grows requirements also increase: a brewery up to 10,000 SF has the same ratio as a small bar and over 10,000 SF the same ratio as a large bar. Dallas applies requirements per discrete use and simply recycles the retail and service, manufacturing and storage ratios found in other land use sections of its ordinance.

Land use	Reference city (applicable code)	Minimum Parking Required
Affordable housing	Atlanta (Sec. 36A/37) Austin (25-6-601) Charlotte (12.202) Dallas (N/A) Oakland (17.116.110)	None 40% of typical requirement 1 / DU No distinction 3/4 / DU (not transit-accessible) 1/2 / DU (transit-accessible)
Winery/Brewery/Distillery	Austin  Dallas	1 / 275 SF (< 2.5K) 1 / 100 SF (< 10K) 1 / 50 SF (> 10K) 1 / 100 SF (retail/service) 1 / 500 SF (production) 1 / 1000 SF (storage)

Table 8 Potential Land Use Classifications for Houston's Parking Ordinance

Houston has found through experience with its market-based parking area, which includes part of East Downtown, that being flexible with parking requirements and working with developers to right-size parking facilities does work. In East Downtown, Eighth Wonder Brewery and several nearby relatively new restaurants, bars and other businesses have formed a substantial activity center. The traditional approach would have required a significant amount of space for parking; instead, the primary facilities are a paid shared parking lot and on-street parking. Despite the limited parking, there have been no complaints related to spillover parking from property owners or tenants in the area. One of the key catalysts for the recent developments is the relatively low cost of opening a business so close to downtown – in part made possible by the exemption from parking requirements.

<sup>27</sup> John Park. Getting More People to Use Transit in the Houston Area. Kinder Institute. 2018. Retrieved 8/17/20 from <https://kinder.rice.edu/2018/11/12/getting-more-people-use-transit-houston-area>.

<sup>28</sup> This is currently the approach in Houston, where wineries and breweries are classified as light manufacturing industrial with secondary use classified as a bar for the tasting/retail floor area. This predates the winery land use code in the ITE Parking Generation Manual, which is the basis for the subsequent recommendation of the Winery, Brewery, or Distillery use classification.



Reducing parking requirements does mean those who arrive by car may have to walk more to get to their destination. It is a culture change, which takes time and should be approached with sensitivity. The kind of revitalization and business investment that has occurred in East Downtown can be done in other underserved areas. Wineries, breweries, and distilleries offer opportunities as pilot projects for best practices in parking management. These include centralized parking, where several establishments can work together to pool resources and satisfy parking needs with one facility. The City can facilitate this approach by providing multimodal planning resources and shared parking incentives, such as assistance with setting up mobile valet services.<sup>29</sup> The bottom line is improvement takes work. Advance planning, working with developers in the early stages of site planning, and implementing contextual TDM policies are the foundation for future dense and multimodal neighborhoods.



*Houston is home to many vibrant breweries, distilleries, and wineries, several of which are relatively large activities present in formerly industrial or underutilized areas, like East Downtown or the Northside, as is Saint Arnold Brewing Company (pictured above). It's not as common to find them in denser areas, because parking for the retail floor areas is required at the same rate as much smaller bars.*

***Houston's existing ordinance does not mention parking regulations related to winery, brewery, and distillery uses. These establishments are a unique mix of industrial, commercial, and food and beverage uses that often serve as centers of activity.***

<sup>29</sup> Washington State University. Downtown Boise Parking Strategic Plan. Valet Parking Best Practices. 2016. P. 149-156. Retrieved 8/18/20 from <http://www.ccdboise.com/wp-content/uploads/2016/02/Document-K1-Parking-Management-and-Design-Best-Practices.pdf>

## Recommendations for Off-street Parking Code Changes

Based on the findings of this study's ordinance structure and benchmarking analysis, there are several ways for the City of Houston to improve the effectiveness of the off-street parking requirements. These recommendations are intended to serve as a list of actions that can be recommended by the Planning & Development Department in the near-term to address clear shortfalls or gaps in the code. Potential opportunities for future code refinements that may warrant more detailed study are presented later as best practices for districts.

Item	Recommendation	Targeted Goal(s)	Purpose for Use(s)
1	Simplify requirements to DU ratio for all multifamily residential uses Reduce ratio to 1.5/DU citywide Implement ratio reductions in dense areas (see Recommendation 7)	Increased density Increased affordable housing	Standardize parking requirements for all multifamily uses Eliminate unnecessary complexity in code Permit reduction to 1/DU to incentivize smaller, infill developments
2	Include transit, car-share, and other multimodal and TDM exemptions for ADU parking requirements	Increased density TDM through multimodality	Provide homeowners abundant opportunities to avoid an unnecessary requirement that may preclude ability to build an ADU
3	Change parking requirement formula for high schools to account for alternative transportation means for students and staff (evaluate for other school and institutional uses)	Reduced burden of variances Adoption of best practices	Reduce parking burden for public uses such as high schools through consideration of drop-off, transit and bike/ped facilities, as well as proactive measures such as on-street and neighborhood parking configurations and permit parking <sup>30</sup> Consideration may include whether school has active transport program
4	Consolidate parking requirements for eating and drinking establishments Adopt functional (size, delivery, alcohol) parking requirements	Context-sensitive parking regulations Adoption of best practices	Eliminate unnecessary complexity in code Develop contextual parking requirements based on engagement with owners and community leaders
5	Add affordable housing as parking reduction option for all residential uses Clearly define eligibility criteria	Increased affordable housing Adoption of best practices	Provide options for scaling reductions based on proportion of affordable housing units within development or existing residential uses <sup>31</sup> Incentivize development of low-income units
6	Add winery, brewery or distillery as a land use classification Develop appropriate parking ratios	Adoption of best practices New land use classification	Recognize unique land use Develop contextual parking requirements based on engagement with owners and community leaders
7	Develop citywide criteria for reducing parking minimums for population density, car ownership rate, and/or availability or use of TDM, multimodal options or shared parking facility	TDM through multimodality	Integrate transit service areas, pedestrian and bike infrastructure, and car-pool and -share programs as formal parking exemptions Use data-driven approach (H-GAC, METRO, Census) to inform parking requirements
8	Initiate shared parking and valet incentives program for food and beverage establishments (particularly bars)	Adoption of best practices Context-sensitive parking regulations	Facilitate pooling resources with other uses Utilize parking partnerships to merge facilities <sup>32</sup> Implement valet assistance program to enable professional, mobile valet and shuttle services

Table 9 Parking Ordinance Near-term Recommendations

<sup>30</sup> The Goodman Corporation. Alamo Heights Texas Parking Study. 2020.

<sup>31</sup> Alexander Garvin. The Heart of the City. Island. 2019. P. 160.

<sup>32</sup> The Goodman Corporation. City of Fredericksburg Downtown Parking Study. 2017.

The general approach to changes in off-street parking requirements should be to recognize that access can be accommodated in many ways and that parking is just one of them. Incentivizing other modes of travel can shift some of the access burden from the single-occupancy automobile and requisite parking lots in favor of other forms of travel, thus raising more awareness and utilization of multimodal facilities. Though efforts are not geared towards specifically breaking the cycle of automobile dependency, one of the cornerstones of dense development and affordability is balancing the car with all the other modes.<sup>33</sup> Proven ways to do so include centralized parking with a fee structure, simply limiting supply (which acknowledges induced demand), transit improvements and subsidies, as well as other pedestrian and bicycle infrastructure, to offset the reduced parking, and carpool or sharing programs.<sup>34</sup>

Currently, Houston provides for shared parking in the code (Sec. 26-499), but it is completely upon the developer to gather partners to meet the requirements in the Parking Credit Schedule. According to code, the decision to approve a developer's plan is based on proposed use characteristics and degree of demand overlap, potential reduction on vehicle movements and improvements in facility design and pedestrian circulation and access, impacts on traffic, residential neighborhood(s) and access to other facilities, and assured continued availability of proposed facility.

Atlanta proposed permitting shared parking by right in its denser districts.<sup>35</sup> Dallas has a program in place for special parking agreements, which may include shared, remote or packed techniques.<sup>36</sup> Austin allows developers to reduce their parking requirements by 20 spaces for every car sharing vehicle provided as part of an approved program.<sup>37</sup> Oakland has been running a pilot program paid for in part by Congestion Mitigation and Air Quality (CMAQ) funding and offers permits for developers that incorporate this type of program into their establishments.<sup>38</sup>

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<sup>33</sup> Chicago Metropolitan Agency for Planning. Impacts of Parking Strategies. 9/15/13. <https://www.cmap.illinois.gov/about/2040/supporting-materials/process-archive/strategy-papers/parking/impacts-of-parking-strategies>

<sup>34</sup> US EPA, Development, Community and Environment Division. Parking Spaces / Community Places. 01/06. Retrieved 7/8/20 from <https://archive.epa.gov/greenbuilding/web/pdf/epaparkingspaces06.pdf>

<sup>35</sup> Atlanta Department of City Planning. Atlanta Zoning Ordinance Update Phase II. N.d. p. 4. Retrieved 4/27/20 from <https://www.atlantaga.gov/home/showdocument?id=39209>.

<sup>36</sup> City of Dallas, Sustainable Development and Construction Department. Dallas Development Guide. 04/16. Retrieved 7/8/20 from [https://dallascityhall.com/departments/sustainabledevelopment/development\\_facilitation/Documents/Dallas%20Development%20Guide%20016.pdf](https://dallascityhall.com/departments/sustainabledevelopment/development_facilitation/Documents/Dallas%20Development%20Guide%20016.pdf)

<sup>37</sup> Will Macht. Developers Reduce Parking via Car Sharing. Urban Land. 8/19/19. Retrieved 7/8/20 from <https://urbanland.uli.org/development-business/developers-reduce-parking-via-car-sharing/>

<sup>38</sup> City of Oakland, Public Works. Car Share Programs. Retrieved 7/8/20 from <http://www2.oaklandnet.com/government/o/PWA/s/Projects/CarShare/index.htm>

<sup>40</sup> Reserved

### Best Practices for Districts

Houston has set a precedent for managing off-street parking through districts, such as downtown and special parking areas. In the absence of zoning, districts are likely to be the best tool for implementing future changes to parking requirements for specific areas. Like Houston, each of the peers treats its central business district quite differently from the rest of the city in regard to parking requirements. This part of the technical memorandum therefore reviews best practices in managing parking through districts from the peer cities, with emphasis on the downtown, other major activity centers, and TOD districts.

#### The Downtown

Houston’s parking rules for downtown are the simplest and represent the market-based approach.<sup>40</sup> Within the area defined, there are no minimum parking requirements, since the area is exempt from the off-street parking code. Though some peers do not specifically refer to a central business district, the effects of the adjusted requirements in central urban zones are very similar across the board. Generally, all the cities either apply few or no minimums and some enforce parking maximums, often in stark contrast to their citywide requirements. These special requirements are typically administered through zones specifically designed for the urban core, as shown in the following table.

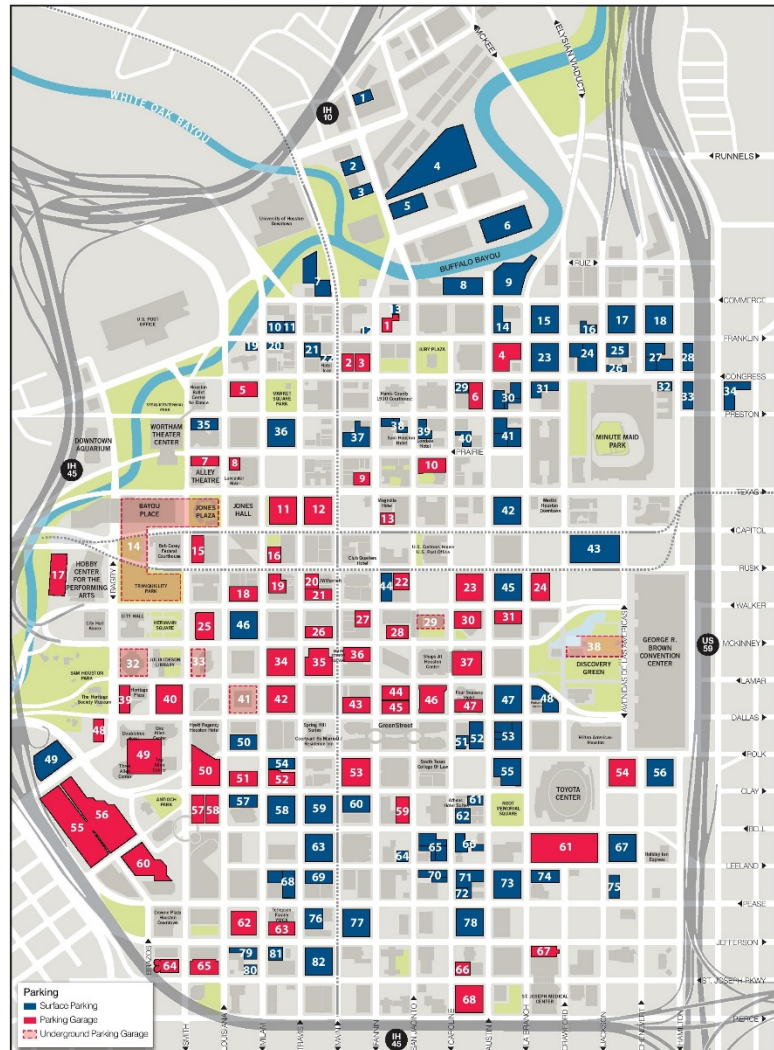


Figure 6 Downtown Houston Parking Map

City and Specific Area (applicable code)	Requirements (Where Different from Citywide)
<b>Houston</b> <sup>41</sup>	Exempt from parking requirements
<b>Atlanta</b> Commercial-Residential (Sec. 16-14.009)  Business Support (Sec. 16-15.008)	Non-residential = 1 / 600 SF Outdoor dining = 1 / 1200 SF if > 25% total GFA (1 / 900 SF if > 60% sales from alcohol) Residential = 0.5-1.5 / DU (per FAR & Sector) Shelters = 1 / 4 rooms + 1 / employee Minimums for residential and shelters only

<sup>40</sup> Donald Shoup. The High Cost of Free Parking. Routledge. 2017. P. 471-500.

<sup>41</sup> Houston employs a market-based parking program in the central business district as well as the entirety or a portion of East Downtown and Midtown. Houston Planning & Development Market-Based Parking Frequently Asked Questions. Retrieved 7/6/20 from [https://www.houstontx.gov/planning/docs\\_pdfs/Market\\_Based\\_Parking\\_FAQs\\_final\\_6.20.19.pdf](https://www.houstontx.gov/planning/docs_pdfs/Market_Based_Parking_FAQs_final_6.20.19.pdf).



City (applicable code)	Requirements (Where Different from Citywide)
<b>Austin</b> (Sec. 25-6 Div. 5)	No minimums except for ADA Max = 60% of citywide min (max may be increased)
<b>Charlotte</b> MU Development (Sec. 9.85) Uptown MU (Sec. 9.90)  Urban Residential (Sec. 9.408)  Urban Industrial (Sec. 9.1007)	Other than Residential, Hotel, Self-storage = 1 / 600 SF Office/commercial = 0.5-1.25 / 1000 SF Hotel = 0.5 / room Single/multifamily: Min = 1, Max = 2 w/ B&B or boarding house: Min = 2, Max = 4 Multifamily-Elderly: Min = 0.25, Max = 0.5 Non-residential: Min = 0 – 1/1000 SF, Max = 1/400 SF 1 / 2 employees (compact spaces ≤ 25%)
<b>Dallas</b> Central Area (Sec. 51A-4.124)	Uses post-1967 except SFR/duplex = 1 / 2000 SF: - No min for ground retail/service except alcohol beverage and indoor amusement - No min for first 5K SF restaurant w/o drive-in/thru
<b>Oakland (Ch. 17.116)</b> Central Business District Lake Merritt Station Area Civic Center	All residential (also ADU) = No minimum Max = 1.25 / DU (+1.25 / ADU) All others = No minimum Recreational, office, retail, services: Max = 1 / 300 SF (ground) + 1 / 500 SF (above)

Table 10 Central Area Parking Requirements

Generally, the cities waive parking minimums for uses in the downtown area. In some cities, such as Austin, Charlotte, and Oakland, parking maximums are used to emphasize non-parking land uses and multimodal access. Other considerations made for uses in downtown areas include counting on-street and recessed parking towards minimum requirements, requiring a service/delivery space for multifamily developments with 25+ units and non-residential uses over 50,000 SF, and not applying setback restrictions on parking for residential developments with individual or shared driveways.

Any of these special rules may be useful for Houston to implement in its urban core. The market-based approach may not always work as intended, especially if private financing policies vary between banks or over time. Relying wholly on the market to provide parking may still prevent the City from attaining its land use and mobility objectives.<sup>42</sup> Implementing parking maximums has shown to be an effective way to properly shepherd development towards the City's density goals.

### Other Major Activity Centers

Outside the traditional central business district, or downtown, Houston has several urban centers that serve as major activity centers. The City has recognized the need to regulate parking differently also in these areas and has implemented the Special Parking Area (SPA) to do so. These are districts, akin to what other cities have in place to manage development in their high-density areas.

According to the Houston code (Sec. 26-500), parking requirements may be adjusted in certain major activity centers that demonstrate parking demand can be met through means other than those prescribed by the off-street parking regulations. This is applicable to areas having at least two principal land uses, 3.5 million square feet of gross floor area, existing floor area ratio of 1.0, contiguous nature with any point no more than 1,800 feet from an existing

<sup>42</sup> Alan Goodwin. 12 Years of TOD in Charlotte. Charlotte Planning, Design and Development. 2018. P. 6. Retrieved 5/6/20 from [https://railvolution.org/wp-content/uploads/2018/11/Alan-Goodwin-Charlotte\\_TOD\\_RVPGH.pdf](https://railvolution.org/wp-content/uploads/2018/11/Alan-Goodwin-Charlotte_TOD_RVPGH.pdf)

transit facility, and an agreement in place for any private property used for parking. This makes it essentially a large area shared parking district.

The SPA districts require a parking management plan that proposes substitute parking ratios based on the existing and proposed uses and floor areas, parking facilities and other modes of transportation, estimated trip generation by use, total employment and resident population, and spillover parking countermeasures. The district must also be led by a competent management entity.

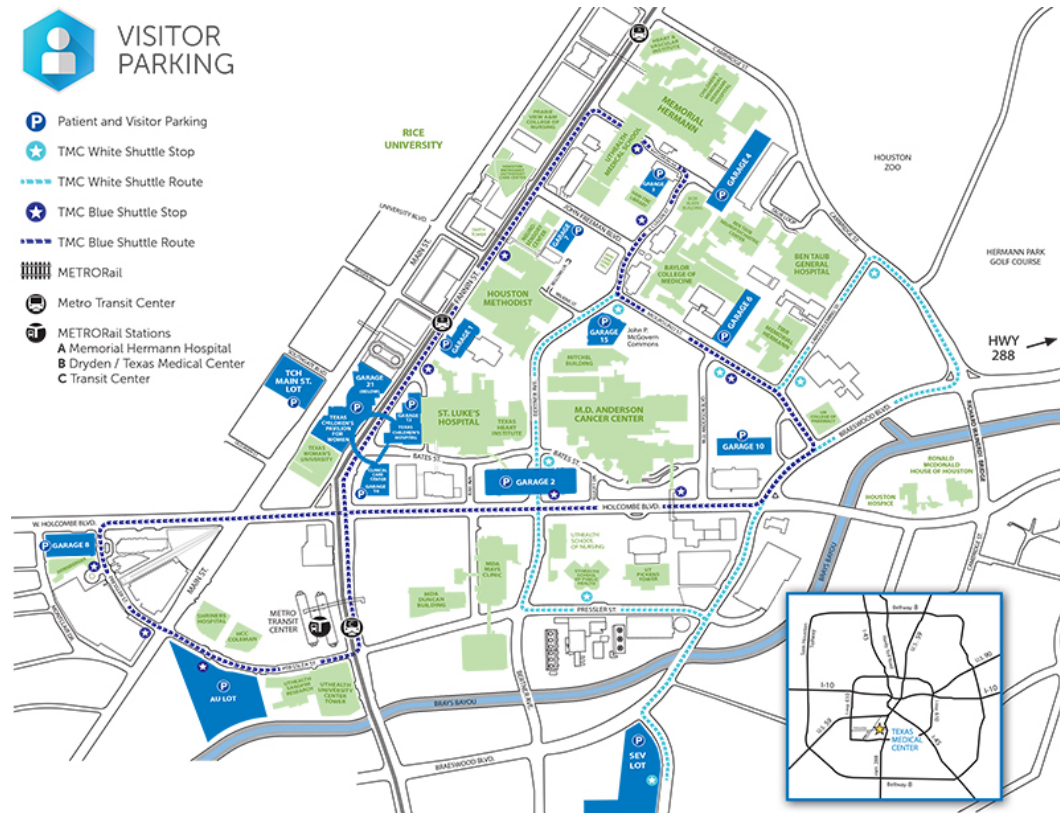


Figure 7 Texas Medical Center Parking Map

Current parking management areas mentioned in the Houston code include the South Main/Texas Medical Center, Uptown/Galleria and Greenway. The Texas Medical Center is required to provide no less than 1.2 spaces per 1,000 square feet gross floor area. Uptown uses revised minimum parking ratios for offices (2.75 / 1,000 SF UFA), shopping centers (4.0 / 1,000 SF UFA) and hotels (0.5 / room if more than 250 rooms).

The Greenway Area is following standard parking minimums until a parking management plan is established. Each of these areas is clearly a dense, mixed use center, patently separate from downtown Houston. Such distinction warrants special treatment of parking requirements. The peer cities also have activity centers that are detached from the central city's downtown. The following paragraphs summarize how each peer has identified these areas and developed the ordinance to manage them separately from their surroundings.

Often Atlanta's Buckhead Village district and Uptown Houston are mentioned in the same breath as examples of major destinations and activity hubs.<sup>43</sup> One might expect to see similar parking management strategies in both districts; however, Buckhead Village includes more detail in its parking rules. Eating and drinking establishments must work within a relatively tight range of minimum and maximum limits, as shown below.

<sup>43</sup> Alexander Garvin. The Heart of the City. Island. 2019. p. 4-5.

Establishment Type	Indoor/covered floor area		Outdoor floor area (> 25% GFA)	
	Min	Max	Min	Max
Alcohol < 60% sales	1 / 375 SF	1 / 300 SF	1 / 750 SF	1 / 600 SF
Alcohol > 60% sales	1 / 250 SF	1 / 200 SF		

Table 11 Special Parking Requirements for Atlanta's Buckhead Village

Any uses other than eating and drinking establishments have no minimums. Maximums, which may be increased, depending on tenant demand, demonstrated parking utilization, and off-site parking availability within a quarter mile, have been implemented to ensure dense development.

Land Use	Max Parking Permitted
Hotel	1 / unit
Residential (1BR)	1.25 / unit
Residential (2BR+)	2.25 / unit
Other commercial/retail	2.5 / 1000 SF
Institutional/office	2.5 / 1000 SF
Recreational/entertainment	1.5 / 1000 SF
All others	2 / 1000 SF

Table 12 Parking Maximums in Buckhead Village

Dallas uses a parking management overlay to address a defined area's needs, but as a tailored solution based on an applicant's plan. Only developments in or adjacent to base districts designated walkable are eligible and typically the general requirements of walkable districts apply. Although the overlay application process allows for the proposed site plan to modify the requirements to suit the specific characteristics of the area, this is a relatively underutilized element of its development code.

None of the other peer cities have overlay districts dedicated to parking management areas, though there are similarly purposed zoning applications. Austin has a Central Urban Redevelopment (CURE) Combining District and a University Neighborhood Overlay (UNO). These are not geographically separate from the downtown the way Buckhead Village in Atlanta and Uptown in Houston are, but they do have distinctly different purposes, redevelopment, and affordability, and there is value in understanding how they are treated.

Central Urban Redevelopment (CURE) district	University Neighborhood Overlay (UNO)
	Generally: 60% of general requirement
Historical: 50% of general requirement	Commercial: No minimum if less than 6,000 SF or on main approaches to university
Residential, civic or commercial: 80% of general requirement	Multifamily: 40% of general requirement (if affordable housing makes up at least 10% of the total units and there is an active car sharing program)

Table 13 Austin's Special District Parking Requirements

Charlotte employs a Pedestrian Overlay District (PED) to support mixed use development and accessibility. This overlay provides for certain exceptions to the general requirements of their off-street parking ordinance.

Use	Min/Max Parking	Citywide Minimum
Hotel	≥ 0.5 / room	1 / room
Religious	≤ 1 / 8 seats	1 / 4 seats
Residential	≥ 1 / DU (except for certain PEDs) ≥ 1.25 / DU (multifamily) ≥ 0.25 / DU (elderly/disabled)	2 / DU (single family) 1-1.5 / DU (multifamily) 1 / room
Eat/drink and entertainment	≥ 1 / 125 SF	1 / 75 SF
All other non-residential	≥ 1 / 600 SF	1 / 200-400 SF

Table 14 Special District vs. Citywide Parking Requirements in Charlotte



In Oakland, two areas have parking requirements substantially different from the off-street parking ordinance. One is the Kaiser Permanente Medical Center. It is a special district assigned a total number of parking spaces based on full build-out. The other is the Residential Parking zone, which is combined with other, high-density districts in areas where residential development adjacent to other uses. To ensure sufficient parking in sensitive areas, such as in or near downtown, this section of the ordinance requires the greater of one space for every three bedrooms or what is required for the underlying base zone, in addition to a calculated number of visitor and ADA spaces.

Most of the peer cities have demonstrated that initiative on the city's part to develop revised regulations for parking in activity centers can encourage development while protecting historic assets and preserving residential neighborhoods. Potential special areas in Houston include the historic ward neighborhoods, Greenspoint, East Downtown, Rice University, and the University of Houston. There are also many mixed-use centers of varying size and density, such as City Center, Midtown, and Montrose, that can benefit from specialized parking rules.

### TOD Districts

Houston is in the process of implementing the Walkable Places and Transit-Oriented Development (TOD) Ordinances, which will establish new off-street parking standards along primary and secondary TOD streets and special parking areas. While other cities generally define TOD districts by geographical boundaries, Houston defines its TOD area by designated primary or secondary streets (the distinguishing factor being within 1,000-ft walking distance of a transit station).<sup>44</sup> The purpose of these ordinances is to encourage dense, walkable development in specific areas. In its current version, the Walkable Places ordinance's off-street parking requirements are the same as the citywide standards, unless property owners petition for a Special Parking Area (SPA). The TOD standards for off-street parking are different from typical requirements:

- Market-based (no minimum) for SFR on Primary and Secondary TOD streets
- Market-based (no minimum) for non-SFR uses on Primary TOD streets
- 50% reduction in parking minimums for non-SFR uses on Secondary TOD streets (requires opting into TOD design standards; applied prior to any other reductions)

The generally accepted approach to parking in TOD districts amongst the peer cities that have them is parking maximums. How they have applied maximums varies. For example, in the Buckhead/Lenox Stations district (different from the Buckhead Village district), Atlanta only requires parking for establishments with an alcohol beverage license and a certain percentage of office parking be assigned to car and van pools. The maximums in this area are approximate to the citywide minimums. Austin has a very simple approach to its special provisions for TOD, as shown previously in the Downtown Parking Requirements Table; a maximum of 60% of the typical requirement for any use. Charlotte has an entire zoning ordinance dedicated to TOD. The only minimums it applies are for bars, restaurants, breweries and live venues within a certain distance of a single-family residential district. It applies parking maximums to other uses. Dallas does not have TOD-specific language in its code, but it does have walkable districts. Although, except for minor reductions in single-family and multifamily parking minimums, there is not much difference from the citywide rules. Oakland has two TOD-related zones designated in its planning code. Any reduction in parking is an indirect result of the development standards implemented by the zoning regulations.

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<sup>44</sup> City of Houston Planning & Development, Walkable Places Committee. Walkable Places Code Amendments. 1/9/20. Retrieved 5/6/20 from [https://www.houstontx.gov/planning/Commissions/committee\\_walkable-places.html](https://www.houstontx.gov/planning/Commissions/committee_walkable-places.html)

## Conclusion

Best practices in parking requirements include integrating plans and design standards with supply and demand management. Consideration of off-street parking needs and requirements in conjunction with general planning efforts and development regulations realizes the benefits of actively managing parking requirements, as Charlotte has demonstrated in over 10 years of TOD experience.<sup>45</sup>

- Plan the TOD district and engage private sector well in advance of implementation of multimodal facilities
- Reducing parking has created space for public realm amenities, networks of footpaths, and open space
- Less emphasis on parking (and special attention on design standards) has helped with activation of the ground floor
- Use vision plan and ordinance updates to continuously improve development standards like introducing parking maximums and requiring parking facilities to be convertible to other uses

Supply management can be summarized from Oakland’s Downtown Parking Study findings for off-street parking.<sup>46</sup>

- District-based parking should be a standalone enterprise operation
- Reduce reserved parking
- Improve wayfinding system
- Unbundle parking from residential and commercial leases
- Include car-sharing and transit passes incentives or requirements

Atlanta produced an assessment that directly addressed demand management. Most of these measures are policy-driven and indirectly linked to off-street parking.<sup>47</sup>

- Centrally manage parking resources to ensure system-wide efficiency
- Implement parking policies that support and connect to multimodal options
- Leverage on-street parking through pricing and monitoring
- Promote public-private partnerships to jointly innovate parking safety, state of repair, and user experiences

The recommendations and best practices noted in the preceding sections provide the basis for a context sensitive set of parking rules to encourage multimodality and increased density. Off-street parking represents one of many factors that impact density, multi-modality, affordable housing and, in general, quality of life. Indeed, there is much more to off-street parking, as well. Strategic, empirical studies of specific uses can tease out the true sources of demand, especially as they change over time, providing the City a more contextual planning reference than the ITE Parking Generation Manual, peer analysis or other sources not specifically addressing Houston’s urban form. Partnering with business and development stakeholders can potentially leverage market, sales and occupancy data to synchronize requirements within the context of the street, block and neighborhood for better shared multimodal and vehicle access throughout the City and down to the block level. Treating off-street parking not as a stand-alone set of requirements, but as an integral part of the urban development system, will help assure the desired outcomes are achieved.

<sup>45</sup> Alan Goodwin. 12 Years of TOD in Charlotte. Charlotte Planning, Design and Development. 2018. P. 7-9. Retrieved 5/6/20 from [https://railvolution.org/wp-content/uploads/2018/11/Alan-Goodwin-Charlotte\\_TOD\\_RVPGH.pdf](https://railvolution.org/wp-content/uploads/2018/11/Alan-Goodwin-Charlotte_TOD_RVPGH.pdf)

<sup>46</sup> City of Oakland / Metropolitan Transportation Commission. Downtown Oakland Parking Study: Parking Management Report – Final. 6/16. Ch. 4. 77-Retrieved 4/27/20 from <http://www2.oaklandnet.com/oakca1/groups/ceda/documents/agenda/oak057558.pdf>.

<sup>47</sup> Atlanta Downtown Improvement District. Parking Today: Downtown Atlanta Parking Assessment Existing Conditions. 6/14. Retrieved 4/27/20 from <https://www.atlantadowntown.com/files/docs/existing-conditions-download.pdf>.

## Appendix A – Peer City Selection

The scope of this study included identifying and selecting peer cities by which to compare existing parking requirements in the ordinance and ascertaining best practices of planning for off-street parking. To aid in selecting peer cities that would provide meaningful comparisons for parking policies and practices, it was determined that an objective evaluation tool would be needed to create a short list of candidates from which to select the few that would be analyzed for the study. This appendix summarizes the development and employment of the selection tool.

The parking requirements strategy of the City of Houston is to help increase density and affordable housing by implementing context-sensitive rules that recognize the opportunities of multimodal access. This means that factors that determine transit use by a city's population needed to be considered in the selection of the peers for this study. Other cities have done peer reviews for transit-supportive and affordable housing development and the criteria for selection in this case can be identified from the report of one of these prior studies.<sup>48</sup>

The intent of the selection process was to identify a mix of relatively progressive, conservative and moderate cities of roughly equivalent metropolitan and transit area size to Houston, but without automatically disregarding smaller cities. From the perspective of parking policies, progressive cities are those that have implemented parking maximums, conservative cities still use primarily parking minimums (typically based on the ITE Parking Generation Manual or other peak demand data), and moderate cities are generally somewhere in between. The initial list used for evaluation consists of cities in the continental United States chosen from those having made at least some progress on parking minimum removals or reductions.<sup>49</sup>

The initial list of 21 cities having made some parking requirements policy progress, including Houston, and criteria serving as basis for peer selection are shown in the table at the end of this appendix. It is important to note that the same criteria that determine to a large extent how a population uses the city's transit services also serve as statistics that influence demand and utilization of parking facilities.<sup>50</sup>

The data used for selection consisted of various population, economic, household and transit statistics available from various US Census and FTA data portals. The statistics used and sources from which they were obtained are (organized by note as shown on the table):

1. City Population, Area, Number of Businesses, and Median Income: City Profiles, US Census (<https://data.census.gov/cedsci/>)
2. Metropolitan Statistical Area (MSA) population: Census data advanced search (<https://data.census.gov/cedsci/advanced>)
3. Driving Percent of Mode Share: ACS Table S0802 (Means of Transportation to Work)
4. Vehicles per Household and Households with No Vehicle: ACS Table S2504 (Physical Housing Characteristics). The number vehicles available is factored by housing units (3 or more vehicles counted as 3) for weighted average for all occupied housing units.
5. Annual Ridership, Service Area, and Fixed Guideway Miles: National Transit Database Agency Profiles 2018 data (<https://www.transit.dot.gov/ntd/transit-agency-profiles>). Agency data typically includes service provided beyond the MSA's boundaries and may include a larger city's area.

<sup>48</sup> The City of San Diego completed a Transit Priority Area Multifamily Residential Parking Standards study last year and the Appendix A – Peer City Review Memo provides a suitable slate of impactful criteria for purposes of peer selection (<https://www.sandiego.gov/planning/programs/transportation/mobility/tpa>).

<sup>49</sup> Strong Towns, a non-profit, community planning organization that does webinars and presentations, training and assistance, and advocacy events. The website has a wiki-type interactive map of cities and towns that have addressed parking regulations with details on progress made. See <https://www.strongtowns.org/parking> for more information.

<sup>50</sup> Morrall, J., Bolger, D. The Relationship Between Downtown Parking Supply and Transit Use. ITE Journal, Vol. 66, Iss. 2, p. 32.

All cities’ data were tabulated to calculate averages and scores relative to group average for each criterion. Relative scores provided the basis for comparison to establish three basic sub-groupings: within, above and below a range around Houston’s scores as specified through sensitivity analysis. The range definition parameters in the tool were set to values that produced “in range” sub-groups of between six and nine peers to represent approximately one-third of the 20 peers (see table below; % Under refers to the lower limit of the range and % Over refers to the upper limit). Whether there were equivalent thirds in the “above range” and “below range” sub-groups depended on Houston’s positioning as the fourth largest city in the US and its car-centric urban form. The sub-groupings were then used to define terms for selection based on what type of peers were being sought: similar to Houston (all criteria in range), model cities (certain criteria set above or below Houston’s range), and car-centric cities (generally the opposite of the settings for the model cities selection). As mentioned earlier, it was considered important to diversify the peer selection, so each of the scenarios was established to identify cities that were of similar urban form, more transit-oriented or more car-centric than Houston, but also working on parking reform.

Criterion	Houston	% Under	% Over
City Population	2,295,982	60%	20%
Area (square miles)	637.4	60%	0%
Metropolitan Area Population	6,997,384	60%	5%
Number of Businesses	260,347	72%	0%
Driving Percent of Mode Share	88.2%	15%	0%
Median Income	\$51,140	10%	15%
Vehicles per Household	1.56	17%	3%
Households with No Vehicle	8.71%	5%	100%
Annual Ridership	90,300,547	55%	100%
Service Area (square miles)	1,306	55%	0%
Fixed Guideway Miles	43.6	80%	300%

The evaluation tool set up for this study uses a combination of pivot tables, data validation lists, conditional formulas and lookup and array functions to automatically prioritize peer cities based on user-defined range for each criterion and preference for the peers to be within, above or below the defined range. The tool allocates points to each city based on the inputs and provides a list of the top seven cities based on total scores across all criteria. An example of the results of the “in range” scenario is displayed at the end of this appendix. The tool’s output can be copied to another document to run multiple scenarios to account for different user preferences. The City desired to select two cities in Texas, two Eastern or Midwestern cities, and one Western city for the peers. Following this direction, the three scenarios above were run.

The cities most similar to Houston were identified as Dallas, San Diego, Atlanta, Minneapolis, Phoenix, San Antonio and Austin. Next, the seven cities identified as models for higher transit use were Oakland, Boston, Minneapolis, Atlanta, Philadelphia, Portland and Chicago. Finally, those cities with cars as a more dominant form of transportation than the rest were Charlotte, Austin, San Diego, Phoenix, San Antonio, Buffalo and Dallas. The results from the scenarios were presented to the City during a final selection meeting, at which the five cities chosen as peers for this study were identified as Atlanta, Austin, Charlotte, Dallas and Oakland.

**Off-street Parking Ordinance Analysis & Recommendations**

**City of Houston, Texas**

City	Houston	Atlanta	Austin	Baltimore	Boston	Buffalo	Charlotte	Chicago	Cincinnati	Dallas
City Population <sup>1</sup>	2,295,982	479,655	935,755	614,700	679,413	257,518	841,611	2,718,555	300,357	1,318,806
Area (square miles) <sup>1</sup>	637.4	133.4	312.7	80.9	48.3	40.4	305.3	227.3	77.4	340.8
Metropolitan Area Population <sup>2</sup>	6,997,384	5,950,828	2,168,316	2,753,149	4,875,390	1,130,152	2,569,213	9,497,790	2,189,442	7,540,371
Number of Businesses <sup>1</sup>	260,347	64,593	96,048	51,891	59,268	15,178	81,973	291,007	26,855	142,658
Driving Percent of Mode Share <sup>3</sup>	88.2%	71.0%	83.4%	69.0%	44.6%	78.4%	84.7%	57.2%	80.7%	87.8%
Median Income <sup>1</sup>	\$51,140	\$55,279	\$67,462	\$48,840	\$65,883	\$35,893	\$60,886	\$55,198	\$38,542	\$50,100
Vehicles per Household <sup>4</sup>	1.56	1.31	1.63	1.08	0.96	1.11	1.63	1.09	1.29	1.53
Households with No Vehicle <sup>4</sup>	8.71%	16.31%	5.33%	28.87%	33.79%	26.09%	5.82%	26.89%	18.66%	9.04%
Annual Ridership <sup>5</sup>	90,300,547	120,162,922	29,491,269	96,231,787	372,398,838	25,158,937	22,516,607	468,067,963	14,467,431	62,438,784
Service Area (square miles) <sup>5</sup>	1,306	936	537	2,560	3,244	383	675	310	289	698
Fixed Guideway Miles <sup>5</sup>	43.6	96.1	64.2	487.4	982.5	12.4	55.2	211.9	3.7	259.4

City	Hartford	Indianapolis	Minneapolis	Newark	Oakland	Philadelphia	Phoenix	Portland	Provo	San Antonio	San Diego
City Population <sup>1</sup>	123,628	857,637	416,021	280,463	421,042	1,575,522	1,610,071	639,387	116,146	1,486,521	1,404,932
Area (square miles) <sup>1</sup>	17.4	361.4	54	24.1	55.9	134.1	517.5	133.4	41.7	460.9	325.1
Metropolitan Area Population <sup>2</sup>	1,206,300	2,048,428	3,629,190	19,979,477	4,729,484	6,096,372	4,857,962	2,478,996	632,705	2,518,036	3,343,364
Number of Businesses <sup>1</sup>	7,841	69,366	44,702	22,800	44,799	104,439	124,033	75,583	8,700	117,546	135,754
Driving Percent of Mode Share <sup>3</sup>	79.1%	91.3%	68.3%	62.5%	60.7%	56.8%	87.0%	66.1%	73.5%	90.1%	83.2%
Median Income <sup>1</sup>	\$34,338	\$46,442	\$58,993	\$35,181	\$68,442	\$43,744	\$54,765	\$65,740	\$46,532	\$50,980	\$75,456
Vehicles per Household <sup>4</sup>	1.03	1.58	1.35	0.92	1.43	1.01	1.7	1.47	1.99	1.63	1.72
Households with No Vehicle <sup>4</sup>	29.31%	8.47%	16.93%	36.90%	15.53%	30.62%	7.63%	13.64%	3.33%	8.37%	6.58%
Annual Ridership <sup>5</sup>	16,206,841	9,119,074	80,653,405	264,671,519	181,834,193	319,425,542	37,790,659	97,033,281	44,176,331	39,910,803	85,429,212
Service Area (square miles) <sup>5</sup>	664	396	653	5,325	364	839	520	382	737	1,213	720
Fixed Guideway Miles <sup>5</sup>	0	0	132.1	1,118.5	243.2	637.7	0	154.4	268.4	0	111.4

Off-street Parking Ordinance Analysis & Recommendations

City of Houston, Texas

Selection Basis	In Range	In Range	In Range	In Range	In Range	In Range	In Range	In Range	In Range	In Range	In Range	In Range	City Score
Category	Population			Economic		Household			Transit			City Score	
Criterion	City	Area	Metropolitan	Businesses	Driving Mode	Median Income	Vehicles	No Vehicle	Ridership	Service Area	Fixed Guideway	Total of "Yes"	
Atlanta	No	No	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	7	
Austin	Yes	Yes	No	Yes	Yes	No	No	No	No	No	Yes	5	
Baltimore	No	No	No	No	No	Yes	No	No	Yes	No	No	2	
Boston	No	No	Yes	No	No	No	No	No	No	No	No	1	
Buffalo	No	No	No	No	Yes	No	No	No	No	No	Yes	2	
Chicago	Yes	No	No	No	No	Yes	No	No	No	No	No	2	
Cincinnati	No	No	No	No	Yes	No	No	No	No	No	No	1	
Dallas	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	9	
Charlotte	No	Yes	No	Yes	Yes	No	No	No	No	Yes	Yes	5	
Hartford	No	No	No	No	Yes	No	No	No	No	Yes	No	2	
Indianapolis	No	Yes	No	No	No	Yes	Yes	Yes	No	No	No	4	
Minneapolis	No	No	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	6	
Newark	No	No	No	No	No	No	No	No	No	No	No	0	
Oakland	No	No	Yes	No	No	No	Yes	Yes	No	No	No	3	
Philadelphia	Yes	No	Yes	Yes	No	No	No	No	No	Yes	No	4	
Phoenix	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	6	
Portland	No	No	No	Yes	No	No	Yes	Yes	Yes	No	Yes	5	
Provo	No	No	No	No	No	Yes	No	No	Yes	Yes	No	3	
San Antonio	Yes	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	6	
San Diego	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	8	

Top 7	
Dallas	9
San Diego	8
Atlanta	7
Minneapolis	6
Phoenix	6
San Antonio	6
Austin	5

Appendix B – Parking Requirements Table

ITE #	City	Houston	Atlanta	Austin	Charlotte	Dallas	Oakland
Governing Ordinance(s)		Sec. 26-492	Sec. 16-08 to 16-17	Ch. 25-6 App. A	Table 12.202 (App. A)	Div. 51A-4.200	Ch. 17.116
<b>Industrial</b>							
110	General Light Industrial / R&D	2.5 / 1K SF (Office) 1 / 2-7K SF (Warehouse)	1 / 600 SF or 1 / 2 employees	1 / 275 SF	0.25 / 1K SF sales 1 / 400 SF office	1 / 333 SF office 1 / 600 SF operations 1 / 1-4K SF storage 1 / 100 SF retail	1 / 3.5K SF (> 25K)
130	Industrial Park / Multi-tenant building			1 / 1K SF (indoor) 1 / 2K SF (outdoor)			
140	Manufacturing						
150	Warehousing / Wholesale						
151	Mini-Warehouse	1 / 50 units	1 / 600 SF 1 / 50 units	1 / 4K SF			
<b>Residential</b>							
220	Multifamily Housing (Low-Rise)	1.25-2.0 / DU (based on # BR)	1-2 / DU (based on FAR & Sector)	1 / BR	1-1.5 / DU	1 / BR 0.25 / DU visitor	1 / DU
221	Multifamily Housing (Mid-Rise)						
222	Multifamily Housing (High-Rise)						
223	Affordable Housing				1 / DU		0.5-0.75 / DU (transit-dependent)
N/A	Single Family Detached	2 / DU ADU (≤ 900 SF) = 1	1-2 / DU ADU = 0	2 / DU ADU = 1 (> 0.25 mi from transit); 0 (≤ 0.25 mi)	2 / DU B&B = 1 / room	1-2 / DU	1-4 / DU ADU = 0-2 B&B = 1 / 2 rooms
	Single Family Attached		1 / DU (+1 / BR > 3) ADU (≤ 750 SF) = 1			2 / DU	
	Special/Boarding/Rooming	0.3 / room 1 / employee	1 / 2 DU 1 / employee	1 + 1 / 2 rooms	1 / room	0.25 / bed 1 / 200 SF office	1 / 2 rooms
<b>Lodging</b>							
310	Hotel	1 / room (≤ 250) 0.75 / room (≤ 500) 0.5 / room (> 500)	1 / room + 1 / 2 employees + 1 / 100 SF restaurant + 1 / 300 SF convention	1.1 / room 80% of typical use requirement (non-accessory)	1 / room 1 / 4 seats (conference) 1 / 250 SF (restaurant)	1 / room (≤ 250) 0.75 / room (≤ 500) 0.5 / room (> 500)	1 / 600 SF ground + 1 / 1000 SF above (> 3K)
311	All Suites Hotel						
312	Business Hotel						
320	Motel						
330	Resort Hotel						
<b>Recreational</b>							
411	Public Park	1 + 1 / AC > 2 (5-10 AC) 5 + 1 / 10 AC (> 10 AC) 1 / pavilion table		As Directed		None	
437-438	Bowling/Billiards/Games	5 / lane or 1K SF	1 / 100 SF	1 / 100-275 SF	1 / 200 SF	6 / lane	1 / 600 SF ground + 1 / 1000 SF above (> 3K)
441/495	Live Theater / Arena / Civic Facility	1 / 3 seats	1 / 4 fixed seats	1 / 4 seats	1 / 3-4 seats	1 / 200 SF	1 / 15 seats
444	Movie Theater	0.3 / seat	1 / 100 SF		1 / 5 seats	1 / 100 SF	1 / 600 SF ground + 1 / 1000 SF above (> 3K)
491-293	Sports/Fitness Club	3 / court 5 / 1K SF	1 / 200 SF	1 / 5 occupants	3 / court	3 / court 1 / 150 SF	



Off-street Parking Ordinance Analysis & Recommendations

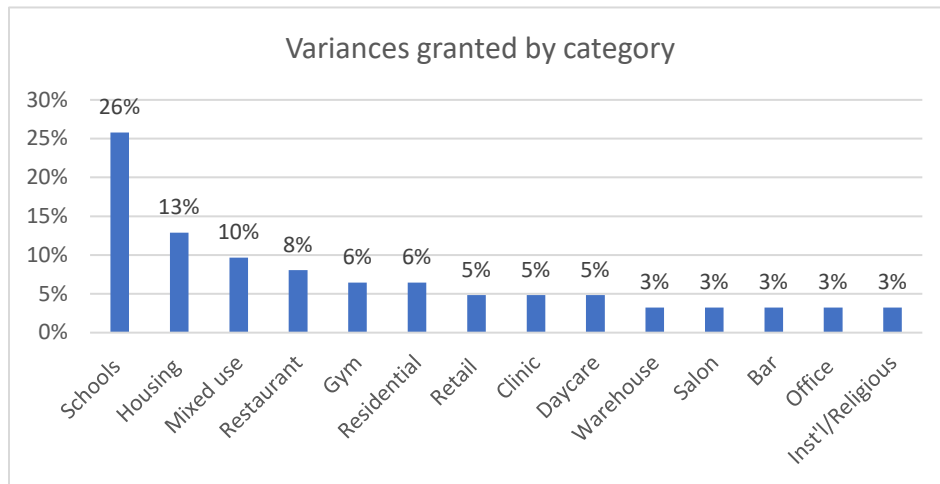
City of Houston, Texas

ITE #	City	Houston	Atlanta	Austin	Charlotte	Dallas	Oakland
Governing Ordinance(s)		Sec. 26-492	Sec. 16-08 to 16-17	Ch. 25-6 App. A	Table 12.202	Div. 51A-4.200	Ch. 17.116
<b>Institutional</b>							
520	Elementary School	1 / 12 occupants	1 / 4 fixed seats	1.5 / staff	1 / classroom	1.5 / classroom	0.5 / classroom
522	Middle/Junior High School	1 / 7 occupants	2 / classroom			3.5 / classroom	
530	High School	1 / 3 occupants	1 / 4 fixed seats 4 / classroom	1.5 / staff + 1 / 3 students	1 / classroom + 1 / 5 students	9.5 / classroom	As Directed
540/550	College/University	1 / 3 employees 1 / 10 resident students 1 / 5 non-resident	1 / 4 fixed seats 8 / classroom	1 / 275 SF Office 1 / 500 SF Gym/Class	1 / 2 students	1 / 25 SF	As Directed
560-562	Religious	1 / 5 fixed seats or 40 SF (sanctuary/auditorium)	1 / 4 fixed seats or 35 SF (largest assembly)	1 / 275 SF (multi-tenant) As Directed (free-standing)	1 / 4 seats	1 / 333 SF (< 5K) 1 / 4 seats 1 / 28 SF other areas	1 / 100 SF
565	Day Care Center	1 / employee 1 / 5 children (x2 w/ drop-off)	1 / 600 SF (drop-off req'd)	1 / employee	1 / employee 1 / 10 children	1 / 500 SF	None
580	Museum/Gallery	3 / 1K SF (exhibit area)	1 / 300 SF	1 / 500 SF	1 / 250 SF	1 / 500-600 SF	1 / 100 SF (> 10K)
590	Library	1.2 / 1K SF					
<b>Medical</b>							
610	Hospital	2.2 / bed 1/4 beds + 1/4 employees (psychiatric)	1 / 4 beds 1 / 2 employees	1 / 4 beds + 1 / 2 employees	1.2 / bed	1 / bed	As Directed
612	Surgery Center			1 / 200-275 SF (human) 1 / 500 SF (animal)	1 / 200 SF		1 / 6 beds 1 / 4 employees
620	Nursing Home	1 / 3 beds 1 / 4 employees	1 / 4 beds 1 / 2 employees		1 / 3 beds 1.5 / unit	0.3 / bed	
630/640	Clinic	2.7 / 1K SF (human) 5 / 1K SF UFA (animal)	1 / 300-600 SF		1 / 200 SF	1 / 200-300 SF	3 / doctor 3 / employee
<b>Office</b>							
710-715	General/Corporate Office	2.5 / 1K SF 2.75 / 1K SF UFA	1 / 300 SF	1 / 275 SF	1 / 300 SF	1 / 333 SF	1 / 600 SF ground + 1 / 1000 SF above (> 3K)
720	Medical-Dental Office Building	3.5 / 1K SF					
<b>Retail</b>							
812	Building Materials and Lumber Store	4 / 1K SF (retail sales area)	1 / 200 SF	1 / 275 SF	1 / 250 SF	1 / 275 SF retail 1 / 1K SF storage	1 / 600-1K SF (> 3-10K)
813	Free-standing Store/Superstore		1 / 300 SF			1 / 330 SF (> 100K)	
814	Variety/Specialty Store						
820	Shopping Center	4 / 1K SF	1 / 200 SF	1 / 500 SF	1 / 250 SF	1 / 500 SF public 1 / 1K SF storage	
850	Supermarket	5 / 1K SF					
890/892	Furniture/Carpet Store	2 / 1K SF					
899	Liquor Store			1 / 275 SF		1 / 200 SF	
N/A	Barber/Beauty Shop	8 / 1K SF		As Directed			

ITE #	City	Houston	Atlanta	Austin	Charlotte	Dallas	Oakland
Governing Ordinance(s)		Sec. 26-492	Sec. 16-08 to 16-17	Ch. 25-6 App. A	Table 12.202	Div. 51A-4.200	Ch. 17.116
Services							
912	Financial/Drive-in Bank	4 / 1K SF	1 / 200 SF 7 stack / bay	1 / 275 SF 8 stack / bay 2 stack / ATM	1 / 200 SF	1 / 333 SF	1 / 600 SF (ground) 1 / 1K SF (above) (> 3K)
920	Copy, Print and Express Ship Store		1 / 200 SF	1 / 275 SF	1 / 250 SF	1 / 600 SF	
930	Fast Casual/Neighborhood Restaurant	9 / 1K SF + outdoor area > 15%	1 / 100 SF 1 / 75 SF (>60% gross income from alcohol) 1 / 200 SF (> 25% outdoor) 4 / drive-thru	1 / 100 SF (≤ 2.5K) 1 / 75 SF (> 2.5K) 1 / 275 SF (Take-out) 8 stack / drive-thru	1 / 75 SF	1 / 100 SF main 1 / 200 SF accessory 1 / 500 SF alcohol production	
931	Quality Restaurant	10 / 1K SF + outdoor area > 15%					
932	High turnover/Pub Restaurant	10 / 1K SF + outdoor area					
933/934	Fast-food/Small Restaurant w/o Drive-thru	8 / 1K SF + outdoor area > 15%					
934	Fast-food/Small Restaurant w/ Drive-thru						
936	Coffee/Take-out Shop w/o Drive-thru	4 / 1K SF					
937	Coffee/Take-out Shop w/ Drive-thru						
939	Bread/Bagel/Dessert Shop w/o Drive-thru	6 / 1K SF + outdoor area > 15%					
940	Bread/Bagel/Dessert Shop w/ Drive-thru						
941	Quick Lubrication Vehicle Shop	3 stack / bay					
943	Automobile Parts and Service Center	1 / employee	1 / 200 SF	1 / 275 SF			
960	Super Convenience Market/Gas Station						
970	Winery/Brewery/Distillery			1 / 275 SF (< 2.5K) 1 / 100 SF (< 10K) 1 / 50 SF (> 10K)			See 930-939
N/A	Bar/Lounge/Club	12-14 / 1K SF + outdoor area	See 930-939	See 930-939	See 930-939	See 930-939	

## Appendix C – Off-street Parking Variance Analysis

This appendix summarizes the trends that emerged from the analysis of City of Houston’s off-street parking variances issued from 2013 to April 2020. Over this time, the City of Houston has dealt with 87 off-street parking variance applications, out of which 62 were approved. These variances were seeking reductions in the off-street parking requirements for a range of developments, like new developments, redevelopments, changes of use and adaptive re-use of existing buildings. Of the 62 approved cases, the top three categories of land uses were schools (26%), housing (13%) and mixed use (10%) developments. These three categories comprise almost half of the approved parking variances.



Each of the 16 school applications submitted for a parking variance was approved. The range of the deviation from the original parking requirement was between 27 and 56 percent. On average, the off-street parking reduction was 40%. All nine applications for multi-family housing parking reductions were approved, as well, with the average change from original requirement slightly less than that for the schools at 36%. Mixed use developments also had all applications, six of six, approved for an average reduction of 27%.

The following section provides observations in decision trends and parking mitigation strategies successful applicants used to obtain approval for reduction in off-street parking spaces.

- 1) Appointment-based operations such as gyms, day cares and salons qualified for parking reductions. However, the onus of quantifying ‘by how much’ varied from case-to-case on the basis of primary use type and capacity.
- 2) Building uses that utilize a drop-off/pick-up facility, like day cares (child or adult) and schools, typically qualified for reductions for customer parking. Few applicants were able to demonstrate that staff rotations between different locations warranted reduction of staff parking.
- 3) High-end retail and luxury brands qualified for parking reductions on the basis of low footfall and exclusive clientele nexus (this is a good example of parking demand not being solely linked to floor area).
- 4) Many applicants used ‘walk-bike-transit nexus’ or ‘alternate forms of getting around’ as methods of reducing parking demand, but there was little if any quantification of amount of demand reduction. This logic was most prevalent in cases related to schools, multifamily and institutional housing, mixed use developments, and neighborhood restaurants.

- 5) The most common unsuccessful or withdrawn applications were for food and beverage outlets and bars. These uses were generally associated with high footfall rates and, unless they were situated in a clearly accessible location supported by alternate transportation modes, were not granted parking reductions. It should be noted that the parking regulations assume customers will mostly drive to and from bars and that the variance decision reinforce this requirement. This raises certain societal concerns regarding potential drinking-and-driving incidents. This combined with newer technology making valet services more relevant and the ubiquity of ride hailing services and car-sharing programs may present the opportunity to relax these requirements.<sup>51</sup>
- 6) As noted earlier, all the school applications were successful in receiving a reduced parking variance, although most of the cases were deferred and underwent multiple rounds of questioning and due diligence fact-checking. Common tools to demonstrate lower demand include: a) demographic analysis showing that students walk or bike or use the bus or drop-off to get to school; b) shared parking agreements within the neighborhood; c) constant enrollment despite increase in floor area due to replacement of temporary facilities; d) undue burden like loss of play ground or athletic facilities; or e) instances where the school explored all options but with no success.
- 7) Historic structures saw a straight 40% reduction in parking requirements. This is a strong incentive for encouraging neighborhood preservation and cultivating community identities across the city. Although these reductions acknowledge that much-needed redevelopment in historic neighborhoods is often constrained by parking requirements, there may be reasons to adopt a more case-by-case approach. For instance, an historic property situated in an area that is not walkable or serviced by high-frequency transit may need more parking spaces than an equivalent use near transit to provide the right level of access.

This variance analysis resulted in three recommendations for managing variances and the associated parking requirements. These recommendations are integrated into the technical memorandum to which this analysis is appended, as well as summarized below.

- Develop an empirical parking demand reduction methodology using walk-bike and transit formulas across the City of Houston. This could be used as an overlay to the existing parking demand calculations and be applied as a straightforward reduction factor based on the occupancy load, assuming certain proximity to multiple modes will offset footfall reliance on single occupancy vehicles. The Walkable Places and TOD ordinances present an opportunity to experiment with this type of demand analysis in a manageable area.
- Parking formulas in the code generally utilize floor space (or a surrogate, such as seating) as the only or primary factor, but often the actual demand is lower than calculated.<sup>52</sup> Many variances demonstrated the link to the number of employees. Redesigning parking calculations to more occupancy-based factors, like employees, especially for non-retail establishments, can streamline the parking permitting process.
- Parking requirements for bars should be reduced if they can prove that most of their clientele use some form of ride hailing services to get to and from the bars or if the bar provides or participates in a form of valet service. The valet service itself may be provided operational flexibility to allow innovative approaches that make economic sense. Parking for bars may even be eliminated altogether, provided the right combination of programs are implemented, such as car-sharing, shared parking, residential parking permits, and metered on-street parking.

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<sup>51</sup> Patrick Sisson. Why valet parking is the future of smarter urban transit. Curbed. 2018. Retrieved 8/18/20 from <https://www.curbed.com/2018/8/6/17649952/valet-parking-driverless-autonomous-curb-management>

<sup>52</sup> Donald Shoup. The High Cost of Free Parking. Routledge. 2017. P. 34-35.

Off-street Parking Ordinance Analysis & Recommendations

Sl. No.	Year	Location (address)	Existing use(s)	Site area (SF)	Spaces Proposed	Use Proposed (floor area)	Land Use Class	Spaces Required by Code	Variance (over/under code)	% Deviation	Justification
1	2020	1001 Frio St, Houston, TX	3,317 SF (recently demolished)	102,410	146	Multifamily housing, 32,827 SF	Housing	161	15	9%	This precedent has already been established by the institutional user to the east/north, who has head-in parking on the same street. Along Channelside Street to the north, the applicant proposes an 8' unobstructed sidewalk with on-street parallel parking, and a total back of curb distance of 32'. The applicant will also provide 3" caliper street trees along all of the right of ways. The 139 parking spaces is only a 5% deviation from the standards.
2	2020	2100 Memorial Drive, Houston, TX	265,082 SF (Parking Garage + affordable senior housing)	68,009	113	Senior affordable housing, 224,801 SF	Housing	154	41	27%	most of the residents of senior affordable housing units no longer drive automobiles and the typical standard for the retirement classification is greater than the need for this particular use. Another similar project constructed in New Orleans by Columbia Residential (Columbia Parc) functions with a 0.48 parking ratio and has a parking surplus on site.
4	2019	117 – 119 E. 20 <sup>th</sup> Street, Houston	Historic Office Building/ 3284 SF	14,375	11	Mixed Use - Dental clinic -residential (1967+2083)	Mixed Use	15	4	27%	Historic Preservation incentive, Staff has not received any formal opposition from residents of the surrounding neighborhood. Therefore, staff recommends approving the requested variance to allow 11 parking spaces in lieu of the ordinance-required 14 spaces, subject to the Banta House receiving designation as a protected landmark.
5	2019	606 Dennis Street	Underused structure/ 18204 SF	25,000	29 (plus 49 bicycle spaces)	(16,122 +3,408) Mixed use	Mixed Use	169	140	83%	Great transit, bike and ped connectivity in Midtown. Building use analysis demonstrates that parking use will fluctuate from 17 to 173. Proposed parking provision optimizes on the parking supply.
7	2019	1012 Westheimer Rd, Houston, TX	Vacant/0 SF	9,374	11 (including 2 bicycle racks)	Dental Office Clinic (7,245 SF)	Clinic	19	8	42%	Infill development; good transit, ped and bike connectivity to the site.
8	2019	2112 Dunlavy St, Houston, TX	Salon/ 1123 SF	5,000	4 (plus 1 bicycle rack)	Salon (1123 SF)	Salon	9	5	56%	High end Salon - low outturn of clientele, iterative observation; clientele and employees live in and around and walk or bike
11	2019	2619 Hadley St, Houston, TX	Residential/ 17 Single Family Homes	62,500	21	Residential/ 10 Single Family Homes (Refurbished)	Residential	62	41	66%	The resident are low-income folks exhibiting low vehicle ownership rates. Plus the neighborhood is walkable and well connected to alternate transportation connections. The proposed parking strengthens pedestrian realm with 6' unobstructed sidewalks.
12	2019	3275 Summer Street, Houston, TX	Vacant/0 SF	101,743	187	Residential (Apartment)/ 55,329 SF	Residential	225	38	17%	Changing transportation behaviors. Owners have experienced unused parking which has similar demographic clientele, in which they followed the guidelines of COH few years ago. Site located in urban core < 2 miles from downtown and within walking distance to high frequency bus routes & moderate bus routes. Near the off-street White Oak Hike and Bike Trail to the north, which could be used as an alternative transportation option and is within walking distance of a grocery store and multiple entertainment options.
13	2019	3735 Drexel Drive, Houston, TX	Adult Day Care/13,969 SF	19,154	29	(Adult Daycare) 15,445 SF	Daycare	40	11	28%	Building is not fully staffed, participants are dropped off and picked-up since most of them are under rehabilitation, most of the activities are on offsite locations.
14	2019	4710 Center Street, Houston, TX	Existing Warehouse/ 3888 SF	61,942	91	Restroom/Locker Room/ Gym (643 SF)	Gym	126	35	28%	Similar facility in W Houston complies with the proposed parking reduction. Staggered class scheduling avoids peak parking demand build-up. Current neighborhood has frequent access to transit corridors. Many clients use ride hailing services.
16	2019	5180 Avenue L, Houston Texas	Residential/Pool (300 SF)	15,000	30	Refurbished swim club - bar (1045SF)	Gym	104	74	71%	Street parking on Edgewood and Ave L. The proposed parking scheme satisfies the parking clause for a swim club but not for "bar" designation. The number of the parking spaces required by the "bar" parking requirement would make the project infeasible. Shared parking is not an option.
17	2019	5220 Ave J, Houston, TX	Vacant/0 SF	59,955	107	Multifamily, 84,300 FT	Housing	137	30	22%	Site located within walking distance of a high frequency bus route, a moderate bus route and the Green Line, which provides justification to reduce the parking requirement for this project.
18	2019	6412 Calhoun Road, Houston, TX	2-Single Family Homes/ 2000 SF	80,000	48	22 new homes + renovated 2 homes, residential	Residential	48	0	0%	The project prioritizes pocket park and patios instead of driveways. This design does not provide on-lot parking spaces for all lots, but does provide the required total number of off-street parking spaces in form of a consolidated parking garage.
19	2019	7903 South Loop E, Houston, TX	Existing Structure-Refurbished/ 51,820 SF	108,900	120	Gym/ 51,820 SF	Gym	182	62	34%	The missing 62 spots are on TxDOT and Harris County Flood Control land. Plus from experience the gym operators deem that 120 spaces are sufficient for its operations.
20	2018	214 Avondale St, Houston, TX	Vacant/ 9816 SF	20,276	35	Multifamily Development/ 58877 SF	Housing	65	30	46%	Available on-street parking, good transit and ped and bike connectivity in Montrose-Midtown area
21	2018	317 W. 19th Street, Houston, TX	Vacant/ 0 SF	6,600	4	Retail/ 10300 SF	Retail	44	40	91%	The proposal is pro-pedestrian realm; most of the neighborhood buildings do not comply either - buildings are built edge to edge to the lot-line (seems like a parking code rewrite is needed specifically for this neighborhood) and this area in heights has a very unique feel to it.
25	2018	1111 S. Shepherd Dr, Houston, TX	Restaurant/ 3085 SF	5,227	1	Restaurant w. Patio/ 2730	Restaurant	19	18	95%	There are 15 parking on-street spaces with access to subject site that will be addressed with this variance request. Owner proposes to install 12 bicycle spaces on the north side of the site as a component of their parking plan
26	2018	1515 Dunlavy, Houston, TX	Spa/ 2200 SF	5,000	6	Spa Salon/ 2200 SF	Salon	8	2	25%	Staff is in support of the request and recommends that the Planning Commission grant the requested variance to allow 6 off-street parking spaces on-site in lieu of the ordinance-required 8 off-street parking spaces. The parking layout must be revised to match the recommendation.
27	2018	1700 Dumble Street, Houston, TX	School/ 98524 SF	575,400	392	School/ 284303 SF	School	694	302	44%	Reduction in required parking spaces based on demographic analysis of current school, comparative analysis with similar programs/schools within HISD, and projected needs of the proposed facility. If district is to provide the ordinance-required number of parking spaces, there will not be room on site to keep the track and football/soccer field. Due to current and projected underutilization of parking spaces, and the applicant's statement that few students bike to school, the applicant is not proposing a parking reduction by providing bicycle spaces.
28	2018	3310 Travis St, Houston, TX	Office/ 4000	10,000	13	Office / 10000	Office	25	12	48%	Close to HCC Rail line, fairly walkable and walkable neighborhood (Midtown). Staff recommends approval to allow 13 off-street vehicle parking spaces and 8 bicycle spaces in lieu of the ordinance-required 25 parking spaces for the proposed office addition subject to the conditions that the applicant provide 6' sidewalks and 3" caliper street trees along Travis and Francis Streets and close the unused vehicular curb cut on Travis Street. Presence of On-street Parking.

Off-street Parking Ordinance Analysis & Recommendations

Sl. No.	Year	Location (address)	Existing use(s)	Site area (SF)	Spaces Proposed	Use Proposed (floor area)	Land Use Class	Spaces Required by Code	Variance (over/under code)	% Deviation	Justification
29	2018	4305 Jack St, Houston, TX	Vacant/ 0 SF	9,500	21	Gym/ 6853	Gym	34	13	38%	Staggered occupancy loads, undue financial burden and leasing a nearby vacant lot and make it parking restrictions compliant. Staff did not receive any letters of opposition and therefore recommends approving the requested variance to allow 21 off-street vehicle parking spaces and 12 bicycle spaces in lieu of the ordinance-required 34 parking spaces for the proposed fitness studio development subject to the condition that the applicant provide 6' sidewalks and 3" caliper street trees along Jack Street.
30	2018	4928 Fulton Street, Ste. A, Houston, TX	NA/ 5184 SF	12,600	12	café Restaurant/ 5184	Restaurant	18	6	33%	Close proximity to alternative modes of transportation; staff believes that the 12 vehicle spaces provided, with 4 bicycle spaces will be sufficient for the proposed uses on this site.
33	2017	104 W 12 <sup>th</sup> Street, Houston, TX	Residential/ 11213 SF	13,200	16	Residential/ 11213 SF	Residential	20	4	20%	To allow 5 improved on-street parallel parking spaces, built by the owner, on W 12 <sup>th</sup> Street to be counted towards required amount of parking. Public Works and Engineering Department poses no objection to the requested variance. Houston Archaeological and Historic Commission granted a Certificate of Appropriateness to the subject site.
34	2017	611 Hyde Park Boulevard, Houston, TX	Bar / 6144 SF	5,100	42	Bar / 7195 SF	Bar	83		0%	The existing bar has been in operation for many years. Based on staff's observation during site visit, lots of patrons do walk to the bar, instead of driving. The owner has demolished two existing houses across the street to provide more parking spaces for the bar use. The owner also agrees to provide 5' wide unobstructed sidewalk along the streets adjacent to the parking lots and provide landscaping improvement to create a pedestrian friendly environment for the neighborhood. Considering the owner's efforts to correct the previous mistakes and the development characteristics in the adjacent neighborhood, staff supports the parking variance.
35	2017	927 Studewood St, Houston, TX	Restaurant	Not mentioned- this is a parking waiver and not variance	49	Office, Dental clinic,	Clinic	55	6	11%	The applicant is providing 49 parking spaces for the overall site. Approving the 10% reduction allows the applicant to comply with the parking ordinance. The overall site includes only one restaurant that is existing. The proposed new development includes uses that require less parking and additionally will be closed during times that the restaurant will be in operation. This will provide additional parking spaces for the restaurant on the adjacent site, helping to minimize overflow of parking onto nearby neighborhood streets.
36	2017	1050 Britton Rd., Houston, TX	Vacant/ 0 SF	93,218	25	Storage Facility/ 181308 SF	Warehouse	25	0	0%	Reduce the size of the two (2) required loading berths to 9' x 40' and to allow two (2) of the provided parking spaces to be utilized for the loading berths per the attached site plan.
39	2017	3201 Louisiana St., Houston, TX	69770 SF	62,291	296	69770 SF	Mixed Use	390	94	24%	The parking garage has been observed to have available spaces throughout the day, even during peak hours of the fitness center, the facility's largest tenant. The owner of the site also owns a surface parking lot, consisting of 66 spaces, at 3000 Milam Street, located within 500' to the north. Posted signs within the garage inform patrons of the mixed-use center that additional parking is allowed and encouraged at the off-site location. Transit and ped accessible neighborhood.
41	2017	13719 White Heather Dr, Houston, TX	School/ 228,707 SF	872,898	501	School/ 272,839 SF	School	1124	623	55%	The school is in process of making a new campus. Strict application of the ordinance will make the high school lose a softball field and baseball field by providing the required parking spaces, which are not needed. After the meeting, both Council Member Green's office and the community representatives pose no objection to the requested reduced parking variance.
42	2016	901 Sue Barnett Drive, Houston, TX	School/ 43580 SF	435,600	133	School / 60372 SF	School	259	126	49%	Most students are dropped off, walk or bike to school. HISD projects that no students will drive to school. Sec 26 492 requires 259 parking spaces for the whole school site. The applicant proposes to provide 133 parking spaces.
44	2016	2605 Reed Road, Houston, TX	Vacant/0 SF	296,118	193	Affordable Housing/ 248019 SF	Housing	276	83	30%	To reduce the number of off-street parking spaces from 276 to 193 by providing 1 space per dwelling unit plus 6 spaces for staff. This is a transition project for homeless folks gearing towards independent living - parking demand would be low for this development.
45	2016	2850 Fannin Street, Houston, TX	Mixed use/ 99524 SF	49,598	497	Mixed use/ 749520 SF	Mixed Use	562	65	12%	Applicant requesting variance for significant parking reduction to allow 16 spaces instead of the required 81 spaces. However, considering the development characteristics in the Midtown, the adjacent mass public transit, and the close proximity of a public parking garage meets the intent of the ordinance by promoting/walkable places in the area.
47	2016	3704 Fannin St., Houston, TX	Bar / 13500 SF	4,500	44	Remodeled Bar/ 13500 SF	Bar	45	1	2%	Applicant providing 16 more spaces than requirement and the parking lot would be used for valet, the applicant will be able to provide sufficient spaces to meet the requirement.
48	2016	3811 Lyons Avenue, Houston, TX	Vacant/0 SF	38,498	37 + remainder through shared parking agreement	Clinic/ 16000 SF	Clinic	56	19	34%	The proposed clinic will provide 37 off-street parking spaces and the developer has coordinated Pleasant Hill Baptist Church in order to share an additional 25 spaces. The church and medical facility operate at different times of day and the parking facilities will not be used simultaneously; however, the shared parking agreement will not meet the requirements of Chapter 26. The developer also intends to acquire additional property in order to expand the business and accommodate the required amount of parking spaces. However, the acquisition of the property will take over a year to complete litigation. The proposed parking variance will provide temporary relief until the required parking has been provided
49	2016	3815 Gulf Freeway	Vacant/0 SF	172,258	144	Multifamily / 169000 SF	Housing	254	110	43%	Since most of the residents have low household income, public transportation would be the major transportation tool for them. There are multiple bus routes and a light rail adjacent to the subject site. Therefore, parking demand would be relatively low on this site.
50	2016	5300 Sunrise Road	Institutional / 6124 SF	77,032	22	Youth Foster Care Homes / 30614 SF/ residential	Housing	80	58	73%	Housing for youth coming out of Foster care. Staff recommends approving this variance as most of the users will be using bicycle instead. As a condition of approval, the applicant will connect a 5' sidewalk from the site to the existing sidewalk along Sunrise Road. The granting of the off-street parking variance will be restricted to the proposed use only. Anytime the units become market value, the additional parking spaces will be required based on the multi-family use classification.
51	2015	339 West 19th Street	Theatre/ 7,058 SF	6,600	45	Art Theatre/ 7,058 SF	Theatre	54	9	17%	Requesting two variances: 1. to provide 45 instead of 54 required parking spaces; 2 to allow proposed off-site parking to be located approximately 580 feet east of the site instead of the allowed maximum distance of 250'. With the 40% reduction credit for historic landmark and 10% reduction credit for bicycles, 54 parking spaces and 24 bicycle parking are required. Sufficient on-street parking based on development characteristics and theater operating hours.

Off-street Parking Ordinance Analysis & Recommendations

Sl. No.	Year	Location (address)	Existing use(s)	Site area (SF)	Spaces Proposed	Use Proposed (floor area)	Land Use Class	Spaces Required by Code	Variance (over/under code)	% Deviation	Justification
52	2015	516 Westheimer Road	Restaurant / 4614 SF	11,000	17	Restaurant / 4614 SF	Restaurant	27	10	37%	The current parking arrangement provides the restaurant 17 parking spaces during lunch time, and 27 parking spaces during dinner time. Based on the information provided by the applicant and verified by staff's site visit, staff finds that the 17 on-site parking spaces are sufficient to meet the parking demand during lunch time, as most customers come to the restaurant during dinner time. (This application does not use bike-walk-transit nexus at all)
53	2015	520 Mercury Drive	High School / 175,759 SF	96,900	295	High School / 184,006 SF	School	562	267	48%	The school submitted an analysis showing that most of the schools would walk, bike or get dropped off at school because they are economically disadvantaged and Of the 238 students transferring in, 81% (193) live within adjacent high school's zone (Kashmere and Wheatley). The proposal also provided almost 250 bike parking.
56	2015	1315 Dumble St 7	31843 SF	282,704	130	School / 37897	School	177	47	27%	To optimize educational spaces and provide the required educational facilities to meet the school program, HISD proposes to demolish one existing building and construct two new buildings with a community SPARK PARK on the site. Project will replace existing outdated classrooms and ancillary spaces. Addition will not result in an increase of student enrollment or faculty. Parking spaces will increase from 106 to 130 while the school population remains the same. Current parking supply meets demand.
57	2015	2305 Francis Street	NA / 582 SF	35,000	21	DayCare/ 8274 SF	Daycare	32	11	34%	Drop off Facility - focus demographic: homeless, low-income family, predominantly public transit use. Most of the children would be dropped off the daycare facility by a shuttle or through public transportation. Therefore, the parking demand for the proposed daycare facility is much less than regular daycare facilities.
58	2015	3325 Westheimer Road	School / 254696 SF	1,103,845	700	School Renovation / 404622 SF	school	1213	513	42%	51% of students ride HISD buses; 40% use other modes of transportation (including parent drop off/pickup and Metro). Remaining 12% are student drivers. HISD has agreed to provide a five-level parking garage with 514 spaces. The remainder of the parking includes 195 surface parking spaces (176 in the west parking lot, 10 near the entry off of Eastside Street and 9 parallel off-peek spaces at the parent drop-off (not included in the official count)). This is an increase of 124 spaces from the existing campus parking of 576 spaces.
59	2015	3419 Dowling Street	Existing Café / 1296 SF	5,000	17	Café Expansion/ 4296 SF Restaurant	Restaurant	35	18	51%	The restaurant is located in an area which has been rapidly redeveloped and revitalized. The project provides shared parking with the neighborhood church. Project Row House has initiated a Third Ward Revitalization Plan to improve pedestrian friendly environment for the neighborhood. The owner expects the majority of customers would be from the adjacent Emancipation Park and the neighborhood. The parking demand for this restaurant would be less than normal restaurants. Walk-Bike- Transit nexus.
61	2015	3505 Coyle St	NA/not mentioned	369,089	171	school/115502 SF	School	318	147	46%	This school is a 100% magnet campus, currently enrolled with 492 students from the whole Houston area. 7% of the students drive to school. Most of the students arrive by school bus. The campus is close to light rail on Scott Street.
62	2015	3703 Sampson Street	School / 354297 SF	868,970	316	School/ 510297 SF	School	509	193	38%	The applicant has provided demographic data for the existing Yates High School campus and other similar existing schools within the Houston urban area. This data includes the number of students who drive, number of staff and visitor parking spaces and event parking spaces required for the new campus and its increased enrollment from 960 students to 1,500. Walk-Bike-Transit nexus
63	2015	3815 Gulf Fwy	NA / Vacant	109,770	79	Homeless Housing Residential / 80000 SF	Housing	141	62	44%	Homeless housing - low vehicle ownership rates in the community - walk-bike transit nexus
64	2015	4311 Bettis Drive	Religious Sanctuary/ 6203 SF	10,400	40	Religious Sanctuary /7233 SF	Religious	41	1	2%	Staff is in support of the requested variance as the site and use is existing and the applicant has provided a lease agreement for parking at a site that is located north of the site in an existing parking garage. The garage per staff review has a surplus to allow for the proposed site to use parking in this location.
65	2015	4401 Harrisburg Blvd	Commercial/ 110091 SF	15,259	29	Commercial/ 130091 SF	Retail	45	16	36%	The applicant proposes to use share parking agreement for both the existing supermarket and the proposed small sports bar. The applicant acquired the adjacent tract to create a new parking lot in the rear. However, the new parking lot could only provide 26 parking spaces and 5 bike racks. With the existing 7 parking spaces, there will be 33 on site parking spaces and 5 bike racks in total. Since the site is located close to the light rail station along Transit Corridor Harrisburg Boulevard, we expect more customers to the bar would use public transit. In addition, there are some on street parking spaces available along Eastwood Road as well.
66	2015	4600 Main Street	Existing Mixed use/ 2 story	17,104	16	Proposed Mixed use/ 3 story	Mixed Use	16 (including shared)	0	0%	The proposed development is a multi-use building for housing, career development and support services for previously homeless veterans. Similar to adjoining uses and shares loading berth within the adjoining parking garage would meet the intent of the ordinance. The parking garage is connected via a sky bridge to the proposed building which will ensure direct access from the garage to the subject site
67	2016	9400 Irving Blvd	school/ 429200 SF	1,197,900	570	school/ 745673 SF	School	1070	500	47%	Most students attending the school are from low income households, live in the adjacent neighborhood, and are dropped off by their parents or walk to school. The parking demand on this campus is low. The additional buildings will be used by the same current students. Strict application of the ordinance would significantly restrict the outdoor physical education spaces and leave no room for the proposed baseball/softball fields.
68	2014	1101 Quitman Street	school/ 250029 SF	547,488	238	school/ 540000 SF	School	540	302	56%	Data provided by the applicant indicates that student enrollment is not increasing, and the site currently has 238 parking spaces. Per the current parking usage table, only 216 parking spaces are occupied out of the existing 238 spaces. Since the enrollment is not increasing, 238 spaces will be sufficient for this project.



Off-street Parking Ordinance Analysis & Recommendations

Sl. No.	Year	Location (address)	Existing use(s)	Site area (SF)	Spaces Proposed	Use Proposed (floor area)	Land Use Class	Spaces Required by Code	Variance (over/under code)	% Deviation	Justification
69	2014	1601 Broadway St.	school/ 390000 SF	822,369	425	school/ 500000 SF	School	642	217	34%	Applicant has provided demographic data for other existing schools in area and existing Milby HS showing number of students who drive, number of staff and visitor parking spaces and event parking spaces required. Based on additional enrollment (40 Students) and projections for transportation requirements for the new campus, the 425 spaces provided by the school are reasonable. Location of the school is in an area with limited athletic facilities and thus providing such facilities in the school campus would enhance the opportunities for the students.
70	2014	2068 Jacquelyn Dr	Existing/ 4553 SF	103,759	101	Multifamily / 27800 SF	Housing	141	40	28%	Low-income housing - the site is well served by the Metro Bus routes and the applicant; the women's home, will provide for shuttle services to the residents. The close proximity of Schools, medical facility and modes of public transportation are the justification for supporting the variance. And in future, if any of these 40 units/apartments are ever leased at market price, then the owner must provide off-street parking as per the ordinance requirements.
72	2014	2901 Rusk Street	Warehouse / 3600 SF	4,160	2	Dog Care Facility / 3600 SF	Daycare	8	6	75%	The applicant is proposing, two parking spaces on site for the employees. and have a plan of action for the drop off and pick up along the public streets. Staff is in support of the requested variance because this is a high residential area where typically from 8 to 5 the residents would be at work; limiting the amount of conflict with parking and traffic between the neighbors and the day care use.
73	2014	2902 Revere St.	Historic Building / 5938 SF	150,097	10	Retail / 23427 SF	Retail	47	37	79%	Historic Incentive for adaptive re-use (but doesn't have the certificates), hi-end boutique, many of the home furnishing items on the floor are samples for display only and must be ordered. A number of support emails have been received by staff for the project. Review by staff has determined that the intent of Chapter 26 will be preserved, and the parking provided will be sufficient to serve the use. The planning staff mandates that the site must provide 5' sidewalks along the right of way from the site along Kipling Street with this variance approval and along Steel and Argon Streets as approved with the previous variance to connect to the off-site parking lot.
74	2014	3217 Montrose Blvd	Mixed use/ 16532 SF	37,935	38	Mixed use / 16532 SF	Mixed Use	45	7	16%	The applicant proposes 38 on-site parking spaces with bicycle parking and would like to add the 6 on-street parking spaces to reach the 44 spaces. Montrose walk-bike-transit nexus.
75	2014	6529 Beverly Hill	School / 325537 SF	767,527	350	School / 591537 SF	School	557	207	37%	Applicant has provided demographic data for other existing schools within the area and existing Lee High School showing number of students who drive, number of staff and visitor parking spaces and event parking spaces required. Based on the additional enrollment (434 Students) proposed with this redevelopment and projections for transportation requirement for the new campus, the 350 spaces provided by the school are reasonable. The existing school campus does not have all the amenities including softball and baseball fields. Allowing reduction in the parking spaces will accommodate these areas and still leave area to expand the parking lots if needed.
77	2014	7504 Bissonnet Street	School / 184000 SF	1,213,943	300	School / 212000 SF	School	489	189	39%	Most kids don't drive to school, if need be - the high school still have the flexibility to convert part of the softball field back to parking spaces. according to the demographic analysis provided by HISD, 300 off street parking spaces would be sufficient to serve the campus for the next 15-25 years.
78	2014	8880 Southbluff Blvd	School / 512860 SF	3,788,413	1304	School / 60000 SF	School	1975	671	34%	The analysis shows that the existing parking in underutilized. Using the current rate of use- the existing parking lot should be sufficient to accommodate the parking needs for upcoming buildings.
79	2014	102726 Mesa Drive	School / NA	11,726,613	300	School Addition / 205000 SF	School	450	150	33%	Applicant has provided demographic data for other existing schools in area showing the number of students driving today, the number of staff and visitor parking spaces and event parking spaces required for the campus. Based on the additional enrolment (540 Students) proposed with this redevelopment and a projection for transportation requirement for the new campus, the 300 spaces provided by the school is reasonable.
80	2014	11625 Martindale Road	School / 223,518 SF	1,021,917	256	School Addition / 460000 SF	School	410	154	38%	Applicant has provided demographic data for other existing schools within the area and existing Sterling High school showing that approximately 60% of the existing 234 parking spaces are occupied and the remaining 40% spaces are empty during school days. Current occupants for this school are approximately 966 and the projection for future occupant load is for 1920. Site plan proposes to provide 410 parking spaces and 256 bicycle spaces, providing 70% of the required parking spaces. Not enough site area to support athletic facilities.
83	2013	2401 W Bellfort Blvd	NA/ 17355 SF	63,598	143	Religious Community Center/ 17355 SF	Religious	135	-8	-6%	35 on owner's property and 108 on neighbor's property provided by a parking easement. Members usually come to the site for evening and weekend events. There are four full time employees working on the site. Chapter 26 requires 135 parking spaces on the site, 35 on-site parking spaces are provided. The Scottish Rite Benevolent Association of Houston has signed a Parking Easement agreement with the adjacent property west of the subject site to share 108 off-site parking spaces. The adjacent site is used for medical labs operating during the regular office hours. The 108 shared parking spaces are for evening and weekend use only. Walking distance from shared parking to site is about 350'
85	2013	3001 LaBranch St.	Vacant / 9800 SF	4,400	9	Office / 9800 SF	Office	18	9	50%	The site also is in close proximity to the light rail line (1,650 feet) along Main Street and Metro bus routes. Additionally, the site is located in the residential neighborhood with public streets that allow for on street parking. Since the office hours will be from 8:00AM to 5:00PM on weekdays there will be sufficient on-street parking during business hours for the office use and for the use of the residents during nights and weekends.
86	2013	3320 White Oak Drive	Existing / 2254 SF	6,600	5 plus 32 bike places	Restaurant / 2254 SF	Restaurant	31	26	84%	Historic Building Incentive - 40% reduction. The immediate neighborhood is bike and pedestrian friendly and the site is located one block west of the Heights hike and bike trail. Staff made condition variances where the applicant has to provide unhindered 5' sidewalks, remove driveway cuts and install 3' caliper trees.
87	2013	7879 Katy Freeway	Vacant/NA	62,870	17	Mini Warehouse/ 127251 SF	Warehouse	22	5	23%	The applicant proposes to build 854 units of mini warehouses with 17 parking spaces on the subject tract, which is 1 parking space for 50 units. Sec 26-492 requires 22 parking spaces on the site, which is 1 parking space for every 40 storage units. However, the proposed 1 parking space for 50 units meets the requirement of the proposed parking ordinance amendment.

## Appendix D – Peer City Lessons Learned

This appendix will document responses received from the peer cities to a list of questions related to current off-street parking regulations. The questions also deal with the planning process behind the regulations, as well as thoughts on what has worked well (accomplished the desired outcome) for the city. The subject areas include top variances and what exemptions are allowed generally for schools (high schools in particular), lessons learned in parking requirements for eating and drinking establishments, shared parking best practices, what parking maximums do that just eliminating minimums cannot, and TOD district best practices.

As responses are received, they will be recorded in this appendix in Q&A format. The questions posed to each peer city are listed below.

1. One way we are looking at adjustments needed in parking minimums is through decision trends on variance requests. Can you identify what uses are the major sources (top three perhaps) of variances in your city?
2. One of the top variance requests Houston receives is for high schools. They usually cite students or staff not driving to school or negative consequences for other uses of the available land as reasons to reduce parking minimums. If you've seen similar variances in your city, what exemptions have been allowed for schools (or other institutional uses) in dense areas?
3. Another top variance source is eating and drinking establishments. This one is tricky, because people want to drive to their favorite place and not have to worry about finding a spot. The next two questions relate to these restaurants and bars to identify best practices for a city- or district-managed program:
  - a. What has been done to leverage alternatives to individual car parking spots for restaurants and bars?
  - b. How have you balanced customers' need for access by car with the desire to reduce parking and expand other modes?
4. A popular way to reduce parking footprint in dense areas is to share parking between uses. There are lots of ways to implement this, but I'm not sure putting the entire onus on developers is the right way. What have you found to be the most effective means for the City to implement shared parking?
5. I'm seeing more acceptance of parking maximums than in years past. Are there good examples of maximums the City has implemented and, if so, what effects have they had that just not requiring minimums cannot achieve?
6. In TOD districts, there are a lot of mixed-use incentives available. Has the City worked with employers to provision transit passes in mixed-use areas and, if so, where and has that helped achieve the level of mixed-use desired?

City of Dallas

Responses to Lessons Learned Questions

Summarized from Teams Meeting August 19, 2020, with representatives from the Department of Sustainable Development & Construction

1. Most variances applications the City processes are for alcoholic beverage and restaurant establishments. Dallas is also updating its parking code. It has set up a Zoning Ordinance Advisory Committee (ZOAC) to manage this process. They have studied many cities across the US and Canada and have identified several key strategies. These include a) reductions are typically greatest for uses near transit, b) no minimums are used in specific areas with well-established transit and supply/demand management, and c) reduction incentives are based on published community goals. The ZOAC website provides the current status of their efforts: <https://dallascityhall.com/departments/sustainabledevelopment/planning/Pages/parking-code-amendment.aspx>.
2. Dallas has not seen many variance requests from schools, so has not developed special exemptions for that use. However, there has been a lot of attention paid to multifamily and mixed-income housing. The City provides a parking incentive of 1.25 spaces per unit for multifamily developments to include low-income units (51A-4.110). What planners have found is that developers would rather provide the typical parking (1 space per bedroom), even if that means a parking garage will need to be built, than to include low-income units in their projects. This has been primarily the case for developments in the suburbs, where the supply of land is still relatively unconstrained when compared to the urban core.
3. Restaurants and bars have seen some experimentation with parking solutions. The City has tried programs like Sidewalk Café and Parklets, with some success. Planners have found that current code requirements, which are based on gross floor area, do not account for space allocated to kitchens and other low-occupancy areas. However, planners also must be cautious not to induce spillover effects as a result of reductions in requirements. What has helped Dallas work with developers and business owners to manage parking requirements is a mixed-use development (MUD) chart. It is based on time-of-day fluctuations of demand for different types of uses. The current version is based on data from 1983 and the City is in the process of updating the chart for 2020 data.
4. Shared parking can be problematic for business owners. The current litigation environment requires comprehensive parking agreements to make shared parking facilities feasible. Unfortunately, many small businesses lack the staff, time and budget to pay for the effort to put one together. Planners have found more success in simply providing more generous administrative reductions using offsite or demand management criteria.
5. Planners have found that, in Dallas, developers (and some council members) are not supportive of parking maximum requirements.
6. Transit-oriented developments, though not specifically addressed by current code, are being considered as part of the City's comprehensive plan update next year. The City does have parking districts, which incentivize proximity to or provision of transit, bike facilities, and remote parking.