

CHARLOTTE, NC

The housing sites included in this assessment are the following:

Site Name	J40	Address	Housing Provider	URL
The Mezzanine	yes	2635 Freedom Drive, Charlotte, North Carolina 28208, United States	DreamKey Partners	https://www.themezzanineatfreedom.com/
Evoke Living at Sugar Creek	yes	4210 Merlane Dr Charlotte, NC 28206	Mosaic Development Group	https://www.evokelivingsugarcreek.com/
Peppertree	yes	4335 Central Avenue, Charlotte, North Carolina 28205, United States	Central NOAH LLC	https://www.peppertreenc.com/
The Innovation Barn	yes	932 Seigle Avenue, Charlotte	City of Charlotte	https://www.envisioncharlotte.com/innovation-barn/

As noted in the “Method” section at the end of this document, US Census Block Group (BG) data represents a significant data source for this analysis. These data include the housing sites, but should be interpreted with caution as the BG may not coincide fully with residents of each site. Justice40 (J40) sites that are located in Justice40 communities designated in the [Climate and Economic Justice Screening Tool](#) (CEJST) that identifies disadvantaged communities that are marginalized and overburdened by pollution and underinvestment.

Charlotte Overview

This assessment includes four sites in Charlotte, NC, located in Mecklenburg County. All sites are located outside of Center City / Uptown Charlotte. The Innovation Barn lies across I-277 just east of Uptown, while The Mezzanine is about a mile west of Uptown, and Evoke Living at Sugar Creek and Peppertree Apartments lie a few miles north and west of Uptown, respectively. The Innovation Barn is a non-residential business and innovation center, while the other sites are apartment or townhouse style residential complexes. The Mezzanine has 185 units, Evoke Living at Sugar Creek has 180 units, and Peppertree has 280 units.

As shown in Figure 1, each of the sites is located in a J40 disadvantaged tract. The tracts with the darker shading indicate greater transportation barriers (higher relative cost and time spent on transportation relative to other tracts¹).

¹ See “transportation barriers” on the Climate and Economic Justice Screening tool “Methodology” web page: <https://screeningtool.geoplatform.gov/en/methodology>



Figure 1. Charlotte, NC sites mapped with J40 tracts (hashed area) and relative travel barriers (shading)

HOUSEHOLD LANGUAGES SPOKEN

Language information, particularly areas with limited English households, can help reveal barriers that residents may face in learning about and utilizing car share, as well as inform possible outreach and service needs. Language spoken information for the BGs in which the sites are located is shown below. In the Peppertree BG, 26% of households are classified as “Limited English”, while Evoke has 9% classified as “Limited English. At Peppertree, limited English households are 10% Spanish speaking, 5% Asian or Pacific Island languages, and 11% other languages, while at Evoke all limited English household were classified as non-Spanish Indo-European languages.

	English only	Limited English (total)	Spanish		Other Indo-European lang.		Asian / Pacific Island lang.		Other lang.	
			Limited English	Not	Limited English	Not	Limited English	Not	Limited English	Not
The Mezzanine	92%	0%	0%	8%	0%	0%	0%	0%	0%	0%
Evoke Living at Sugar Creek	80%	9%	0%	11%	9%	0%	0%	0%	0%	0%
Peppertree	61%	26%	10%	6%	1%	0%	5%	4%	11%	3%
The Innovation Barn	90%	2%	0%	6%	2%	0%	0%	2%	0%	0%
City: Charlotte, NC	80%	5%	3%	7%	1%	4%	1%	3%	0%	1%

(Source: 2021 ACS 5-yr BG data)

HISPANIC/LATINO AND NOT HISPANIC/LATINO BY RACE

Information about race and ethnicity can help to understand the diversity of the area surrounding study sites, which can help inform outreach strategies. This section is closely related to household languages spoken, particularly Spanish. The Mezzanine and Evoke each have about two-thirds of residents who are Black or African American. Peppertree is roughly split between Hispanic or Latino (27%), white (32%), and Black or African American (31%).

	Hisp. or Latino	Not Hispanic or Latino						
		White alone	Black or African American alone	American Indian / Alaska Native alone	Asian alone	Native Hawaiian / Pacific Islander alone	Some Other Race alone	Two or more races
The Mezzanine	12%	15%	68%	0%	2%	0%	0%	3%
Evoke Living at Sugar Creek	24%	5%	65%	0%	2%	0%	0%	3%
Peppertree	27%	32%	31%	0%	4%	0%	0%	4%
The Innovation Barn	5%	20%	68%	0%	3%	0%	0%	3%
City: Charlotte, NC	16%	40%	32%	0%	7%	0%	1%	4%

(Source: 2021 ACS 5-yr BG data)

HOUSEHOLD COMPOSITION AND INCOME

Household level factors such as household size and income level can help to understand residents’ travel needs and budgets, and gauge the potential market and impact of reduced car share rates. All of the sites have median income levels well below the citywide median income of \$68,367, with the Mezzanine at just over \$32,000, Evoke at \$39,580, and Peppertree at \$42,260.

	Percentage renter occupied	Average household size	Median Income (BG)	Median Income (Tract)
The Mezzanine	66%	1.6	\$32,069	\$45,206
Evoke Living at Sugar Creek	64%	1.8	\$39,580	\$41,750
Peppertree	75%	2.3	\$42,260	\$42,260
The Innovation Barn	72%	2.4	\$43,844	\$44,957
City: Charlotte, NC	47%	2.5	\$68,367	\$68,367

(Sources: 2021 ACS 5-yr BG and Census Tract data)

RESIDENT AGE AND POVERTY

Resident age can help understand the proportion of the population that is working age and older adult populations. Information about the proportion of the population living at or below poverty level can help reveal potential market and impact of reduced car share rates. Notably, the Mezzanine and Evoke have large proportions of residents who are 65 years or older (20% and 28% respectively, compared to 10% for Charlotte overall). Poverty rates in the site tracts are all at or above the citywide percentage of 12%. Figure 2 shows the site locations with tracts shaded by proportion of the population below the poverty line (percentile).

	Percentage of population age:		Percentage below poverty (tract)		
	18 to 64	65+	Total (tract)	Ages 18 to 64	Ages 65+
The Mezzanine	67%	20%	13%	13%	25%
Evoke Living at Sugar Creek	65%	28%	22%	17%	8%
Peppertree	72%	9%	15%	13%	0%
The Innovation Barn	65%	1%	24%	17%	42%
City: Charlotte, NC	66%	10%	12%	10%	9%

(Sources: 2021 ACS 5-yr BG and Census Tract data)



Figure 2. Charlotte, NC sites mapped with J40 tracts (hashed areas) and percentile of proportion of population below the poverty level (shading)

Household vehicles and commuting

CAR OWNERSHIP

Zero-car households may be an indicator of need or market for alternative transportation modes. In addition, the proportion of single and multi-car households can reveal opportunities for car share. Among renter occupied units, Peppertree and the Mezzanine have the highest proportion on zero-car households (at 26% and 20% respectively).

HH car ownership	Zero-car HHs	One-car HHs	Two-plus-car HHs
Among renter occupied units			

The Mezzanine	20%	54%	25%
Evoke Living at Sugar Creek	11%	87%	2%
Peppertree	26%	39%	35%
The Innovation Barn	15%	80%	5%
City: Charlotte, NC	11%	54%	35%

(Source: 2021 ACS 5-yr BG data)

COMMUTE MODE

Commute mode information provides some insight into currently available and used travel modes, at least for work trip purposes. Residents in the Peppertree BG are more multimodal than Charlotte overall, with roughly a third of residents who commute doing so by carpool, transit, or to a lesser degree, walking. Mezzanine also has a quarter of residents who commute by carpool. Evoke commuters, while a smaller proportion of residents, are reliant on drive alone trips.

	Percent of residents who commute	Commute Mode				
		Drive Alone	Carpool	Public Transit	Walk	Taxi, motorcycle, bicycle, other
The Mezzanine	46%	76%	24%	0%	0%	0%
Evoke Living at Sugar Creek	32%	100%	0%	0%	0%	0%
Peppertree	53%	66%	15%	16%	2%	0%
The Innovation Barn	37%	77%	4%	8%	12%	0%
City: Charlotte, NC	44%	83%	10%	3%	2%	2%

(Source: 2021 ACS 5-yr BG data)

PERCENTAGE OF COMMUTERS WITH 45+ MINUTE COMMUTES BY MODE

Commute mode travel information provides some insight on the length of time individuals need to travel to work. Often transit dependent individuals spend significantly longer in getting to and from work. 20% of residents of the Peppertree area experience longer commutes of 45+ minutes than, compared to 12% for Charlotte overall. For Peppertree, those who commute by carpool or transit are more likely to experience those longer commutes.

45+ Minute commutes by	All commuters	Drive Alone	Carpool	Public Transit	Walk	Taxi, motorcycle, bicycle, other
The Mezzanine	0%	0%	0%	n/a	n/a	n/a
Evoke Living at Sugar Creek	0%	0%	n/a	n/a	n/a	n/a
Peppertree	20%	9%	47%	42%	0%	0%
The Innovation Barn	15%	10%	0%	91%	0%	n/a
City: Charlotte, NC	12%	10%	16%	42%	5%	22%

(Source: 2021 ACS 5-yr BG data)

Walkability

WALK SCORE

Walk Score (Walkscore.com) provides an all-in-one metric for gauging the walkability of a place based on a proprietary algorithm for accessing a set of defined key destination types. Scores range from 0 (completely car dependent) to 100 (all errands can be done by walking)². Walkable neighborhoods and car share can be contributing factors to helping people accomplish daily needs without owning a car. The Walk Score for the sites are listed below. Mezzanine and Evoke have higher walk scores than Charlotte overall, but all three fall into the “car dependent” Walk Score category, denoting that “most errands require a car.” Peppertree and Innovation Barn are higher, with scores denoting that some to most errands can be accomplished by walking.

	Walk Score Rating
The Mezzanine	45
Evoke Living at Sugar Creek	39
Peppertree	71
The Innovation Barn	67
City: Charlotte, NC	26

(Source: walkscore.com)

KEY DESTINATIONS

Another way to assess walkability for everyday needs is to look at distances to key destinations, particularly to daily services (groceries, pharmacies, and schools) but also for medical services and other essential services. The Mezzanine has a number of key

² Walk Score Ratings: 90–100 Walker's Paradise (Daily errands do not require a car); 70–89 Very Walkable (Most errands can be accomplished on foot); 50–69 Somewhat Walkable (Some errands can be accomplished on foot); 25–49 Car-Dependent (Most errands require a car); 0–24 Car-Dependent (Almost all errands require a car)

destinations available within a quarter to half mile, including a grocery store, pharmacy, and high school. Other sites are generally at least a mile or more to any key destinations.

Distance to:	Grocery	Pharm.	Hardware	Hosp. / ER	Urgent care	Elem. school	High school
The Mezzanine	0.1 (Compare Foods)	0.4 (Doc's)	2.0 (Southern Hardware Co)	4.4 (Atrium Health Carolinas Medical Center)	1.0 (Star Family)	1.4 (Ashley Park)	0.2 (Stewart Creek)
Evoke Living at Sugar Creek	1.2 (Compare Foods)	1.5 (Walgreens)	1.5 (William's Hardware)	4.4 (Atrium Health University City)	2.8 (Eastway Medical Clinic & Urgent Care)	1.0 (Hidden Valley)	2.5 (Garinger)
Peppertree	0.9 (Food Lion)	0.9 (CVS)	1.3 (Rodriguez Tools)	3.6 (Atrium Health Mercy)	1.9 (StarMed Healthcare - Eastland)	1.7 (Windso r Park)	2.5 (Garinger)
The Innovation Barn	1.2 (Harris Teeter)	1.0 (CVS)	2.1 (Rodriguez Tools)	1.8 (Atrium Health Mercy)	1.3 (Urgent Care 24/7)	1.1 (Villa Heights)	3.0 (Garinger)

(Distance in miles. Source: Google Maps)

HOUSING AND JOBS DENSITY

Housing and employment densities provide information about the concentration of people and businesses in an area, which can inform the potential market or user base of a service. Employment density and ratios of jobs to households can also provide insight into the potential for local residents to easily access businesses and jobs. The Mezzanine has a lower gross residential and population density than Charlotte overall, while the other sites are higher. Of the residential sites, Peppertree has the highest population density and employment density.

	Gross resid. density (HU/acre)	Gross pop. density (people/acre)	Gross empl. density (jobs/acre)	Jobs per household ³
The Mezzanine	0.6	1.0	3.5	5.6
Evoke Living at Sugar Creek	2.9	5.3	2.3	0.8
Peppertree	3.9	8.8	9.6	2.5
The Innovation Barn	5.5	13.2	2.5	0.5
City: Charlotte, NC	1.8	4.4	2.4	1.4

(SLD and US Census)

³ EPA notes that “An employment to housing ratio in the range of 0.75 to 1.5 is considered beneficial for reducing vehicle miles traveled” (<https://enviroatlas.epa.gov/enviroatlas/datafactsheets/pdf/supplemental/employmenthousingratio.pdf>)

Transit access

Transit can be a useful means of transportation if people can easily get to a transit stop (bus or light rail), the service is relatively frequent, and it gets them where they need to go. Walk Score (Walkscore.com) also provides a Transit Score metric, which gauges access to destinations by transit. All of the study sites have Transit Scores above the city-wide score (Walkscore.com), while the Mezzanine, Peppertree and Innovation Barn have access to more transit trips per week within a half mile of the site locations, and have more jobs available within a 30-minute transit trip, than Charlotte overall.

Transit access stats	Transit Score	Transit Routes within 1/2 Mile	Transit Trips per Week within 1/2 Mile	Jobs Accessible in 30-minute trip	Commuters Who Use Transit
The Mezzanine	40	7	2,160	221,166	4.2%
Evoke Living at Sugar Creek	31	3	613	74,539	13.5%
Peppertree	42	3	1,952	217,241	8.9%
The Innovation Barn	57	13	2,476	242,895	8.7%
City: Charlotte, NC	27	4	1,326	135,990	3.8%

(Source: Transit Score from Walkscore.com. All other data from alltransit.cnt.org)

Other transport

Zipcar is available in some areas of Charlotte, though not nearby any of the residential sites in the study.

JoyRides docked bike share, along with Lime and Bird e-scooter share are available in Charlotte, but not in the near vicinity of any of the residential study sites.

	Bike Score	Bike Share available within 1/4 Mile	Scooter Share available within 1/4 Mile	Car sharing available? (distance to)
The Mezzanine	36	N	N	2.5
Evoke Living at Sugar Creek	33	N	N	4.3
Peppertree	64	N	N	4.8
The Innovation Barn	55	Y	Y	1.1
City: Charlotte, NC	31	Y	Y	Y

(Source: Bike Score from Walkscore.com; Bike and Scooter share data from US Bureau of Transportation Statistics <https://data.bts.gov/stories/s/Bikeshare-and-e-scooters-in-the-U-S-/fwcs-jprj/>; Zipcar data from Google Maps and Zipcar.com)

City Summary

OVERVIEW

- Peppertree, and to a lesser degree, Evoke Living at Sugar Creek, have a considerable number of non-English speaking residents living nearby.
- Peppertree has a higher proportion of residents in the 18 to 64 range, and with a slightly higher median income, do the Mezzanine and Evoke Living at Sugar Creek.
- The Mezzanine and Peppertree both have sizable zero-car households (20% and 26% respectively), and a sizable percentage of residents commuting by non-drive alone modes (24% and 34%, respectively).
- Peppertree has a high proportion of residents who spend a long time commuting: 20% of Peppertree commuters spend 45 or more minutes on their trips – this is concentrated in the carpool and public transit commuters.
- The Peppertree area has the highest combined population and employment density, which could suggest a greater market for car share.
- None of the residential sites currently have easy access to bike share, e-scooter share, or car share.

LIMITATIONS

- Note that most of the data utilized in this assessment is based on the block group(s) which make up the preponderance of the site location, and the tract in which the site is located. These do not in most cases directly correlate to residents of the sites, as they often include residents of some adjacent blocks. The Methods section provides some additional detail on the block group as it relates to the individual sites.
- Relatedly, ACS 2021 5-year data is used for many Census variables, and would not, for example, include details on residents who had moved into the site since 2021.

Method

This basic transportation needs assessment is a review of transportation, sociodemographic and built environment data for the site.

Key data sources include the US Census American Community Survey (2021 5-year data in most cases), the 2020 Decennial US Census, the TransitCenter’s AllTransit tool (<https://alltransit.cnt.org/>), Walk Score (Walkscore.com), the US EPA Smart Location Database (“SLD”; <https://www.epa.gov/smartgrowth/smart-location-mapping>), and calculations using mapping software include ArcMap and Google Maps.

Primary address: For analyses utilizing walkscore.com, alltransit.cnt.org, and proximity to various specific types of destination, we utilize the primary address provided for each site, generally representing the building mailing address (for individual buildings) and/or housing

site office. For larger multi-building complexes, the actual access information would be expected to vary slightly for residents housed elsewhere in the community.

Census data: A major component of the data in this analysis is based on census block group, or in a few cases, census tract data. In cases where a site made up less than a block group, the data presented is for the entire block group. In cases where a site made up more than 1 block group, or a portion of multiple block groups, we first looked to see if one single BG made up the preponderance of the site (and if so, data is present for that BG), or if significant portions of the site were split between multiple BGs, in which case we took the average of those BGs. See the table below for information about the BG used for each site.

2020 Census BG and Tract info	Primary Address	BG	BG notes	Tract
The Mezzanine	2635 Freedom Drive, Charlotte, North Carolina 28208, United States	Block Group 1, Census Tract 40, Mecklenburg County, North Carolina		Census Tract 40, Mecklenburg County, North Carolina
Evoke Living at Sugar Creek	4210 Merlane Dr Charlotte, NC 28206	Block Group 1, Census Tract 53.05, Mecklenburg County, North Carolina		Census Tract 53.05, Mecklenburg County, North Carolina
Peppertree	4335 Central Avenue, Charlotte, North Carolina 28205, United States	Block Group 1, Census Tract 16.05, Mecklenburg County, North Carolina	Apartments in SE corner of BG. BG has a large green space in the center.	Census Tract 16.05, Mecklenburg County, North Carolina
The Innovation Barn	932 Seigle Avenue, Charlotte	Block Group 2, Census Tract 8, Mecklenburg County, North Carolina	Nearby in the BG are several apartment complexes and a school.	Census Tract 8, Mecklenburg County, North Carolina