2025 Parking Study

City of Sterling Heights

City of Sterling Heights
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Chapter 1 - Introduction

Overview

Sterling Heights, a largely built-out city in Macomb County, Michigan, is strategically focused on revitalizing underutilized sites to achieve key goals outlined in the recently adopted *2025 Master Plan*. These goals include fostering a diverse and sustainable housing market, cultivating a vibrant local economy, and creating walkable, mixed-use neighborhoods that enhance the quality of life for all residents (Local Economy Goal and Placemaking Goal – *2025 Master Plan*, pgs. 14 and 20). The Master Plan emphasizes specific land use policies to achieve this vision, including a focus on developing mixed-use zoning districts and nodes to integrate residential and commercial uses. This approach aims to create communities where residents can work, live, and shop within walking or biking distance, promoting physical activity, reducing transportation costs, and enhancing community connectivity.

To further support the creation of walkable areas, the *2025 Master Plan* advocates for utilizing form-based code standards and zoning strategies that consider how building and site design shape the public realm, making streets and sidewalks more attractive and pedestrian-friendly. Recognizing the negative impacts of excessive parking on land use efficiency and the experience of walking and biking in Sterling Heights, the Master Plan also calls for lowering parking minimums and establishing parking maximums (*2025 Master Plan*, pg. 125). This approach aligns with a wider national and statewide movement to 'right-size' parking requirements based on evidenced need (parking demand) and utilization rates (supply analysis).

The City of Sterling Heights acknowledges the importance of adjusting its parking requirements to better reflect observed supply and demand and to support the interconnected goals and policies articulated in the *2025 Master Plan*. This *Sterling Heights Parking Study* examines parking conditions primarily in four (4) key nodes and corridors within Sterling Heights, as designated by the *2025 Master Plan's* future land use map: District Nodes, Neighborhood Nodes, the Van Dyke Mixed Use Corridor, and the North Van Dyke Node. The studied areas are representative of suburban commercial development (namely strip plazas) that exists throughout the City of Sterling Heights, as illustrated in Map A: Studied Areas (pg. 3).

This study provides an analysis of Sterling Heights' existing parking ordinances, collects and summarizes key parking supply and demand data for 35 parking lots in the city, reviews case study examples from other communities in Michigan and the Midwest, and recommends several policy changes to modernize parking requirements and

Figure 1.1. Guiding Principles from Sterling Heights' *2040 Visioning Plan* and *2025 Master Plan*

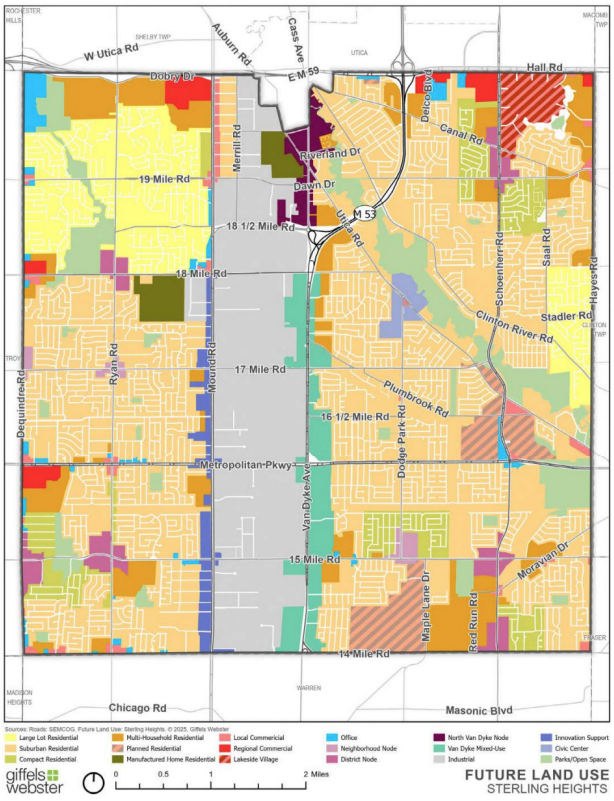
These eight (8) guiding principles are established in the 2040 Visioning Plan and reflected throughout the Master Plan. Credit: 2025 Master Plan, pg. 10.

Aligning Parking and Future Land Use

Sterling Heights' *2025 Master Plan* identifies desirable locations for future mixed-use development and organizes these locations into different categories of nodes or corridors, depending on envisioned intensity and targeted market area. This Study analyzes parking supply and demand data for representative, off-street parking lots within four (4) of Sterling Heights' future land use categories in order to align parking needs and conditions with the future land use vision. The studied nodes are shown in Map A (pg. 3) and include:

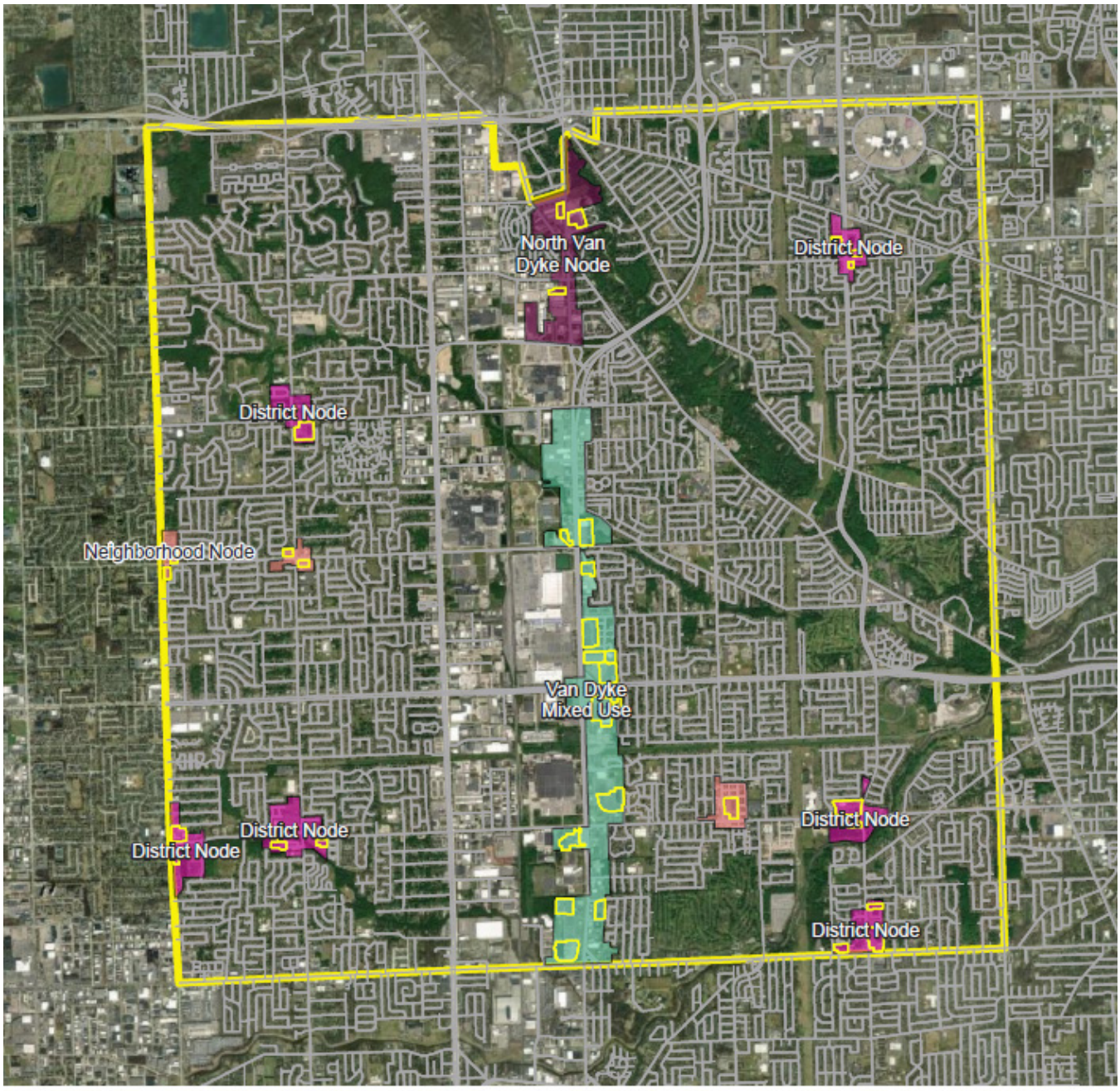
1. **District Nodes:** often located along higher-traffic roads (excluding Van Dyke Avenue) and currently characterized by existing big-box retail and large surface parking lots, District Nodes are envisioned for larger-scale, vertical mixed-use development. District Nodes are intended to serve a regional market and include high-density residential uses alongside retail, services, and entertainment. These nodes overlap with the city's existing Neighborhood and District Node Overlay (NDNO); however, the District Nodes are intended to be more intense than the Neighborhood Nodes.
2. **Neighborhood Nodes:** these nodes currently overlay with existing strip plazas and standalone buildings scattered across Sterling Heights, outside of the Van Dyke corridor. Neighborhood Nodes (NN) are intended to be redeveloped or improved incrementally to provide key products, services, and small-scale housing to serve a variety of local neighborhood needs. Rather than vertical mixed-use development, horizontal mixed-use development is expected in these nodes. These areas largely align with the existing NDNO Overlay Zone.
3. **Van Dyke Mixed Use Corridor:** the Van Dyke Mixed Use Corridor (VDMUC), particularly the area along Van Dyke Avenue between 14 and 18 Mile Roads, is intended as a regional commercial corridor, integrating retail and services, office buildings, institutional uses, and high-density residential uses. The Master Plan recommends infill development along the mixed-use corridor, especially on road frontages within underutilized parking areas. This future land use category corresponds with two (2) existing zoning overlay districts: Neighborhood and District Node (NDNO) and Van Dyke Mixed-Use District (VDMUD).
4. **North Van Dyke Node:** The North Van Dyke Node (NVDN), planned as a dense, walkable mixed-use urban center, intends to shift away from traditional parking requirements and towards strategies that prioritize transit, pedestrian, and bicycle access.

Figure 1.2. Sterling Heights Future Land Use Map



The Future Land Use Map identifies District Nodes, Neighborhood Nodes, the Van Dyke Mixed Use Corridor, and the North Van Dyke Node for mixed-use redevelopment.
Credit: 2025 Master Plan, pg. 169.

Map A: Studied Parking Lots



Credit: Map created by Spalding DeDecker, using future land use layers provided by the City of Sterling Heights (2025).

Chapter 2 - Parking Study Methodology

Overview

This chapter outlines the methods used to assess existing parking conditions, including supply and utilization, in privately-owned parking lots across Sterling Heights. The approach integrated multiple data sources for parking counts spanning a seven (7) year time frame. Additional reference documents and analytical techniques were used to supplement parking counts. Within the Neighborhood Nodes, District Nodes, Van Dyke Mixed Use Corridor, and North Van Dyke Node (described in this chapter), 35 parking lots were studied. These privately-owned, surface parking lots were specifically chosen to represent a variety of land use mixes and densities/intensities, varying transportation contexts (roadway classification and transit availability), and diverse parking peak-hour times based on existing residential or business mix.

This study evaluated 35 parking lots across the city that share similar characteristics to other with privately owned, surface parking lots in commercial areas. Findings from this study are shared in *Chapter 3: Parking Study Findings*.

Objectives

The following five (5) objectives were established to guide the development of the *Sterling Heights Parking Study*:

1. Quantify existing parking supply and utilization in privately-owned parking lots in key nodes and corridors across the city;
2. Analyze parking utilization considering land use type and investigate the relationship between parking lot usage and factors such as land use and hours of operation, age of the development, parking lot layout, and adjacent land uses and parking supply;
3. Evaluate other sources of parking demand data and their applicability for determining minimum parking standards, including best practices from other municipalities and the *ITE Parking Generation Manual 5th Edition*;
4. Consider future parking demand based on anticipated land use changes and growth projections, including consideration of multi-tenant developments and potential changes in use over time;
5. Create an actionable implementation plan to guide the city in addressing current and future parking challenges, including recommendations related to ordinance amendments, incentives for parking, educational outreach, and parking area design.

Aerial Imagery

Aerial photographs from multiple sources with capture dates between 2018 and 2025 were used to count the number of parking spaces (supply/capacity) in studied parking lots and the number of parked vehicles (demand). The percentage of available parking spaces that are occupied by parked vehicles is referred to as the ***parking utilization rate***. Count data was compiled in ESRI ArcGIS Pro and combined with multiple other data layers, including parcels, zoning, building footprint, aerial imagery from SEMCOG and NearMap, and the node boundaries identified in the *2025 Master Plan* – Future Land Use Map.

Macomb County provided aerial photography from years 2018, 2022, and 2024. Aerial photographs were captured in early spring (typically late March to mid-April) under leaf-off conditions (i.e. when there are no leaves on the trees that would limit visibility), ensuring clear views of ground features. Flights to gather the aerial images occurred between 11:30 AM and 1:30 PM to minimize long shadows caused by low sun angles. The dates of capture for the referenced aerial photographs are as follows:

A. 2018 - March or April

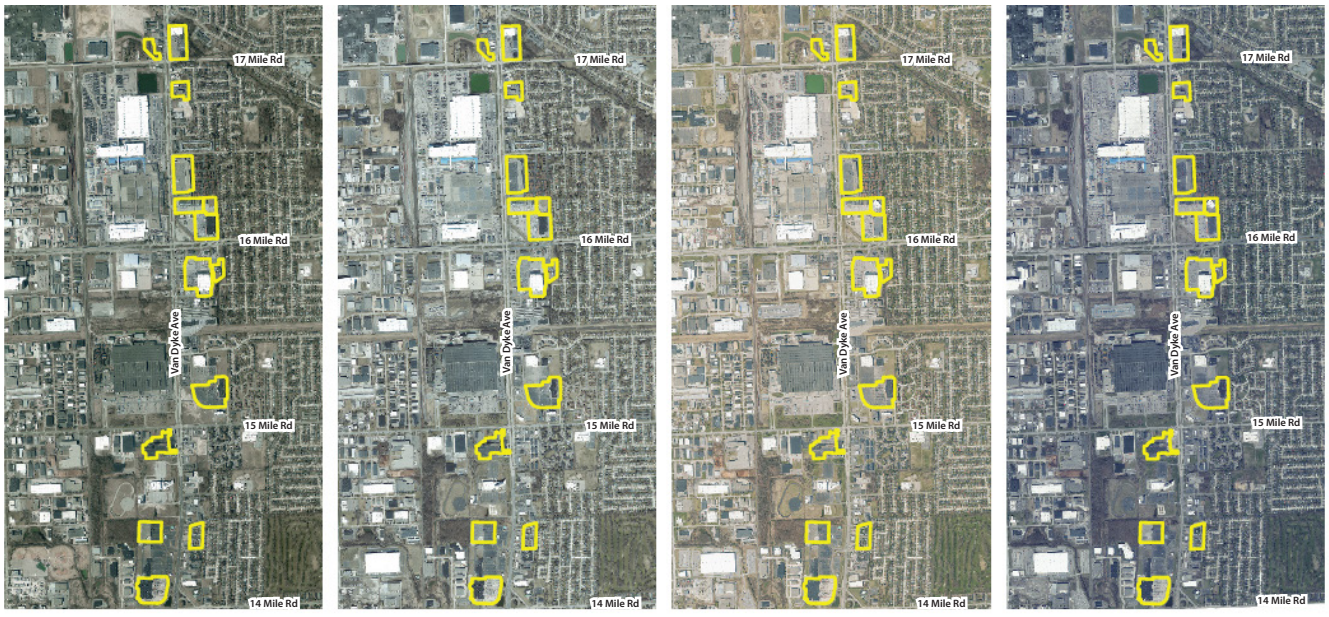
B. 2022 - April 10

C. 2024 - March 28

In addition to existing county imagery, the project team captured aerial photography on Thursday, January 9, 2025, at approximately 12:30 PM. This flight supplements the available county data by capturing real-time conditions relevant to our study. Although it was an earlier capture date than the Macomb County aerials, time of day and leaf-off conditions were consistent.

To supplement aerial imagery for the study during multiple years, the project team also used NearMap imagery, which provides high-resolution aerial coverage. Because NearMap is updated multiple times per year, it provides a more dynamic view of parking conditions across different seasons and days of the week. NearMap imagery enabled the analysis of parking utilization on a variety of weekdays and weekends over multiple years, allowing for the observation of parking utilization differences during business/land uses' peak hours.

Figure 2.1: Parking Lots Identified in Aerials



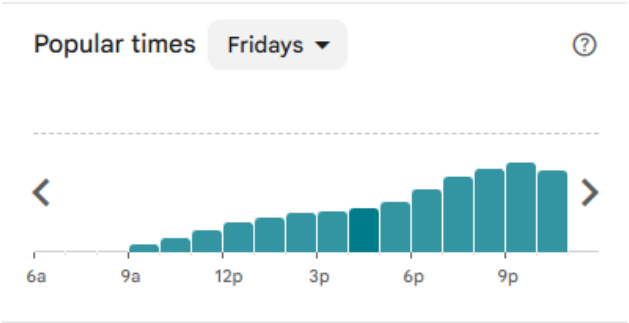
Aerial imagery was available for the years 2018, 2020, 2022, and 2024. Shapes outlined in yellow represent a sampling of the studied parking lots on Van Dyke Avenue.
Credit: Created by Spalding DeDecker using referenced aerial images, 2025.

Field Counts

Recognizing that peak parking demand for many businesses in the study area may occur on weekends or outside the typical 10:00 AM to 2:00 PM window for aerial surveys, the team supplemented the aerial data with on-the-ground field counts. The project team selected 17 parking lots that were suspected to have peak parking utilization in the hours before or after the midday window (i.e. movie theaters, entertainment venues, multi-family residential, and fitness centers). Peak hours for businesses within these parking areas were estimated using the *ITE Parking Generation Manual – Fifth Edition, 2019* (described in the next section), and "Popular Times" data for businesses listed in Google Maps (Figure 2.2).

Project team members traveled to the 17 parking lots during suspected peak hours (for the unique businesses being studied). The number of parking spaces (supply/capacity) and the number of parked vehicles (demand) were counted by hand. Videos of each parking area were also taken to record parking lot conditions and characteristics of surrounding roads and land uses. The field count data was added to the project geodatabase with the aerial imagery parking counts.

Figure 2.2: Google Maps Popular Times for MJR Cinema (Lot 12)



Google Maps data was used to identify likely peak parking hours for businesses, to inform the timing of field counts. Source: Google Maps, 2025.

Additional References

Institute of Transportation Engineers (ITE) Parking Generation Manual

For the purposes of this study, the Institute of Transportation Engineers (ITE) *Parking Generation Manual – Fifth Edition, 2019*, was used to compare Sterling Heights' parking ordinances and parking lot utilization rates to national averages. The *ITE Parking Generation Manual* synthesizes crowd-sourced parking demand data from across North America. The data is peer-reviewed before being included in the manual, which is available for purchase online (and is often used by planning and transportation professionals). The manual provides data-driven insights for determining appropriate parking requirements for various land uses, with its primary goal being to assist jurisdictions and developers in aligning parking supply with actual demand. Analysis shows that Sterling Heights' existing parking minimums exceed demand observed in the *ITE Parking Generation Manual* for nearly all land uses. These findings are explored in detail in Chapter 3.

Sterling Heights Zoning Ordinance

In addition to counting the supply of parking spaces and the number of parked vehicles within parking lots, the project team provided estimates of the number of parking spaces that would be required by the current zoning ordinance at each location. Sterling Heights' minimum parking requirements are found in Section 23.02 of the City's Zoning Ordinance. The minimum off-street parking requirements for private developments are based on proposed land use, and may be calculated using floor area of the building or use, number of dwelling units or bedrooms, number of employees, and/or maximum occupancy of the building. In instances where minimum standards are based on floor area, the ordinance specifies that floor area means 90 percent of the gross floor area used or intended to be used for services to the public, employees, or tenants, including areas for storage and display of merchandise (§23.01.K.).

Many of the parking lots studied accompany multi-tenant commercial buildings. The mixture of land uses within these buildings was not always known. In order to estimate the minimum number of parking spaces that would be required by ordinance, the project team used NearMap to measure (as closely as possible) the square footage of buildings. If anchor tenants were known, or if standalone buildings existed, the parking standards for these structures were calculated separately – based on the occupying land uses. For multi-tenant portions of buildings, the project team generally applied the standards of the "Retail stores" land use category:

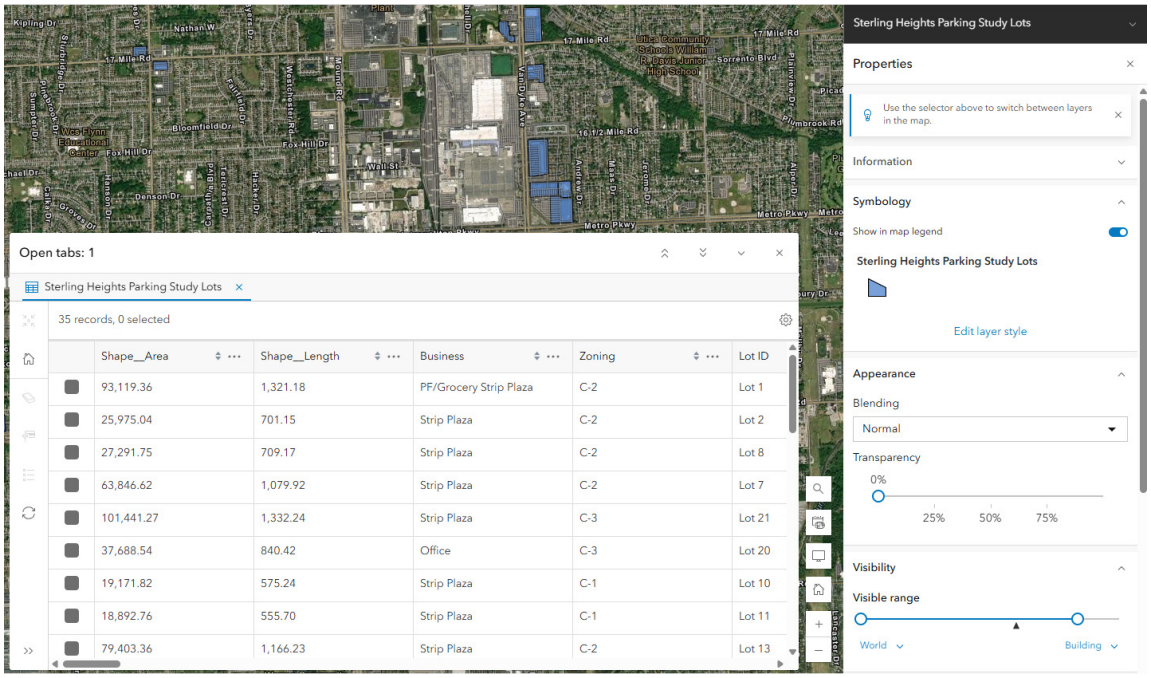
- With floor area of less than 75,000 square feet of floor area, one space per 200 square feet of floor area.
- With floor area of between 75,000 and 200,000 square feet, one space per 225 square feet of floor area; and
- With floor area over 200,000 square feet, one space per 250 square feet of floor area.

The ordinance requirements for each site were compared to observed parking supply and demand to determine if the requirements are consistent with parking realities in the city. This is explored in greater depth in Chapter 3.

GIS Database

The Spalding DeDecker team developed a database of the information above in ESRI ArcGIS and provided the data to the City of Sterling Heights. Summaries and excerpts of key data points are included in the *Parking Study Findings* section (Chapter 3) that follows.

Figure 2.3: Screenshot of Sterling Heights Parking Study GIS Database

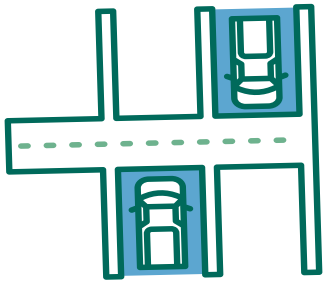


The Parking Study GIS Database compiles aerial counts, field observations, and ordinance requirements for analysis.
Source: Database created for the City of Sterling Heights by Spalding DeDecker, 2025.

Chapter 3 - Parking Study Findings

Overview

This chapter presents the key findings from the analysis of parking conditions in Sterling Heights. As described in Chapter 2, the project team performed parking counts and calculated utilization rates from both aerial imagery and in-person field observation. Additional analysis compared Sterling Heights' parking ordinances to local and regional examples as well as to national best practices, including demand data from the *ITE Parking Generation Manual*. A few key findings are summarized below. A table of findings for each studied parking lot is available in Appendix C.

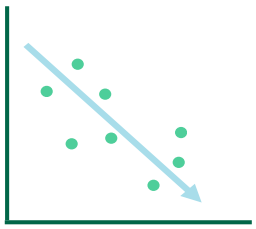


53% was the **highest parking utilization** recorded in 2025.

Ordinance requirements **greatly exceed real demand and ITE suggestions** in many cases.

Although online purchasing increased during COVID, **most** grocery transactions still occur in-store[1].

75% of all restaurant traffic now occurs off-premises, including **drive-thru, takeout, and delivery usage[2].**



A **significant negative correlation** was observed **between the total number of parking spaces in a parking lot and the parking utilization rate.**

1. (PYMNTS, 2024)
2. (National Restaurant Association, 2025)

Parking Supply and Utilization

As described in the previous chapter, parking utilization is defined as the percentage of available parking spaces that are occupied by vehicles at the time of a count. The most commonly used metric for parking utilization, by professionals who study and manage municipal parking, is a target utilization rate of 85 percent (*Utah Parking Modernization Guidebook*, 2023). For the purposes of this study, the team considered a utilization rate between 70 and 90 percent as "balanced", meaning that parking supply is well-suited to parking demand.

A utilization rate below 70 percent indicates an oversupply of parking (supply exceeds demand). Too much parking may be contrary to community goals outlined in the *Master Plan*, such as local economy, environmental stewardship, transportation, and placemaking. For example, large, paved surface parking lots may appear as 'dead-space' within a community, interrupting the pedestrian experience and also occupying land that could otherwise be redeveloped for higher-value uses (residential, commercial, etc.). Impervious surfaces, which prevent stormwater runoff from filtering through to the ground beneath and also absorb heat from sunlight, also cause strain on municipal stormwater infrastructure and lead to increases in ambient temperatures, contributing to urban heat island effect.

A utilization rate above 90 percent means that parking demand may be overburdening the parking supply. Where parking demand exceeds supply, it may take longer to find a parking space (idling also increases while drivers wait for spaces) or people may forego unnecessary trips. If on-street parking is available nearby, those areas may start to be used for overflow parking.

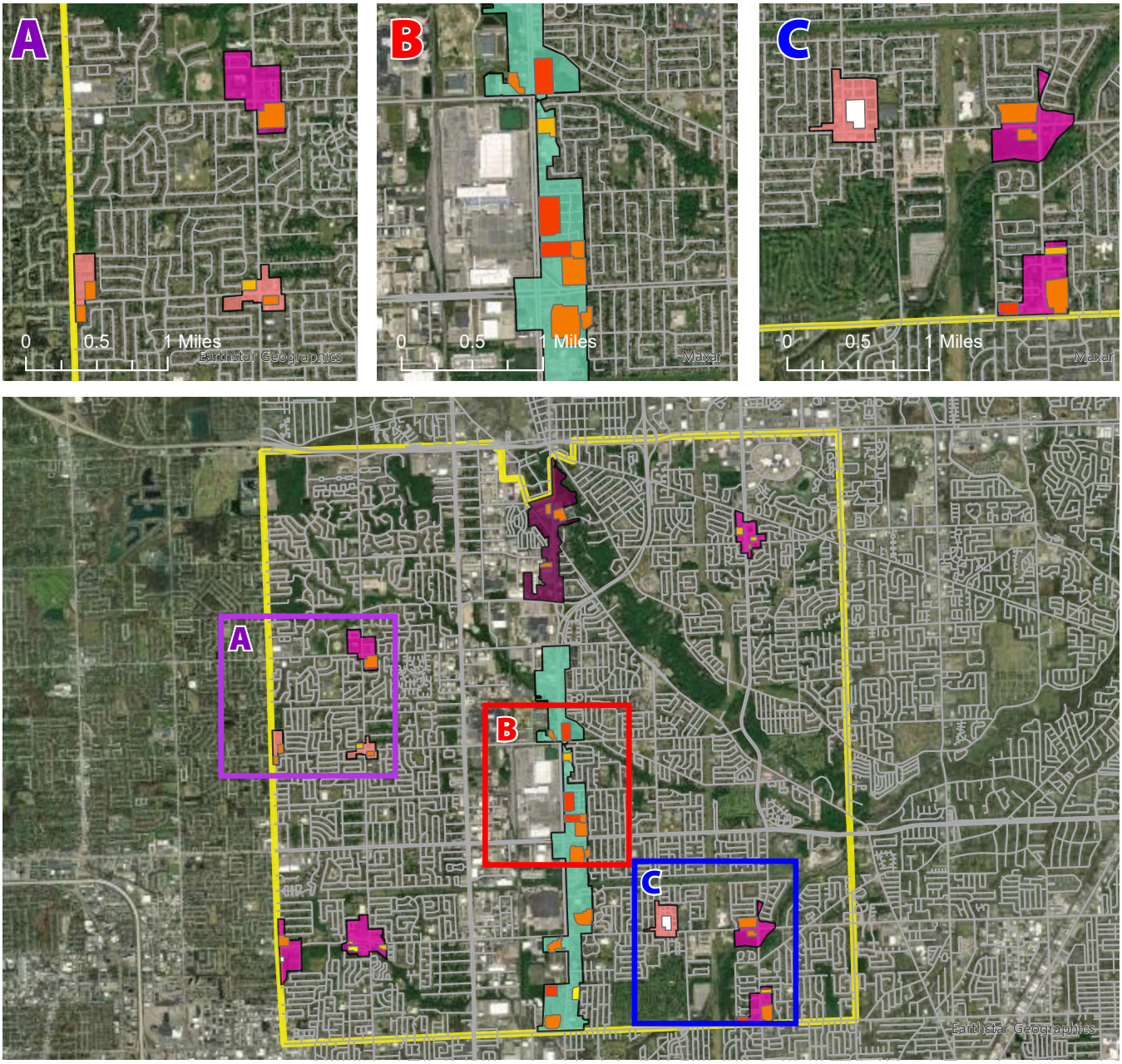
In general, parking utilization in the studied lots is low – indicating an oversupply of parking spaces (Map B, pg. 10). Findings related to parking utilization are summarized in Table 3.A.

Table 3.A: Parking Utilization Data

Category	Finding
Maximum Utilization Rate, 2025	55% (condominiums)
Average Utilization Rate, 2025	27%
Maximum Utilization Rate, Any Year	74% (2021 - place of worship)
Average Maximum Utilization Rate,* Any Year	36%
Number of Parking Lots with a Capacity that Exceeds Minimum Ordinance Requirements	21

**To calculate the average maximum utilization rate, the highest number of vehicles counted in any year for each parking lot was divided by the capacity (total parking spaces) within that parking lot.*

Map B: 2025 Parking Lot Utilization Rates



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Credit: Map created by Spalding DeDecker, using parking counts from aerial photography and in-person counts conducted in 2025.

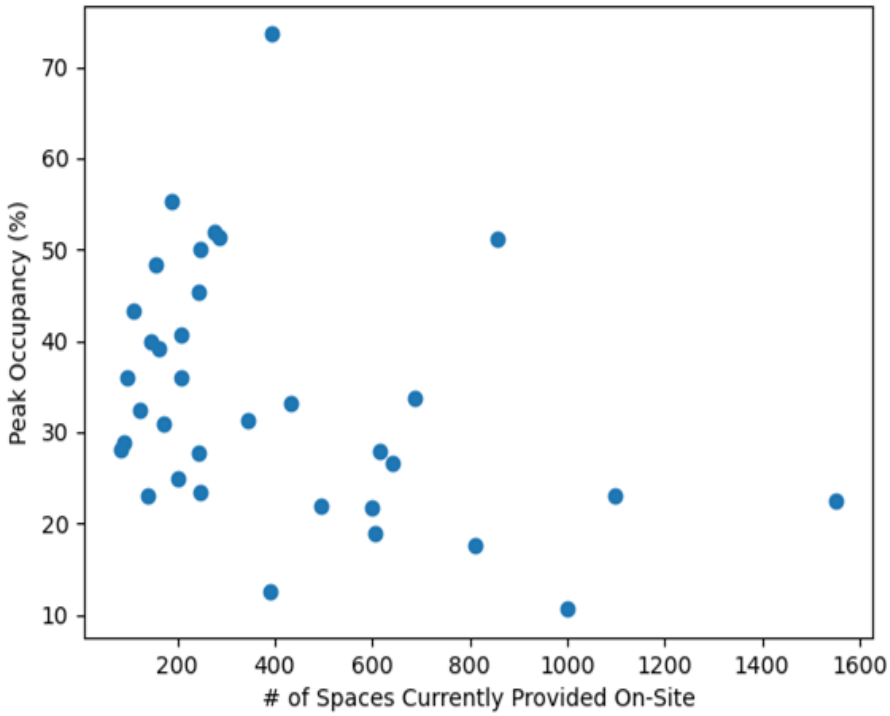
A total of **21 out of 35** studied parking lots have more parking spaces than is required by Sterling Heights' current parking ordinances. However, even if the supply of parking spaces in each lot was exactly the same as the minimum parking spaces required by ordinance:

- **30 lots would be underutilized (supply > demand).**
- **1 lot would be over-utilized (supply < demand).**
- **Only 4 lots would be balanced (supply = demand).**

Data reveals that the larger the parking lot (total number of parking spaces), the lower the parking utilization rate (see Figure 3.1). This again suggests that true parking demand is lower than what developers and/or the City Zoning Ordinance would predict.

At the end of this chapter, parking profiles for six (6) of the studied parking lots are shared to provide additional context on parking conditions, utilization rates, and land use considerations. Findings from all of the lots were provided in a GIS database for the City of Sterling Heights.

Figure 3.1: Correlation between Parking Lot Size and Maximum Parking Utilization



Credit: Figure 3.1 shows a correlation plot of parking lot size and parking utilization. A negative correlation exists, meaning that the larger the overall size of the parking lot, the lower the observed parking utilization rate. Python was used to run a t-test on the correlation, and the resulting p-value demonstrated that this is a ***significant*** *correlation. This finding informed minimum parking standard recommendations found in the Appendices, especially pertaining to multi-tenant retail centers.*

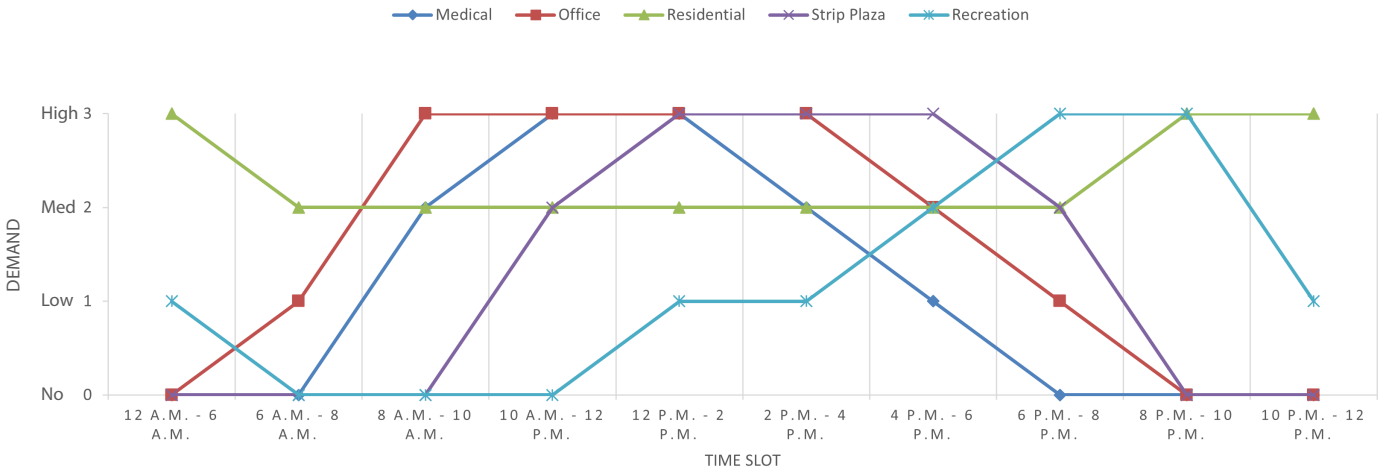
Land Use and Parking

Parking counts reveal several patterns between land use and parking utilization. Overall, multi-tenant commercial plazas with large anchors exhibit the lowest utilization rates. For example, commercial parking lots containing Meijer, MJR Theater, and Burlington Coat Factory, each have a peak utilization rate below 30 percent. As demonstrated by the I*TE Parking Generation Manual's* parking demand tables and by the *ULI Shared Parking Model* (Chapter 5), different land uses also generate parking demand during different peak hours. Figure 3.2 shows the hours during which five (5) different land use categories experience peak occupancy in Sterling Heights.

The data suggests that shared parking strategies, which allow diverse uses to co-locate and share available parking spaces based on hours of peak parking demand, could be an effective strategy for balancing parking supply and demand in Sterling Heights. Additional considerations may especially be needed for multi-tenant buildings where a variety of land use and business types are present, and where drivers have the option to park once and visit multiple establishments.

Two (2) multi-family residential parking lots were included in the parking study. Peak hours for residential uses are generally 8:00 PM to 6:00 AM (when residents are assumed to be parked at home and sleeping - *ITE Parking Generation Manual – Fifth Edition, 2019*). At least one (1) count was performed on each parking lot during these peak hours (11:00 PM to 12:00 AM). Observed utilization did not exceed 55 percent.

Figure 3.2: Occupancy for Various Land Uses by Hour



This graph shows peak parking demand for five major land use types (medical, office, retail, residential, entertainment) and illustrates potential for shared parking strategies.
Credit: Created by Spalding DeDecker for Sterling Heights Parking Study, 2025.

Parking Utilization, Future Land Use, and Population Growth

Average parking utilization in 2025 also varies slightly by future land use node type (see Table 3.B). For example, average utilization within District Nodes is almost 10 percent higher than in all other node types.

The District Nodes are primarily located within areas of Sterling Heights that are expected to experience a very small population loss within the next 10 years (see Map C, pg. 14). Meanwhile, the Van Dyke Mixed Use Corridor is adjacent to several areas that are expected to grow or at least retain population during the next 10 years (SEMCOG Population Projections by TAZ, 2024). The low parking utilization within the Van Dyke Mixed Use Corridor may create opportunities for existing vacant parking areas to be repurposed for housing or services to accommodate any anticipated or desired growth.

Based on population projections, the total population of Sterling Heights is expected to increase from 134,346 in 2020 to 134,809 in 2030. **The overall population is projected to reach 143,767 by 2050, which is a 7.0 percent increase from 2020.** While the total population is growing, some areas within the city are projected to experience population decline in the next 10 years, as shown by Map C (pg. 14).

Changes to Work and Commerce

This parking study utilized available data from 2018 to 2025. There were notable changes in utilization rates during this time period, especially considering pre-COVID, COVID, and post-COVID timeframes. Map D (pg. 15) demonstrates a significant post-COVID decrease in parking utilization within Neighborhood Node areas of the city. Each studied parking lot within a Neighborhood or District Node (excluding those where pre-COVID data was unavailable) was found to have decreased parking utilization between 2018 and 2024.

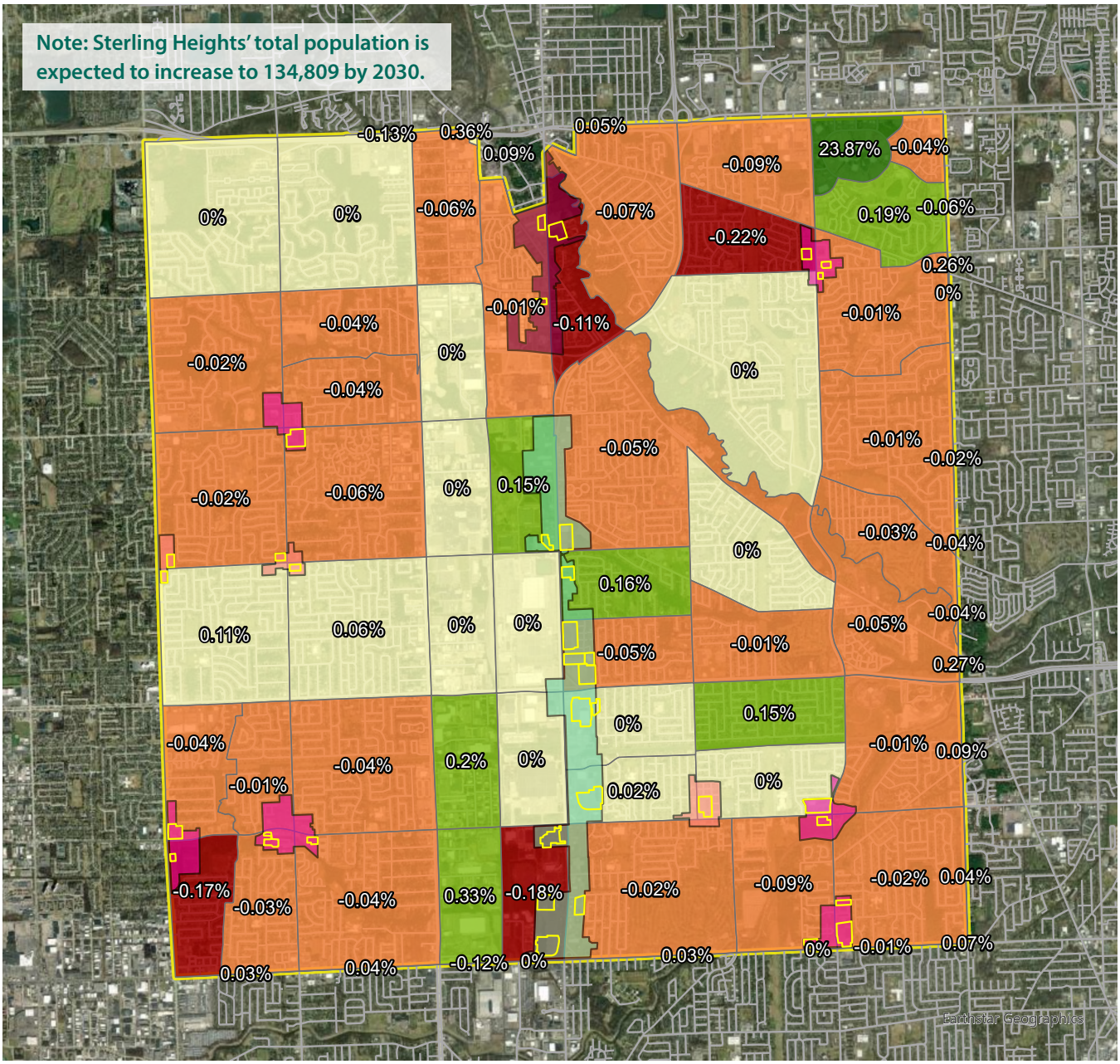
It is assumed that most of these changes were related to increases in building/tenant vacancy or by a rise in e-commerce. However, georeferenced business license data was not available at the time of this study, and vacancy rates could not be verified. The District Nodes also contain large office plazas (Parking Lot IDs 6 and 35), which may have transitioned to remote work in response to COVID and post-COVID conditions.

Table 3.B: Average 2025 Parking Utilization Rate, by Node Types

Node Type	Average Utilization Rate (2025)	# Parking Lots Studied per Type
District Node	33%	13
Neighborhood Node	24%	5
North Van Dyke Node	25%	3
Van Dyke Mixed Use Corridor	24%	14

This table compares parking utilization across District Nodes, Neighborhood Nodes, North Van Dyke, and the Van Dyke Mixed Use Corridor.
Credit: Created by Spalding DeDecker for Sterling Heights Parking Study, 2025.

Map C: Projected Population Change Relative to Future Land Use Node Locations



N

0 0.5 1 2 Miles

Legend

- Parking Lots
- 10 Years Pop Change
  - 0.36% to 23.87%
  - 0.12% to 0.36%
  - 0.00% to 0.11%
  - -0.10% to -0.01%
  - -0.22% to -0.11%
- District Node
- Neighborhood Nodes
- North Van Dyke Node
- Van Dyke Mixed Use
- Roads
- Sterling Heights Limits

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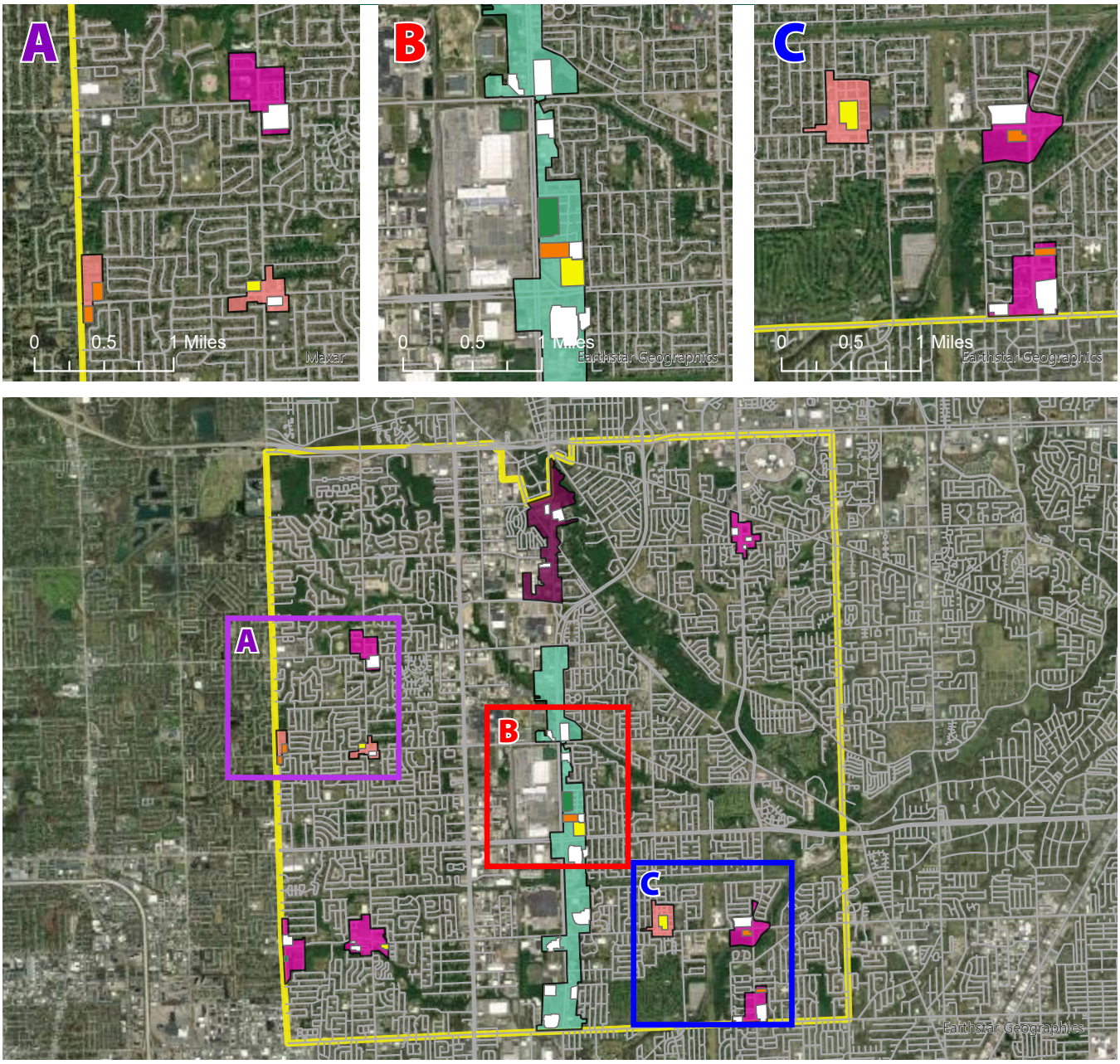
Credit: Map created by Spalding DeDecker using population projections by TAZ from SEMCOG, 2024

Map D: Changes in Parking Utilization from 2018 (Pre-COVID) to 2024 (Post-COVID)



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Credit: Map created by Spalding DeDecker, using parking counts from aerial photography and in-person counts conducted in 2025.

Parking Lot Profiles

The following pages offer six (6) examples of parking lots included in the *Sterling Heights Parking Study*. Examples were selected to represent a range of land use and building configurations.

Parking Lot #3 (Henry Ford Emergency Medicine and Accessory Lot)

Zoning: Planned Office District (O-2) Zone and Neighborhood and District Node (NDNO) Overlay

Future Land Use: District Node

Building Tenants and Adjacent Uses: Henry Ford Emergency Medicine (anchor) with supporting retail/service

General Findings: This lot presents a notable discrepancy between the city's current ordinance, which requires 822 spaces, and the actual number provided (286 spaces), which is closely aligned with ITE's recommendation of 267 spaces. Despite falling significantly short of the ordinance requirement, the observed peak utilization of 51.40 percent and average occupancy of 33.04 percent indicate that the current supply is more than adequate for demand. This pattern is consistent with trends in the healthcare sector, where increased adoption of digital scheduling and telemedicine has reduced the need for on-site parking.

Metric	Value
Number of Spaces Required by Ordinance	822 spaces
Number of Spaces Suggested by ITE Parking Generation Manual	267 spaces
Actual Number of Spaces Provided On-Site	286 spaces
Peak Occupancy (Cars, Rate, Date)	147 cars; 51.40% (2023-06-17)
Average Occupancy	33.04%

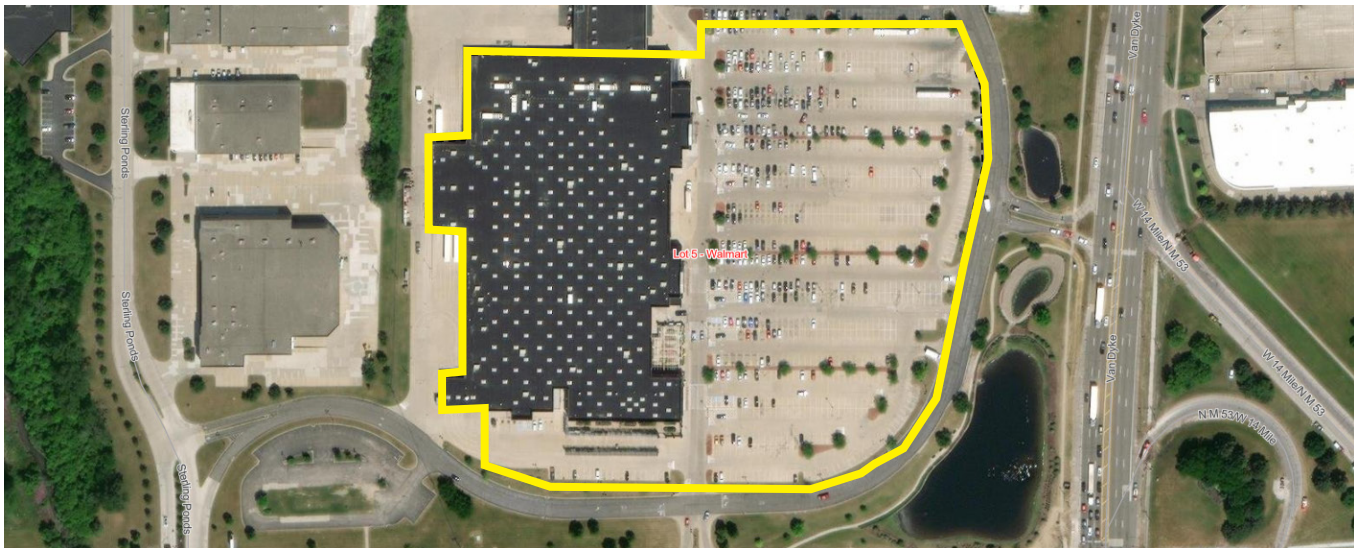
Parking Lot #5 (Walmart)

Zoning: Planned Center District (PCD) Zone and Van Dyke Mixed Use District (VDMUD) Overlay

Future Land Use: Van Dyke Mixed Use Corridor

Building Tenants and Adjacent Uses: Walmart (anchor) with supporting retail/service

General Findings: This lot was selected as a representative case for a large commercial retail anchor. With an existing capacity of 857 spaces, the lot closely aligns with both current ordinance requirements and ITE recommendations (799 spaces for both). However, observed data reveals a consistent oversupply of parking, even during peak periods, as evidenced by a peak occupancy of 51.11 percent and an average occupancy of 32.73 percent. The parking area is very underutilized, a trend broadly observed across big-box retail developments in the city.



Metric	Value
Number of Spaces Required by Ordinance	799 spaces
Number of Spaces Suggested by ITE Parking Generation Manual	799 spaces
Actual Number of Spaces Provided On-Site	857 spaces
Peak Occupancy (Cars, Rate, Date)	438 cars; 51.11% (2018-11-23)
Average Occupancy	32.73%

Parking Lot #6 (Church)

Zoning: Planned Center District (PCD) Zone and Van Dyke Mixed Use District (VDMUD) Overlay

Future Land Use: Van Dyke Mixed Use Corridor

Building Tenants and Adjacent Uses: Grace Christian Church (sole tenant)

General Findings: Originally built for a big-box retail store (Builder Square), the site is now used as a place of religious assembly—an activity characterized by highly intermittent peaks. The selection of this parking lot is important because it illustrates how conventional parking metrics often fail to account for land uses with highly intermittent demand. The parking patterns for this church lot reveal a significant contrast between infrequent, high peak demands and low average occupancy. While the lot's actual capacity of 394 spaces is sufficient for its peak utilization of 73.60 percent, its average occupancy is a strikingly low 1.27 percent. This difference, coupled with ITE's paradoxically high recommendation of 1,051 spaces compared to the ordinance's 284, highlights the challenges of applying standard parking metrics to institutional uses with highly episodic demand patterns. Further complicating the data, city staff have observed high occupancy in this lot during Christmas events.

Metric	Value
Number of Spaces Required by Ordinance	284 spaces
Number of Spaces Suggested by ITE Parking Generation Manual	1,051 spaces
Actual Number of Spaces Provided On-Site	394 spaces
Peak Occupancy (Cars, Rate, Date)	290 cars; 73.60% (2021-03-12)
Average Occupancy	1.27%

Parking Lot #11 (The Block Apartments)

Zoning: General Business District (C-3) Zone and Van Dyke Mixed Use District (VDMUD) Overlay

Future Land Use: Van Dyke Mixed Use Corridor

Building Tenants and Adjacent Uses: The Block Apartments with surrounding service uses

General Findings: This multi-family residential lot offers insights into evolving residential parking needs. Despite its large capacity of 811 spaces (originally built for a hotel and water park), and an ordinance requirement of 1,198 spaces, actual parking utilization is low. Utilization peaks at 17.63 percent, but the observed average occupancy is 9.54 percent. ITE suggests a lower figure of 585 spaces, but even that significantly exceeds observed demand. Low utilization may be reflective of decreases in household size and changing car ownership patterns.

Note: For the purposes of this study, the number of parking spaces and number of parked vehicles within the yellow boundary shown below were counted. The east portions of this lot are not located on the same parcel as the Block Apartments. Those portions, along with the adjacent property fronting on Van Dyke, are proposed for development as a hotel in the future. Existing vacant parking may be shared with the hotel facility.

Metric	Value
Number of Spaces Required by Ordinance	1,198 spaces
Number of Spaces Suggested by ITE Parking Generation Manual	585 spaces
Actual Number of Spaces Provided On-Site	811 spaces (see note above)
Peak Occupancy (Cars, Rate, Date)	143 cars; 17.63% (2024-03-28)
Average Occupancy	9.54%

Parking Lot #12 (MJR Movie Theater)

Zoning: General Business District (C-3) and Van Dyke Mixed Use District (VDMUD) Overlay

Future Land Use: Van Dyke Mixed Use Corridor

Building Tenants and Adjacent Uses: MJR Marketplace Cinema (sole tenant), surrounded by lodging, retail, service, and one vacant parcel

General Findings: This movie theater lot was chosen as an example of commercial entertainment and exhibits a substantial oversupply of parking. With 1,553 spaces provided, it exceeds both the ordinance requirement (1,484 spaces) and ITE's recommendation (641 spaces). The observed peak utilization was only 22.41 percent, with an average occupancy of 15.14 percent, indicating that a significant portion of its parking capacity remains underutilized. Current parking provisions for large entertainment venues is in excess of actual observed demand, a trend that is increasingly observed with national shifts in entertainment consumption.

Metric	Value
Number of Spaces Required by Ordinance	1,484 spaces
Number of Spaces Suggested by ITE Parking Generation Manual	641 spaces
Actual Number of Spaces Provided On-Site	1,553 spaces
Peak Occupancy (Cars, Rate, Date)	348 cars; 22.41% (2023-09-24)
Average Occupancy	15.14%

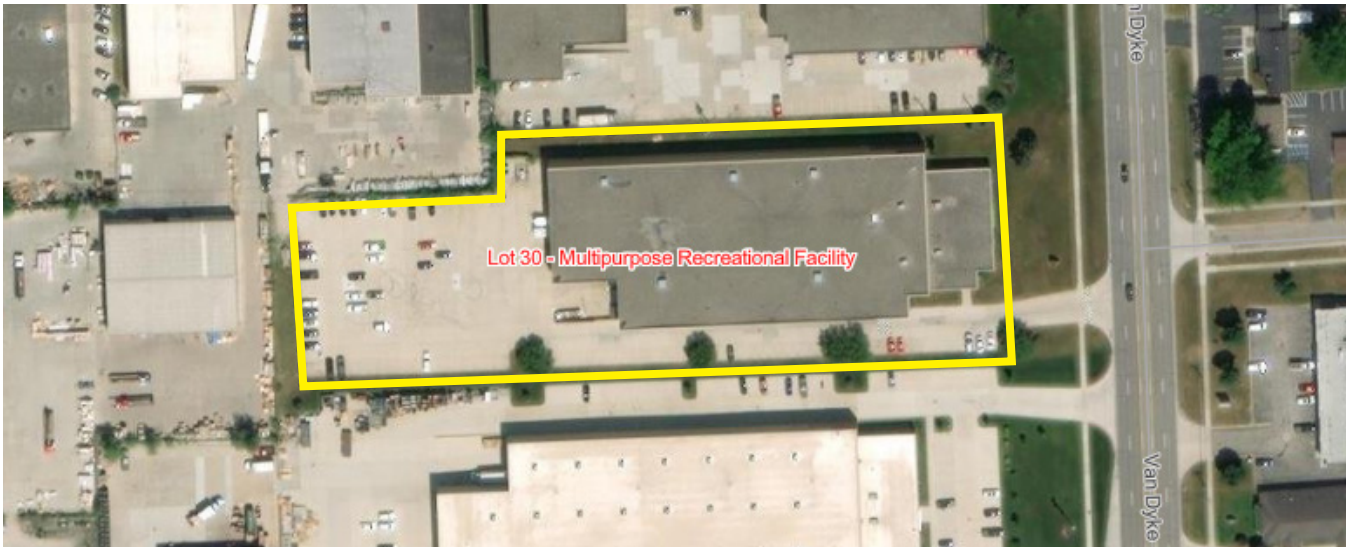
Parking Lot #30 (Full Throttle - Recreational Facility)

Zoning: North Van Dyke Industrial District

Future Land Use: North Van Dyke Node

Building Tenants and Adjacent Uses: Full Throttle Adrenaline Park (sole tenant), surrounded by industrial uses

General Findings: This lot presents a unique case: a standalone recreational use developed within an industrial zoning district. The site provides 144 spaces, which is significantly lower than both the ordinance requirement of 407 spaces and the ITE's recommendation of 514 spaces. Despite these considerable differences in prescriptive standards, the observed peak utilization was only 40.00 percent, indicating that the existing parking supply functionally meets demand. The peak hours of the recreation/entertainment facility vary from surrounding uses, which could create opportunities for shared parking if demand every exceeded available on-site spaces. However, the surrounding parking areas are largely inaccessible.



Metric	Value
Number of Spaces Required by Ordinance	407 spaces
Number of Spaces Suggested by ITE Parking Generation Manual	514 spaces
Actual Number of Spaces Provided On-Site	144 spaces
Peak Occupancy (Cars, Rate, Date)	57 cars; 40.00% (2025-04-11)
Average Occupancy	31.55%

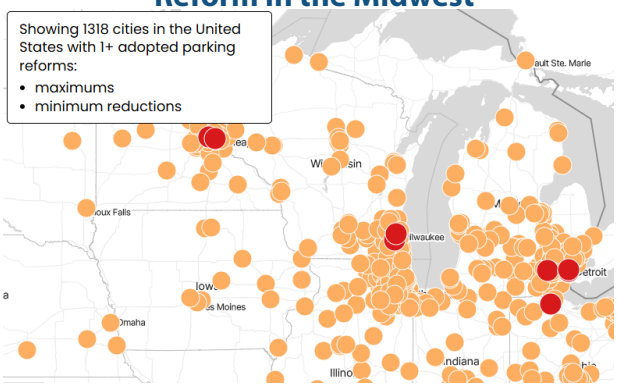
Chapter 4 - Parking Regulation: Current Practices and Peer Review

Overview

In recent years, several planning organizations and the development community (American Planning Association, Urban Land Institute, Lincoln Institute of Land Policy, Congress for New Urbanism, etc.) have called on communities to reform their parking regulations. Publications from these organizations have primarily highlighted the land inefficiencies that are created when zoning standards require more parking spaces than the parking demand a use or business generates (Chapley - writing for the American Planning Association, 2025). Parking lots occupy land that could otherwise be developed for housing, employment, or community services; large areas of impervious surface (pavement) burden stormwater infrastructure and contribute to urban heat island effect; parking lots introduce additional conflict points with pedestrians and bicyclists and can make for less comfortable experiences walking and biking – in addition to increasing the physical distance between uses (FHWA, 2014; Chapley, 2025; MEDC, 2025).

Several solutions have been proposed and adopted by communities both in Michigan and across the nation. This chapter discusses some of those solutions and their applicability to Sterling Heights, based on the findings of this *Parking Study*.

Figure 4.1: Snapshot of Municipal Parking Reform in the Midwest



This map shows Midwest municipalities that have adopted maximum parking standards or reduced minimums. Credit: Parking Reform Network, 2025.

Zoning Analysis

As a part of this study, the following resources were reviewed for parking regulation best practices:

- **Michigan Association of Planning's** Zoning Reform Toolkit – 15 Tools to Expand Housing Choice + Supply
- **Redevelopment Ready Communities'** Zoning Quick Sheet - Best Practice 2.5 Parking Flexibility
- **Victoria Transport Policy Institute's** Parking Management – Strategies for More Efficient Use of Parking Resources
- **Utah's** Parking Modernization Guidebook

The project team reviewed Sterling Heights' existing parking ordinances to determine which, if any of the identified parking regulation best practices had been implemented. The following articles of the zoning ordinance were reviewed by the Spalding DeDecker team in May 2025: 14A. VDMUD, 14B. NDNO, 23. Off-Street Parking and Loading, and 24. Environmental Provisions. In June 2025, the city amended its TMUDN Ordinance and renamed it Neighborhood and District Node Overlay District (NDNO). Parking provisions within this article were not changed. Therefore, TMUDN was changed to NDNO in this analysis.

Findings of the zoning analysis are shown in Table 4.A (pg. 23). The first column in the table lists several best practices related to parking regulation. For each practice, the table identifies whether Sterling Heights is currently engaging in the practice and provides additional notes comparing the city's existing ordinances to the recommended regulatory approaches.

Table 4.A: Sterling Heights Parking Ordinances Review

Regulatory Best Practice	Is the City Doing it?	Notes on Sterling Heights' Existing Regulations
The ordinance contains provisions for shared parking.	Partially	§23.01.F. allows shared parking, but associated conditions make the tool difficult to use. For example, uses that share parking are not allowed any overlap in their business hours and a reserve area for future parking (that fits all of the spaces reduced by the shared parking arrangement) must be provided on-site.
The ordinance sets maximum parking standards.	No	Article 23 (Off-Street Parking and Loading Requirements) includes minimum off-street parking standards but no maximums.
The ordinance follows MAP's recommendations for parking requirements based on housing unit size.	No	With the exception of the NDNO and VDMUD Overlay Districts, at least two (2) off-street parking spaces are required per residential unit, regardless of the size of the unit. The Michigan Association of Planning (MAP) suggests requiring one (1) parking space per dwelling unit for units with 2-bedrooms or less. For every additional bedroom, MAP suggests requiring another half (0.5) parking space.
The ordinance includes pathways for administrative parking reductions (reductions approved by staff, rather than through public process).	Yes	The ordinance allows for administrative parking reductions in the NDNO and VDMUD Overlay Districts. These reductions must be accompanied by a legal agreement that is recorded against the property. Reductions up to 10% are also allowed in the O-3 or C-4 Zoning Districts, but only in instances where two (2) or more uses, whose operating hours do not overlap, are sharing parking. Even where reductions are granted, a reserve area is required for the construction of future parking meeting minimum standards.
The ordinance requires connections between adjacent parking lots.	Partially	Cross access agreements are not required but are encouraged, especially in the NDNO and VDMUD Overlay Districts. The City recognizes that cross access agreements can create obstacles for renovation or improvement of involved sites.
The ordinance requires parking spaces with hook-ups for future EV Charging Stations.	No	Based on recommendations of the *City Sustainability Plan*, Sterling Heights has considered developing an EV Charging Ordinance. Staff consistently suggest the inclusion of EV parking infrastructure during development review meetings.
The ordinance requires bicycle parking.	Yes	§24.11 requires that a bicycle rack with a minimum of three (3) bicycle parking spaces be installed at each new commercial building/site with more than 5,000 square feet of usable floor area.
The ordinance allows for parallel parking.	No	The City has allowed parallel parking in the past through the Planned Unit Development process, which offers some flexibility from conventional zoning standards.
The ordinance allows banked or deferred parking in lieu of constructing all required spaces.	Yes	If an applicant believes that the proposed use/ development will generate less parking demand than the ordinance anticipates, the applicant may request that a certain number of the required minimum parking spaces go into a Reserved Parking Area (§23.01.N). The Reserved Parking Area must exist on the site in perpetuity and cannot include any buildings, structures, or other improvements.

This table compares existing ordinance provisions against recognized best practices in parking regulation.

Peer Review

In addition to the parking regulation best practices identified from the sources listed on page 22, the project team reviewed parking ordinances and recent parking reform initiatives in other Michigan communities. Among peer communities, seven (7) parking regulation themes emerged and are explored in Table 4.B. This table is intended to introduce key practices and evaluate whether these practices are applicable in Sterling Heights. Formal recommendations and implementation strategies are provided in Chapter 5.

Table 4.B: Parking Practices, Peer Review

Parking Practice (Policy)	Peer Communities Using Practice	Applicability to Sterling Heights	Additional Resources
Addition of Parking Maximums: a standard specifying the maximum number of off-street parking spaces that are allowed on a site.	**Washington Township** – parking maximum set at 110% of minimum standard.	**Recommended.** Several sites in this study have more parking than ordinance requires. A parking maximum can reduce overparking and help the city achieve its sustainability goals by reducing stormwater runoff and urban heat island effects caused by excess pavement.	Sustainable Development Code: Development Patterns and Infill – Parking Maximums
Elimination of Parking Minimums: removal of minimum parking standards from certain zoning districts or overlays (usually for the purposes of incentivizing development).	**River Rouge and Ecorse –** eliminated parking minimums, but created parking maximums.	**Expansion not currently recommended.** The city does not set minimum parking standards for the VDMUD or NDNO Overlay Districts (besides for residential). This solution may become more feasible for other areas of the city if non-motorized transportation infrastructure and transit services are expanded.	Planning Magazine – A Business Case for Dropping Parking Minimums
Right-Sizing Parking: general term for amending minimum parking standards to better reflect the true parking demand induced by specific land uses.	**Various –** typically tied to parking studies and specific development goals.	**Recommended.** All studied lots are underutilized, suggesting that the minimum parking standards do not align with true parking demand. Failing to 'right-size' off-street parking standards results in inefficient use of land and leaves less space available for the development of desired uses.	MAP Zoning Reform Toolkit – Reduce Minimum Parking Standards for Residential Development
Implementing Parking Reductions or Incentives: ordinance language that establishes a process and criteria for granting parking reductions administratively.	**Washington Township** – up to 25% parking reduction for uses in the Village Center District that meet specified criteria.	**Recommended.** Building flexibility into parking standards can help Sterling Heights meet its development goals, respond to unique site conditions, and plan for future opportunities (new transit service, mixed-use development, non-motorized connections, etc.).	Redevelopment Ready Communities – Parking Flexibility (Best Practice 2.5)

Table 4.B Continued. . .

Parking Practice (Policy)	Peer Communities Using Practice	Applicability to Sterling Heights	Additional Resources
Addressing EV Charging Stations with Parking: minimum standards for the number of EV stations that must be required as a component of off-street parking. Can also include incentives for EV charging stations.	**Auburn Hills** – standards for the installation of EV charging infrastructure with specific uses, including residential.	**Recommended.** At a minimum, Sterling Heights can start requiring conduit to be installed at the time parking lots are developed – opening the door for the future installation of EV charging stations if demand supports it.	Great Plains – EV-Friendly Ordinances
Access Management: standards that encourage motorized and non-motorized connections between parking lots, to reduce the number of individual driveways and curb cuts.	**Hudsonville –** standards for the number of, location of, and design of driveways/curb cuts.	**Recommended.** Study shows limited connections between residential developments and adjacent commercial plazas or between commercial developments. Low connectivity forces drivers back into their cars and out on the road network, increasing congestion and vehicle emissions, as well as introducing additional conflict points with vulnerable road users (through driveways).	MDOT Access Management Guidebook (2001)
Payment in Lieu of Parking: ordinances that allow developers to provide cash to the city instead of constructing parking. The city puts the payment in a fund and uses it to build shared parking lots or for other parking management.	**Northville –** allows developers to provide cash in lieu of parking, only in the CBD District. The revenue is used to manage municipal parking downtown.	**Not currently recommended**. Payment in Lieu of Parking Programs can be difficult to manage. The studied area features dispersed land uses and currently lacks the density needed to support a 'park once' strategy. Lot sizes in the nodes are large enough to accommodate development and required parking, especially if parking standards are right-sized to match demand generated by uses.	Sustainable Development Code: Pedestrian Mobility – Parking In-Lieu Fees

This table summarizes regulatory strategies used in other Michigan communities, with notes on applicability to Sterling Heights.

Chapter 5 - Recommendations and Implementation Strategies

Overview

This chapter presents eight (8) recommendations for zoning ordinance amendments to address key parking challenges identified in Chapter 3 and advance implementation of the *2025 Master Plan*. Recommendations are informed by the analysis of existing parking supply and utilization in key nodes, Sterling Heights' goals related to mixed-use development and walkability, and best practices from other Michigan communities and around the nation (see Chapter 4).

Each recommendation identified in this chapter includes a description with clear implementation actions, a justification section that explains the rationale behind the recommendation, links to additional resources, and example ordinance language and/or case studies. The recommendations are further supported by appendix materials, including a table of recommended parking formulas (organized by land use) and guidance for performing shared parking calculations.

Existing Zoning Ordinance and Master Plan Vision

Like municipalities across Michigan and the United States, the City of Sterling Heights requires a minimum number of off-street parking spaces to be provided on a private site at the time of development. Minimum parking space requirements are based on the proposed land use, building or use square footage, number of dwelling units and/or bedrooms, number of employees, maximum occupancy, and other characteristics. The general parking requirements in Sterling Heights' Zoning Ordinance §23.01 were last amended on October 4, 2016. However, the minimum parking formulas (§23.02) have not been revised since March 4, 2008. In the past 15 years, community conditions and goals have changed, as well as best practices related to off-street parking regulation.

Chapter 3 of this study revealed that parking utilization was low across all studied lots in the City, regardless of node type or associated land uses. Additionally, the peer review in Chapter 4 showed that of 11 key best practices related to off-street parking regulation, Sterling Heights is currently implementing only four (4): administrative parking reductions in the NDNO and VDMUD, encouragement of cross access agreements in the NDNO and VDMUD, minimum bicycle parking requirements, and allowing of reserved parking areas in lieu of constructing required parking. These are great tools for improving flexibility in site development. This chapter recommends methods for strengthening these tools and taking additional actions to right-size the city's parking requirements.

Implementation of the strategies in this chapter specifically advances the following recommended actions from the *2025 Master Plan*:

1. Lower parking standards and establish maximums to reduce the amount of land dedicated for parking automobiles (pg. 188).
2. Incentivize property owners to participate in shared parking arrangements by promoting the benefits and providing model agreement language that could be adapted as needed (pg. 188).
3. Add bike parking facilities, bus stops, pedestrian pathways, and car-free zones to encourage and support access by a variety of modes (pg. 190).
4. Incentivize shared facilities, including shared parking, shared access drives, and internal sidewalk/crosswalk connections. These may be incentivized through Zoning Ordinance reductions, such as reduction of required parking if shared facilities are provided (pg. 192).
5. Update city codes to include requirements for EV charging readiness and renewable energy integration in new developments (pg. 187).

RECOMMENDATION 1: RIGHT-SIZE MINIMUM OFF-STREET PARKING STANDARDS

Description:

Amend the minimum off-street parking standards in §23.02 to better reflect the parking demand observed for each land use (including demand data from this parking study and from the ITE Parking Generation Manual). Formulas for required parking spaces should be presented in a clear table, and other stacking, loading, or specific use standards should be moved to more appropriate locations within the ordinance.

The list of uses for which parking space formulas are provided should be reviewed and modified as needed to:

- Consolidate uses that are similar in nature and create the same demand for parking (i.e. doctor's offices and medical clinics);
- Remove any uses that are no longer relevant to Sterling Heights (i.e. boarding houses); and
- Add any use categories that are currently present in Sterling Heights but are not represented in the parking ordinance.

Recommended changes to Sterling Heights' minimum parking space requirements are presented in Appendix A.

Justification:

- Parking counts revealed that parking utilization in the studied areas was well below 85 percent, even during peak hours. Most parking lots had more parking spaces than ordinance currently requires. However, even if parking lot capacity was comparable to the minimum parking standards in the current ordinance, 30 out of 35 parking lots (86 percent) would still be underutilized.
- The Michigan Association of Planning (MAP) has suggested reductions in parking minimums for residential uses as a method of addressing affordable housing.
- Land use conditions and parking needs have changed since the ordinance was last amended in 2008. Minimum parking requirements should be updated to reflect new and emerging land uses as well as available data on parking demand.

Additional Resources:

- See Appendix A for recommended parking formulas.
- MAP's *Zoning Reform Toolkit.*
- *ITE Parking Generation Manual - Fifth Edition,* 2019.

Example Language:

Sterling Heights' existing parking formulas can be organized in a table which includes both parking minimums and maximums (see Recommendation 2). Note that square footage for parking lots are limited by impervious surface and lot coverage. The formulas for minimum parking spaces per residential unit (shown to the right) are based on the recommendations of *MAP's Zoning Reform Toolkit*.

Use	Minimum Parking Spaces Required	Maximum Parking Spaces Allowed
	RESIDENTIAL	
Single-family and two-family units, attached or detached	2 spaces per unit, tandem parking allowed	No Maximum. However, maximum lot coverage and impervious surface standards apply.
Accessory dwelling and caretaker units	1 space per unit, tandem parking allowed	No Maximum. However, maximum lot coverage and impervious surface standards apply.
Multiple-family	Studio or 1-Bedroom Unit: 1 space Plus, 0.5 spaces for each additional bedroom Plus, visitor parking is required on multiple-family residential sites where on-street parking is not available and the development is not located within 1/4 mile of a fixed-route transit stop. Such visitor parking shall be provided at a rate of 1 space per 10 units.	Studio, 1-Bedroom, 2-Bedroom Unit: 2 spaces per unit 3-Bedroom+ Unit: 1 space per bedroom Visitor Parking: 1 space per 5 units

RECOMMENDATION 2: IMPLEMENT MAXIMUM PARKING STANDARDS

Description:

Add a column to the minimum parking standards in §23.02 that specifies the maximum number of parking spaces allowed to be provided on a site. Maximum parking standards apply to new development or to redevelopment that significantly impacts the building footprint and/or parking layout. The addition of parking maximums is especially recommended for uses which tend to supply more parking than is needed (i.e. large department stores and multi-tenant retail buildings). Parking maximums may not be needed for certain land uses, such as single-family residential. While some communities apply blanket parking maximums (i.e. up to 10 percent more than the minimum), maximums tailored to each use are likely to be more effective.

In addition to specifying maximum parking standards, it is recommended that a provision be added to the ordinance which allows an applicant to request more parking than the maximum would allow if the applicant can demonstrate that more parking is needed.

Recommended changes to Sterling Heights' parking standards, including recommended maximums, are presented in Appendix A.

Justification:

- 21 out of 35 (60 percent) studied parking lots included more parking spaces than required by ordinance.
- In 2025, the highest parking utilization rate observed was 55 percent (even including in-person counts at peak hours).
- Large surface parking lots can burden municipal stormwater systems, increase temperatures in adjacent areas, and create barriers to walking and biking (see Chapter 3).

Additional Resources:

- See Appendix A for recommended parking formulas.
- Redevelopment Ready Communities' *Zoning Quick Sheet: Best Practice 2.5 Parking Flexibility*
- Victoria Transport Institute's *Parking Management - Strategies for More Efficient Use of Parking Resources, 2018*

Example Language:

The City of Ann Arbor has eliminated minimum vehicle parking standards, but specifies the maximum number of vehicle parking spaces allowed per use and requires a minimum number of bicycle parking spaces (see snapshot to the right, §5.19).

The City of Midland also sets maximum parking standards, but allows the Planning Commission to approve additional spaces if an applicant produces evidence of need.

TABLE 5.19-1: REQUIRED PARKING

USE (See Sec. 5.19.3 for Uses in D1, D2, TC1 Districts)	MAXIMUM VEHICLE PARKING SPACES (NONE IF BLANK)	MINIMUM BICYCLE PARKING SPACES			
		SPACES	CLASS		
			A	B	C
Veterinary, Kennels and Animal Boarding	1 /250 sq. ft.	1 / 3,000 sq. ft.	30%		70%
OFFICE AND RESEARCH					% OF SP
OFFICE					
Bank, Credit Union, Financial Services	1/180 sq. ft.	1 / 2,000 sq. ft.			100 %
General	1/250 sq. ft.	1/3,000 sq. ft.	30%		70%
Medical or Dental	1/180 sq. ft.	1/1,500 sq. ft.	30%		70%
Nonprofit Corporations	1/250 sq. ft.	1/3,000 sq. ft.	30%		70%

RECOMMENDATION 3: ALLOW FOR PARKING REDUCTIONS IN ALL ZONING DISTRICTS

Description:

Amend the Zoning Ordinance to allow for administrative parking reductions in all Zoning Districts, including Overlay Districts. The addition of specific criteria related to parking reductions can help clarify the city's parking expectations and incentivize desired development patterns.

Administrative parking reductions may be considered when:

- An existing site is re-purposed and an applicant can demonstrate that the available parking spaces are sufficient;
- Residential and non-residential uses are provided on the same site, with pedestrian connections, so that some trips generated by the non-commercial use are expected to come from the adjacent residents;
- The building for which parking is required is located within 1/8 mile of an improved (shelter, seating, sign) fixed-route transit stop; or
- A proposed use is novel and not otherwise accounted for in the table of parking standards. Data should be submitted to justify any reduction in parking.

Justification:

- Building flexibility into the minimum parking standards allows planning staff to review facts specific to the use or site and potentially identify opportunities to achieve other goals by reducing parking requirements.
- A clear process for parking reductions allows greater flexibility in response to changing community characteristics. For example, if transit service expands in Sterling Heights and more vehicle trips can be replaced with transit, more sites may qualify for parking reductions without needing to amend the parking ordinance.

Additional Resources:

- Redevelopment Ready Communities' *Zoning Quick Sheet: Best Practice 2.5 Parking Flexibility*

Example Language:

Washington Township, MI, allows the Planning Commission to grant parking reductions up to 25 percent for non-restaurant uses in the Village Center (V-1) Zoning District. Six (6) specific criteria are outlined to help the Planning Commission decide whether to grant a reduction. A provision stating the reasons why the Planning Commission may deny a reduction are also provided.

The image to the right is a snapshot from the Township's Zoning Ordinance §5.12.D.

a. A reduction up to twenty-five (25) percent may be permitted if the applicant can demonstrate that the proposed number of parking spaces is sufficient to meet parking demand generated by the proposed land use, and if one or more of the following applies:

(1) The applicant is reusing an existing building and site;

(2) Unique physical conditions exist on the site that limit the provision of parking;

(3) The applicant is proposing a novel land use that is not otherwise contemplated in Table 5.12.C;

RECOMMENDATION 4: CREATE CLEAR STANDARDS FOR SHARED PARKING

Description:

Add a formula for administratively reducing minimum parking standards when two (2) or more uses are sharing off-street parking facilities. It is recommended that the table calculations provided by the Urban Land Institute (ULI) are incorporated directly into the zoning ordinance or adjusted very minimally.

Uses sharing parking should be allowed to have some overlap in their operating hours. In addition, uses with shared parking configurations should not be required to provide Reserved Parking Areas as long as a long-term Shared Parking Agreement is provided to the city and recorded against the propert(ies).

The amended ordinance language should require the shared parking facilities to be located within 500 feet of primary building entrances.

An example shared use parking calculation is provided in the Appendices.

Justification:

- Figure 3.2 in Chapter 3 illustrates peak hours for land uses common in Sterling Heights. While medical, office, and retail uses may share similar peak hours, residential and recreational/entertainment uses have distinct peaks. Shared parking standards offer a clear method of accounting for those different peak times, while promoting mixed-uses and efficient use of land area.
- Shared parking formulas are readily available and have been backed up by extensive research and application (ULI, 2020).
- Allowing shared parking also supports the city's walkability goals by encouraging connections across parking lots and businesses.

Additional Resources:

- See Appendix B for an example calculation using ULI's shared parking table.
- Redevelopment Ready Communities' *Zoning Quick Sheet: Best Practice 2.5 Parking Flexibility*
- *ULI Shared Parking - Third Edition, 2020.*

Example Language:

The table to the right is a snapshot from Chesterfield Township's Parking Ordinance. Shared parking is calculated based on peak hours for each land use included in the shared parking agreement. Full instructions for calculating shared parking are provided in Appendix B. Shared parking agreements should be reviewed and approved administratively. The zoning ordinance should outline key criteria for approval, including a formally recorded agreement, proximity of the parking area to the buildings served, and pedestrian pathways connecting primary building entrances and parking spaces.

GENERAL LAND USE CLASSIFICATION	WEEKDAYS			WEEKENDS		
	2:00 A.M. - 7:00 A.M.	7:00 A.M. - 6:00 P.M.	6:00 P.M. - 2:00 A.M.	2:00 A.M. - 7:00 A.M.	7:00 A.M. - 6:00 P.M.	6:00 P.M. - 2:00 A.M.
Office	5%	100%	5%	0%	10%	0%
Retail sales and services	0%	90%	80%	0%	100%	80%
Restaurant	10%	70%	100%	20%	70%	100%
Residential	100%	60%	100%	100%	75%	90%
Theater	0%	40%	90%	0%	80%	100%
Hotel						
Guest rooms	100%	55%	100%	100%	55%	100%
Restaurant/ lounge	40%	60%	100%	50%	45%	100%
Conference rooms	0%	100%	100%	0%	100%	100%
Religious institution	0%	25%	50%	0%	100%	50%
Reception or meeting hall	0%	70%	90%	0%	70%	100%
Museum	0%	100%	80%	0%	100%	80%
School, grades K-12	0%	100%	25%	0%	30%	10%

RECOMMENDATION 5: CREATE NEW STANDARDS FOR VEHICLE STACKING LANES AND PEDESTRIAN PICK-UP WINDOWS

Description:

Amend the Zoning Ordinance to regulate interactions between auto-centric uses (like drive-thru facilities) and pedestrian and bicyclist infrastructure. In addition, standards should give consideration to new and emerging uses, such as third party delivery services (Uber Eats, Doordash, etc.).

The following standards are recommended:

- Specifically allow for walk-up service windows, subject to the use providing a safe path for pedestrians/bicyclists from the city sidewalk network to the pick-up window.
- Require carry-out restaurants to designate parking spaces for third party delivery services. These parking spaces should be placed near building entrances and identified with clear signage.
- Require drive-thru facilities to be located on the sides or at the rear of a building (less visible from the public right-of-way).
- Where a drive-thru lane or other driveway serving the drive-thru facility crosses between the public sidewalk and the building entrance, require a raised pedestrian crosswalk through the driveway.

Justification:

- The COVID pandemic caused a resurgence in drive-thru services and also popularized other modes of providing goods and services - third party delivery services, in-app ordering and curbside pick-up, and even carhop service (where customers park outside and restaurant staff approach the vehicle to take orders/deliver food) (APA Zoning Practice, 2022).
- Fostering successful commercial districts and reusing vacant commercial spaces may require allowing a mix of auto-centric and pedestrian-friendly uses.
- Drive-thru and pick-up facilities can coexist with walking and bicycling infrastructure when strong zoning standards are in place.

Additional Resources:

- *APA Zoning Practice: Making Drive-Thrus a Boon, Not a Bane (2022)*
- Recommended vehicle stacking standards are provided in Appendix A.

Example Language:

Ann Arbor, MI, had adopted specific standards that regulate the placement of drive-thru facilities. Ann Arbor's ordinance also requires improved pedestrian crossings to be placed over any drive-thru related driveway that crosses between public right-of-way (sidewalk) and a building's primary entrance.

Review the full ordinance pertaining to drive-thru facilities in Ann Arbor's Unified Development Code, §5.16.6.C.

Drive-Through Facility

1. **General**
   - a. A *drive-through facility* may not be located between a Street and the *principal building*.
   - b. Placement of the *drive-through facility* and its queuing lanes may not impair pedestrian circulation or general vehicular circulation on and off the *site*.
   - c. *Driveways* located in the *front yard* that serve *drive-through facilities* shall meet the following standards:
     - i) The width of the *driveway* shall not exceed 12 feet.
     - ii) A minimum five-foot wide raised Sidewalk shall be provided across the *driveway* connecting the public Sidewalk to the main entrance of the *building* and designed in a manner than clearly identifies it as a pedestrian crossing.
     - iii) At least four bollards shall be provided near each corner where the raised Sidewalk crosses the *driveway* to alert drivers of the pedestrian crossing.

RECOMMENDATION 6: AMEND LANDSCAPING ORDINANCES TO MINIMIZE ADVERSE IMPACTS OF SURFACE PARKING AND EXPAND WALKING/BIKING OPPORTUNITIES

Description:

Amend existing parking lot landscaping ordinances to visually de-emphasize parking areas and reduce burden on the city's stormwater infrastructure. Additionally, general landscaping and screening standards should be audited and amended as needed to allow for non-motorized transportation connections between adjacent, compatible uses. The following standards are recommended:

- Revise the list of allowed parking lot trees in §24.03 to match the street trees recommended for planting by the Michigan Department of Natural Resources.
- In addition to requiring a curbed, landscaped area at the end of each parking row, set the maximum length of parking rows at 15 parking spaces.
- Add language to §24.01 and to the Overlay Districts that specifically encourages non-motorized pathways that cut through required screening areas in order to connect compatible uses. Greenbelt screening can still be required between commercial and non-commercial uses, but pedestrian and bicyclist connections should be allowed in order to provide convenient access to goods and services for residents living nearby.

Justification:

- While working on the parking study, the project team observed several locations within the node areas where residential uses were separated from community destinations (gyms, grocery stores, etc.) by masonry walls or wide greenbelt areas. Non-motorized connections between adjacent uses can improve convenience for residents while also reducing the number of vehicle trips and demand for parking.
- The *Sterling Heights Climate Action Plan (2025)* recommends expanding non-motorized connections between residential and commercial uses and improving citywide stormwater infrastructure.

Additional Resources:

- Michigan Department of Natural Resources - *Recommended Trees for Community Planting*
- Village of Glenview, IL - *Parking Lot Landscaping Ordinance and Design Guidelines*
- FHWA Course on Bicycle and Pedestrian Transportation, Lesson 7: *Using Land Use Regulations to Encourage Non-Motorized Travel*

Example Language:

The following change is recommended to Sterling Heights' existing screening requirements (§24.01):

B. Other screening specifications.

1. *Non-Motorized Connections Encouraged.* Required greenbelts or screening walls may include gaps for existing or future sidewalk or non-motorized pathway connections, between compatible residential and non-residential uses, as determined by the Planning Director. Where non-motorized access is provided through a required screening area, an accessible grade and clear sight lines shall be maintained for pedestrian safety. Non-motorized access paths should connect to existing or proposed sidewalk or pathway facilities within the residential and non-residential developments.

~~1.~~ 2. *Walls.* Whenever a wall is used in conjunction with, or in lieu of, the previously mentioned screening requirements, it shall be constructed according to the following specifications: **[. . .]**

RECOMMENDATION 7: INTRODUCE REQUIREMENTS FOR THE PROVISION OF EV CHARGING STATIONS OR CONDUIT IN OFF-STREET PARKING LOTS

Description:

Add requirements for the provision of electric vehicle (EV) charging infrastructure in new developments to Sterling Heights' parking ordinance. It is recommended that a certain number or percentage of a site's required minimum parking spaces be equipped with conduit and other infrastructure to make the spaces "EV-Ready". Recommended provisions include:

- A standard for the installation of a main electrical switchgear that can accommodate Level 2 charging stations on a certain percentage of parking spaces (Great Plains Institute recommends up to 20 percent of spaces).
- A requirement that a certain percentage of parking spaces be equipped with conduit which can support the future installation of a Level 2 charging station.
- New residential development with garages should include appropriate connectors, conductors, and other electrical equipment to support future installation of an energized outlet for charging.

Justification:

- The typical lifespan of a parking lot is 25 years. Once a parking lot is built, changes, including the addition of electrical conduit and outlets, is expensive. Standards for EV charging infrastructure within Sterling Heights' parking ordinances both supports the *Climate Action Plan's* (2025) call for increased EV charging infrastructure and encourages efficient resource use.
- Approximately 13 percent of car sales in 2024 were electric vehicles (IDTechEx, 2025). This number is expected to keep growing, with some sources predicting that 50 percent of all passenger vehicles will be electric by 2050 (U.S. Bureau of Labor Statistics, 2023).
- Several large retailers are investing in EV charging stations to attract customers and lengthen the time that customers spend in-store (Fuels Institute - *EV Consumer Behavior, 2021*). EV charging infrastructure may help attract desired commercial tenants in Sterling Heights' planned nodes.

Additional Resources:

- Great Plains Institute - *Best Practices in EV Ordinances*

Example Language:

The following is an excerpt from New Jersey's *Model Statewide Municipal EV Ordinance*:

> Make-Ready Parking Space: means the pre-wiring of electrical infrastructure at a parking space, or set of parking spaces, to facilitate easy and cost-efficient future installation of Electric Vehicle Supply Equipment or Electric Vehicle Service Equipment, including, but not limited to, Level Two EVSE and direct current fast chargers. Make Ready includes expenses related to service panels, junction boxes, conduit, wiring, and other components necessary to make a particular location able to accommodate Electric Vehicle Supply Equipment or Electric Vehicle Service Equipment on a "plug and play" basis. "Make-Ready" is synonymous with the term "charger ready," as used in P.L.2019, c.362 (C.48:25-1 et al.).
>
> 2. As a condition of preliminary site plan approval [. . .] shall:
>
> a. Install at least one Make-Ready parking space if there will be 50 or fewer off-street parking spaces.
>
> b. Install at least two Make-Ready parking spaces if there will be 51 to 75 off-street parking spaces. [. . .]

RECOMMENDATION 8: SUPPLEMENTAL PARKING ORDINANCE AMENDMENTS

Description:

In addition to the amendments described elsewhere in this Chapter, the following miscellaneous ordinance amendments are recommended to be completed as a part of Sterling Heights' 2025/2026 Zoning Ordinance Update.

- Move all parking-related ordinances, including parking lot landscaping, bicycle parking standards, and loading requirements to §23.03.
- Allow for parallel parking configurations in new developments and for on-street parking on City-owned, local roads.
- Reduce the minimum number of parking spaces required for residential developments in the Van Dyke Mixed Use Overlay District from 1.25 per unit to 1 per unit.
- Increase the number of bicycle parking spaces required by ordinance, especially for multi-tenant developments with more than one business that will be accessed by the public.
- Define a threshold for when redevelopment or site improvement projects would trigger compliance with off-street parking standards, including landscaping, bicycle parking, and EV charging station standards.

Justification:

- Minor amendments to the existing parking ordinances can help improve clarity and ease of use for both staff and applicants.
- Parallel parking can offer advantages in mixed-use, walkable developments, including minimizing the footprint of parking lots, providing buffer space between vehicles and pedestrians, and accommodating barrier-free spaces, third party delivery service spaces, or visitor parking spaces.
- As Sterling Heights implements the Master Plan vision for infill and redevelopment of existing commercial sites, especially in the mixed-use nodes, it will be important to identify what level of change is acceptable before an applicant must comply fully with the ordinances.

Additional Resources:

- Redevelopment Ready Communities' *Zoning Quick Sheet: Best Practice 2.5 Parking Flexibility*

Example Language:

Sterling Heights' Zoning Ordinance currently prohibits parallel parking. If allowed, dimensional standards for parallel parking configurations would need to be added to §23.03.B. The table to the right is a snapshot from the Midland, MI Zoning Ordinance (2025), which includes standards for parallel parking.

Parking Angle	Maneuvering Aisle Width	Parking Stall Width	Parking Stall Depth	Total Width of Two Stalls of Parking Plus Maneuvering Aisle
0 degrees (parallel)	12 ft.	9 ft.	24 ft.	30 ft. (one-way traffic)
0 degrees (parallel)	24 ft.	9 ft.	24 ft.	42 ft. (two-way traffic)
30 to 53 degrees one-way traffic	13 ft.	9 ft.	18 ft.	49 ft. (one-way traffic)
54 to 74 degrees	18 ft.	9 ft.	18 ft.	54 ft. (one-way traffic)
75 to 90 degrees two-way traffic	22 ft.	9 ft.	18 ft.	58 ft. (two-way traffic)
75 to 90 degrees one-way traffic	20 ft.	9 ft.	18 ft.	56 ft. (one-way traffic)

Parking Study References

- Chaddick Institute for Metropolitan Development. ***Glenview Design Guidelines: Parking Lots.*** DePaul University, https://las.depaul.edu/centers-and-institutes/chaddick-institute-for-metropolitan-development/programs/mdrn/Documents/Glenview_Design_Guidelines--Parking_Lots.pdf.
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- Federal Highway Administration. **"Access Management (Driveways)."** U.S. Department of Transportation, 19 Nov. 2014, https://highways.dot.gov/safety/other/access-management-driveways.
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- Michigan Department of Natural Resources. ***Recommended Trees for Community Planting.*** State of Michigan, https://www.michigan.gov/dnr/managing-resources/forestry/urban/recommended-trees.
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- Smith, Mary. ***Shared Parking. 3rd ed.***, Urban Land Institute, 1 Feb. 2020, https://knowledge.uli.org/en/books/2019/shared-parking.
- Takahashi, Mika. ***"What to Expect From Electric Vehicle Markets in 2025 and Beyond."*** IDTechEx, 13 Jan. 2025, https://www.idtechex.com/en/research-article/what-to-expect-from-electric-vehicle-markets-in-2025-and-beyond/32391.
- ***Utah Parking Modernization Guidebook.*** Wasatch Front Regional Council, https://wfrc.utah.gov/studies/parking-modernization/.

APPENDIX A – Recommended Minimum and Maximum Off-Street Parking Space and Stacking Space Requirements

Use	Minimum Parking Spaces Required	Maximum Parking Spaces Allowed
RESIDENTIAL		
Single-family and two-family units, attached or detached	2 spaces per unit, tandem parking allowed	No Maximum. However, maximum lot coverage and impervious surface standards apply.
Accessory dwelling and caretaker units	1 space per unit, tandem parking allowed	No Maximum. However, maximum lot coverage and impervious surface standards apply.
Multiple-family	Studio or 1-Bedroom Unit: 1 space Plus, 0.5 spaces for each additional bedroom Plus, visitor parking is required on multiple-family residential sites where on-street parking is not available and the development is not located within 1/4 mile of a fixed-route transit stop. Such visitor parking shall be provided at a rate of 1 space per 10 units.	Studio, 1-Bedroom, 2-Bedroom Unit: 2 spaces per unit 3-Bedroom+ Unit: 1 space per bedroom Visitor Parking: 1 space per 5 units
Housing for the Elderly, independent living or limited assistance	1 space per unit Plus, 1 space per employee Plus, 1 visitor parking space per 10 units	2 spaces per unit Plus, 1 space per employee Plus, 1 visitor parking space per 5 units
Full assisted housing	1 space per 10 residents Plus, 1 space per employee	1 space per 4 residents Plus, 1 space per employee

Use	Minimum Parking Spaces Required	Maximum Parking Spaces Allowed
Mobile home parks	2 spaces per unit, tandem parking allowed Plus, visitor parking is required at mobile home parks where on-street parking is not available and the development is not located within 1/4 mile of a fixed-route transit stop. Such visitor parking shall be provided at a rate of 1 space per 10 units.	No Maximum
Boarding houses	1 per bedroom	2 per bedroom
Single-family and two-family units, attached or detached	2 spaces per unit, tandem parking allowed	No Maximum
INSTITUTIONAL		
Churches, temples, mosques, cathedrals, and synagogues	1 space per 5 people at the designed occupant load	1 space per 3 people at the designed occupant load
Elementary and junior high schools	1 space per employee or 1 space per 5 people at the designed occupant load of the auditorium/assembly room (as applicable), whichever is greater	1.5 spaces per employee or 1 space per 3 people at the designed occupant load of the auditorium/assembly room (as applicable), whichever is greater
Senior high schools and colleges/higher-education facilities	1 space per employee Plus, 1 space for each 6 students or 1 space per 5 people at the designed occupant load of the main auditorium/assembly room (as applicable), whichever is greater	1 space per employee Plus, 1 space for each 4 students or 1 space per 3 people at the designed occupant load of the main auditorium/assembly room (as applicable, whichever is greater
Municipal buildings	1 space per employee	No Maximum
Libraries/museums	1 space per employee Plus, 1 space per 5 people at the designed occupant load of any assembly rooms and study spaces	1 space per employee Plus, 1 space per 3 people at the designed occupant load of any assembly rooms and study spaces
Day care facility, child care center	1 space per employee Plus, 1 space per 8 children at max capacity	1 space per employee Plus, 1 space per 4 children at max capacity

Use	Minimum Parking Spaces Required	Maximum Parking Spaces Allowed
Group or Family Child Care Homes	(See Single-Family Residential Units)	No Maximum
RECREATIONAL		
Outdoor Recreation, including golf courses, riding stables, agritourism, recreation clubs, and park facilities	As determined by the Planning Director, based on a parking demand study (to be provided by the applicant)	
Stadiums, sports arenas, amphitheaters, and similar places of assembly	1 space per employee Plus, 1 space per 5 seats or per 5 people at designed occupant load, whichever is less	1 space per employee Plus, 1 space per 3 seats or per 3 people at the designed occupant load, whichever is less
Bowling, axe-throwing, fowling alleys, golf simulators, indoor shooting ranges, archery ranges, and similar uses	2 spaces per lane or bay Plus, 1 space per employee Plus, parking for ancillary uses as determined by this table	4 spaces per lane or bay Plus, 1 space per employee Plus, parking for ancillary uses as determined by this table
Dance halls, roller rinks, amusement centers, ice skating rinks, and exhibition halls	1 space per employee Plus, 1 space per 5 people at the designed occupant load	1 space per employee Plus, 1 space per 3 people at the designed occupant load
Private clubs and lodges (Social and Fraternal Organizations)	1 space per 5 people at the designed occupant load of any assembly areas Plus, parking for ancillary uses as determined by this table	1 space per 3 people at the designed occupant load of any assembly areas Plus, parking for ancillary uses as determined by this table
Gyms, health spas, dance studios, and other personal fitness uses	1 space per employee Plus, 1 space per 5 people at the designed occupant load of gym or studio facilities	1 space per employee Plus, 1 space per 3 people at the designed occupant load of gym or studio facilities
OFFICES		
Doctors offices, medical clinics, dentists, veterinarians, chiropractors, or similar outpatient uses	1 space per employee Plus, 1 space per available patient chair or room	1 space per employee Plus, 1.5 spaces per available patient chair or room
Financial institutions	1 per employee Plus, 1 space per 350 feet of usable floor area	1 per employee Plus, 1 space per 200 feet of usable floor area

Use	Minimum Parking Spaces Required	Maximum Parking Spaces Allowed
Other business or professional offices	1 per employee or workspace, whichever is greater	1 per employee or workspace, whichever is greater Plus, 1 space per 250 square feet of commercial office floor area accessible to visitors
COMMERCIAL		
Auto wash, high-speed or self-service	1 space per employee Plus, required stacking spaces	No Maximum
Automotive repair and/or service, including quick service, major or heavy repair	1 space per employee Plus, 1 space per repair bay (not including repair bay, except for quick service)	1 space per employee Plus, 3 spaces per repair bay (not including repair bay, except for quick service)
Self-service gasoline stations	1 space per employee Plus, 1 space per 350 square feet of usable floor area (bathrooms and convenience store area)	1 space per employee Plus, 1 space per 150 square feet of usable floor area (bathrooms and convenience store area)
New or used vehicle sales establishments	1 space per employee Plus, 1 space per repair bay (not including the repair bay) Plus, 1 space per 500 square feet of indoor sales area	No Maximum
Personal care services - beauty parlors, barber shops, nail salons, and similar uses	2 spaces per employee	3 spaces per employee
Furniture, appliance, and carpet sales, and showrooms for plumbers, cabinet makers, electricians, and similar professions	1 space per employee Plus, 1 space per 500 square feet of showroom floor area	1 space per employee Plus, 1 space per 300 square feet of showroom floor area
Dry Cleaners	1 space per employee Plus, 2 spaces Plus, required stacking spaces (as applicable)	If 2 or less employees per shift, 5 spaces If more than 2 employees per shift, 2 spaces per employee Plus, required stacking spaces (as applicable)

Use	Minimum Parking Spaces Required	Maximum Parking Spaces Allowed
Laundromats	1 space per employee	1 space per employee Plus, 1 space per machine
Mortuaries/Funeral Homes	1 space per employee Plus, 1 space per 6 people at the designed occupant load	1 space per employee Plus, 1 space per 4 people at the designed occupant load
Motels/hotels/inns	1 space per guestroom Plus, parking for ancillary uses as determined by this table	1.5 spaces per guestroom Plus, parking for ancillary uses as determined by this table
Theaters (motion picture or with live entertainment)	1 space per employee Plus, 1 space per 6 seats	1 space per employee Plus, 1 space per 4 seats
Open-air business or portions of businesses	1 space per employee Plus, 1 space per 500 square feet of lot area used for retail sales or display area	1 space per employee Plus, 1 space per 300 square feet of lot area used for retail sales or display area
Multitenant commercial buildings ***Retail stores, except as otherwise provided in this section***	Gross floor area < 75,000 square feet = 1 space per 300 square feet of gross floor area Gross floor area between 75,000 and 200,000 square feet = 1 space per 500 square feet of gross floor area Gross floor area ≥ 200,00 square feet = 1 space per 700 square feet of gross floor area	Gross floor area < 75,000 square feet = 1 space per 225 square feet of gross floor area Gross floor area between 75,000 and 200,000 square feet = 1 space per 350 square feet of gross floor area Gross floor area ≥ 200,00 square feet = 1 space per 500 square feet of gross floor area
Eating and Drinking Establishments, Dine-In	1 space per 125 square feet of gross floor area Plus, required stacking spaces (as applicable)	1 space per 90 square feet of gross floor area Plus, required stacking spaces (as applicable)
Eating and Drinking Establishments, Carry Out Only	1 space per employee Plus, 1 space per 5 people at designed occupant load of the ordering/pick-up area Plus, required stacking spaces (as applicable)	1 space per employee Plus, 1 space per 3 people at designed occupant load of the ordering/pick-up area Plus, required stacking spaces (as applicable)

Use	Minimum Parking Spaces Required	Maximum Parking Spaces Allowed
Banquet and/or catering halls, reception venues, and similar uses	1 space per employee Plus, 1 space per 5 seats or per 5 people at designed occupant load, whichever is less	1 space per employee Plus, 1 space per 3 seats or per 3 people at the designed occupant load, whichever is less
Hospitals and inpatient medical care	As determined by the Planning Director, based on a parking demand study (to be provided by the applicant)	
Kennel, boarding, pet day care, and similar uses	1 space per Plus, 2 visitor/customer parking spaces	1 space per employee Plus, 1 space per 4 animals at maximum occupancy
INDUSTRIAL		
Manufacturing establishments	*Manufacturing establishments* *Wholesale or warehouse establishments* *Office research, research and development, laboratories, and similar uses*	*Manufacturing establishments* *Wholesale or warehouse establishments* *Office research, research and development, laboratories, and similar uses*
Wholesale or warehouse establishments		
Office research, research and development, laboratories, and similar uses		
Mini warehouses or self-storage units	1 space per employee Plus, 1 space per 15 storage compartments	1 space per employee Plus, 1 space per compartment (parallel)
	Note: parallel parking in front of individual storage units may be provided to meet these requirements.	

*Per employee refers to the number of workers present during the highest employment shift.

**Regardless of the maximum parking standards for any use, lot coverage and impervious surface requirements still apply to the site as a whole.

Recommended Drive-Thru Facility Stacking Space Requirements

Primary Use	Minimum Number of Stacking Spaces Required
Financial institutions - teller windows and drive-up ATMs	2 per teller window or drive-up ATM
Pharmacy	3 per pick-up window
Eating and Drinking Establishment (order and pick-up)	10 per drive-thru lane
Eating and Drinking Establishment (pick-up only/online ordering)	3 per pick-up window
Dry cleaner	3 per pick-up window
Auto wash, high-speed	3 per car wash bay
Auto wash, self-service	1 per car wash bay

**Stacking spaces to be counted from the drive-thru window.*

Additional Findings for Multitenant Commercial Regulation

Option 1: Ways to Address Multitenant Building Conversions to Restaurants:

1. **Define Multitenant Commercial Buildings**: A minimum of three (3) commercial retail and/or service establishments within one (1) building or a group of buildings that has a floor area of at least 10,000 square feet and is served by a common parking area, where such building(s) and site features are planned, developed, owned, managed, and functioning as a single property or unit.
2. **Exclude Restaurant/Bar/Theater Uses from Shopping Center Parking Calculations**: Parking for non-retail or service establishments, including restaurants, bars and lounges, bowling alleys, theaters, banquet centers, and similar uses shall be calculated separately based on their respective requirements. These uses shall be excluded from the floor area of the multitenant commercial building(s) when determining overall square footage. However, individual parking needs for each of the excluded uses shall be added to the total for the multitenant building(s).

Option 2: Language that Shifts Responsibility to the Property Owner:

1. All demand for parking and stacking spaces that is generated by uses on a property must be accommodated in off-street parking areas on the same property, unless parking agreements and easements are provided.
    a. If a property generates more parking or stacking demand than can be safely managed on-site, in accordance with the dimensional standards and emergency access provisions of the zoning ordinance and other municipal ordinances, it is the responsibility of the property owner to expand the parking area, establish a parking agreement with adjacent properties, or modify uses or operating hours so that all parking can be accommodated on-site.
    b. The City has the authority to revoke approvals or licenses based on a property owner's failure to adhere to the standards of this ordinance and subsection.

Potential Challenges with Enforcement:

- Option 1: City would need to catch tenant changes when they come in for building permits – especially for retail converting to restaurants. The responsibility for solving parking challenges shifts from tenant/landlord to the City.
- Option 1: In new projects, the developer would need to have an idea of who the anchor tenants (theater/bowling alley) and restaurant tenants would be at the time of development. This is rarely the case. If the developer is building without prospective tenants, it may be hard to guess the correct blend of restaurant/retail. This may lead to a situation where the standard encourages excess parking to ensure that future non-retail/service tenants could be accommodated. Vice versa, if the calculation assumes primarily retail/service uses and less parking is provided, it may limit future tenants and the economic viability of the plaza (i.e. ability to fill spaces over time).
- Option 1: Bakeries and other small-scale food and beverage stores may be a gray area under these standards. Most operate similarly to retail. However, if several tables are provided, they may fit better in the restaurant category.
- Option 1: If the above challenges are a deterrent, an alternative option is to follow Novi's or Southfield's models which set a limit on the total floor area or percentage of floor area dedicated to a single non-retail/service use or restaurant. Although possibly more flexible for new multitenant construction, the city would still be forced to track and re-evaluate parking every time a business turns over.
- Option 2: The drafted language is intended to align with language sometimes used in special use and temporary use standards/permit applications. The enforcement of similar standards in those contexts has generally been supported. However, we have not seen it expressly written in off-street parking chapters. It should be reviewed and discussed with code enforcement and the legal team to make sure all parties are comfortable with the definitions. This language could potentially provide a basis for addressing other outlier uses, such as drive-thrus. However, the city may need to discern which parking challenges are temporary (such as the first month of opening of a new drive-thru) and which are long-term shortages in parking/stacking space.
- Option 2: There may be instances where this language conflicts with the maximum parking standards suggested in the table at the beginning of this Appendix. In the Recommendations Chapter of the Parking Study, we recommend including flexible language to allow the Planning Director to waive or increase parking maximums when presented with a parking study or other evidence that indicates more spaces will be needed.

APPENDIX B – Shared Parking Calculation Example

Shared Use Parking Table

The table below is an excerpt from the Off-Street Parking Ordinance for Kearns, Utah. This table is similar to the shared parking table recommended by ULI and used throughout the nation. The table provides a formula for calculating minimum parking space reductions for uses or businesses that share parking facilities.

The table is divided into land use categories. For each land use category, a percentage is identified for weekdays and weekend during various time blocks. This percentage correlates to parking demand for the land use in any given time period. The higher the percentage, the more parking demand that use is expected to generate during the specified time period. For example, office uses generate the most parking demand on weekdays between 7:00 AM and 6:00 PM (when employees are working), and residential uses generate the most parking demand on weekdays and weekends between 12:00 AM and 7:00 PM (when residents are home for the night).

General Land Use Category	Weekdays			Weekends		
	12 AM – 7AM	7 AM – 6 PM	6 PM – 12 AM	12 AM – 7AM	7 AM – 6 PM	6 PM – 12 AM
Office	5%	100%	5%	0%	5%	0%
Industrial	75%	100%	75%	75%	100%	75%
Retail	5%	100%	75%	5%	100%	60%
Restaurant	25%	70%	100%	30%	75%	100%
Lodging	100%	55%	100%	100%	55%	100%
Theater / Entertainment	5%	20%	100%	5%	50%	100%
Conference Rooms / Reception Venue	0%	100%	100%	0%	100%	100%
Place of Worship	0%	30%	50%	0%	100%	65%
Institutional	5%	100%	20%	5%	100%	10%
Residential	100%	60%	95%	100%	75%	90%

Example Lot: Village Plaza, 13701-13753 19 Mile Road (Lot 34 in the Parking Study)

This sample calculation is based on the land use mix and building square footage for Village Plaza (Lot 34), from the Parking Study. Calculations were performed using Sterling Heights' **existing** minimum parking standards. There are three (3) land uses that share parking on this site: medical offices, retail stores, and restaurants. The building square footage dedicated to each use is described below:

a. Three (3) medical offices, for a total building area of 5,950 square feet;
b. Five (5) retail stores, for a total building area of 7,000 square feet; and
c. Two (2) restaurants, for a total building area of 4,550 square feet.

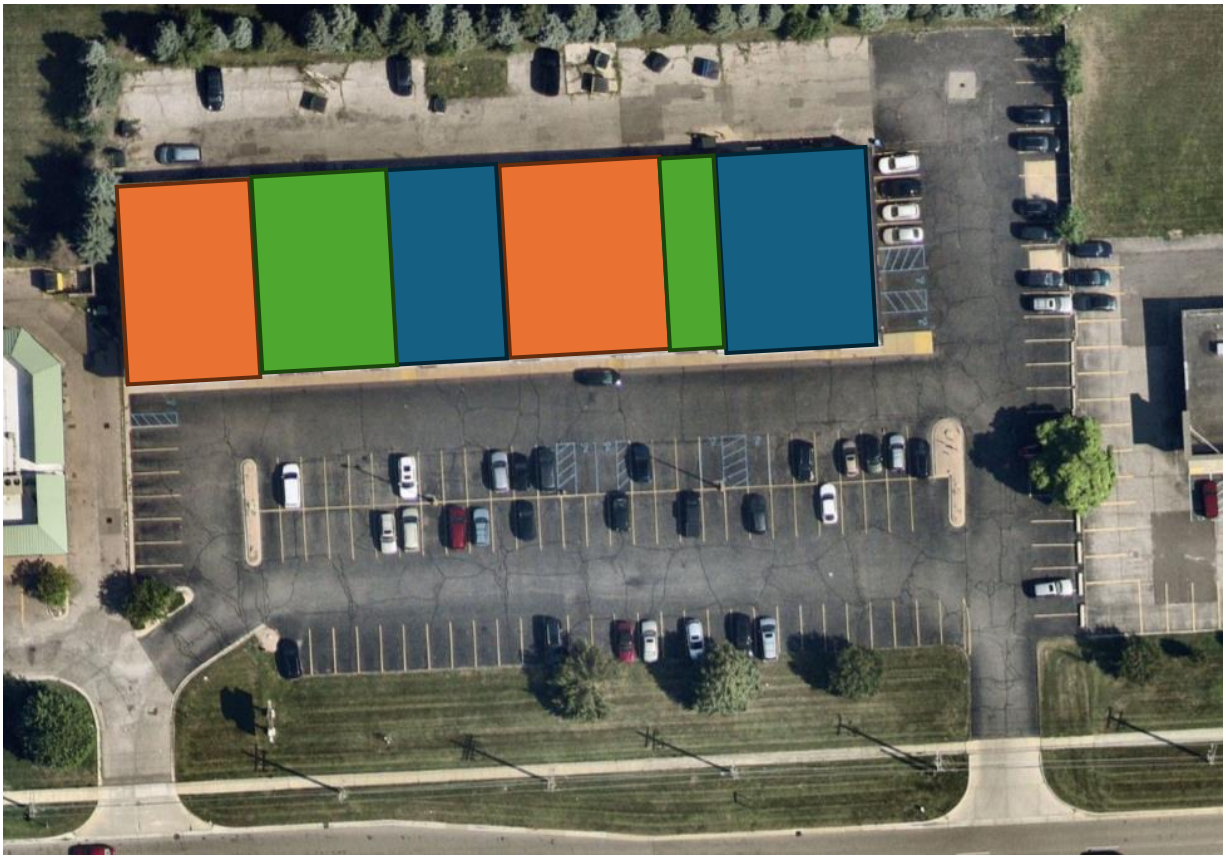


Figure 1. The colors indicate different land use categories: orange is restaurant, green is retail, and blue is medical. These are approximate sizes for the multitude of business uses on the site.

For this calculation, we will only need three (3) rows from the shared use table identified above.

General Land Use Category	Weekdays			Weekends		
	12 AM – 7AM	7 AM – 6 PM	6 PM – 12 AM	12 AM – 7AM	7 AM – 6 PM	6 PM – 12 AM
Office	5%	100%	5%	0%	5%	0%
Industrial	75%	100%	75%	75%	100%	75%
Retail	5%	100%	75%	5%	100%	60%
Restaurant	25%	70%	100%	30%	75%	100%
Lodging	100%	55%	100%	100%	55%	100%
Theater / Entertainment	5%	20%	100%	5%	50%	100%
Conference Rooms / Reception Venue	0%	100%	100%	0%	100%	100%
Place of Worship	0%	30%	50%	0%	100%	65%
Institutional	5%	100%	20%	5%	100%	10%
Residential	100%	60%	95%	100%	75%	90%

Shared Parking Calculation

Step 1: Calculate the minimum number of parking spaces that would be required for each use independently.

Medical Office: 5,950 square feet x 0.9 x [1 space per 100 square feet] = **53.55 spaces**

Retail Store: 7,000 square feet x 0.9 x [1 space per 200 square feet] = **31.50 spaces**

Restaurant: 4,550 square feet x 0.9 x [1 space per 90 square feet] = **45.50 spaces**

**Note: floor area is multiplied by 0.9 to represent Sterling Heights' definition of floor area, which is 90% of gross floor area.*

Step 2: Multiply the required number of parking spaces for each land use by the percentages specified in the shared parking table above.

General land use category	Minimum spaces required	Weekdays			Weekends		
		12 AM – 7 AM	7 AM – 6 PM	6 PM – 12 AM	12 AM – 7 AM	7 AM – 6 PM	6 PM – 12 AM
Medical Office	53.55	53.55 x 5% = **2.68**	53.55 x 100% = **53.55**	53.55 x 5% = **2.68**	53.55 x 0% = **2.68**	53.55 x 5% = **2.68**	53.55 x 0% = **0**
Retail	31.50	31.50 x 5% = **15.75**	31.50 x 100% = **31.50**	31.50 x 75% = **23.63**	31.50 x 50% = **15.75**	31.50 x 100% = **31.50**	31.50 x 50% = **15.75**
Restaurant	45.50	45.50 x 25% = **11.38**	45.50 x 70% = **31.85**	45.50 x 100% = **45.50**	45.50 x 30% = **13.65**	45.50 x 75% = **34.13**	45.50 x 100% = **45.50**

Step 3: Add up the calculated amounts for each column of the table (weekdays and weekend time periods).

General land use category	Minimum spaces required	Weekdays			Weekends		
		12 AM – 7 AM	7 AM – 6 PM	6 PM – 12 AM	12 AM – 7 AM	7 AM – 6 PM	6 PM – 12 AM
Medical Office	53.55	53.55 x 5% = **2.68**	53.55 x 100% = **53.55**	53.55 x 5% = **2.68**	53.55 x 0% = **2.68**	53.55 x 5% = **2.68**	53.55 x 0% = **0**
Retail	31.50	31.50 x 5% = **15.75**	31.50 x 100% = **31.50**	31.50 x 75% = **23.63**	31.50 x 50% = **15.75**	31.50 x 100% = **31.50**	31.50 x 50% = **15.75**
Restaurant	45.50	45.50 x 25% = **11.38**	45.50 x 70% = **31.85**	45.50 x 100% = **45.50**	45.50 x 30% = **13.65**	45.50 x 75% = **34.13**	45.50 x 100% = **45.50**
Column Totals:		**29.81**	**116.90**	**71.81**	**58.39**	**68.31**	**61.25**

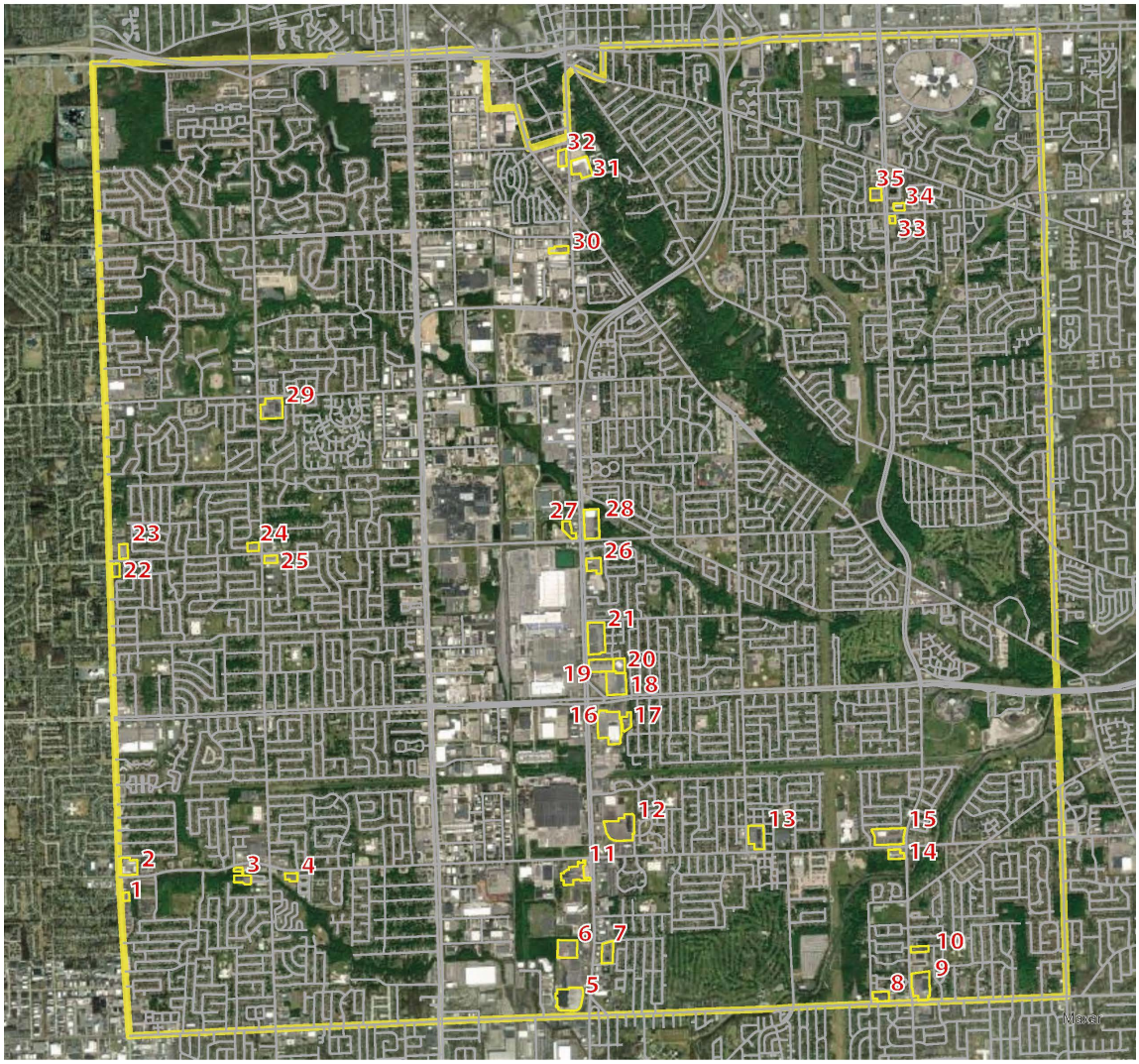
Step 4: Identify the column with the largest number. This is the number of spaces that should be required for the shared parking configuration.

In the example of Lot 34, **117 spaces would be required** (round up from 116.90). *How does this compare to the typical parking requirements (i.e. no shared parking formula)?* If we added up the totals from Step 1, the minimum parking standard for the site would be 131 (rounded up from 130.55). The shared parking configuration results in 14 fewer parking spaces.

Note: a larger reduction may have been achieved if the land uses on this site had less overlap in their peak operating hours; if more overlap in peak operating hours existed, the calculation may have yielded a smaller reduction.

APPENDIX C – Parking Lot Map and Summary Table

Map E: Parking Lots Included in the Study



N

0 0.5 1 2 Miles

Legend

Sterling Heights Parking Study

Parking Lots

Roads

Sterling Heights Limits

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Disclaimer:** The information provided on this map is for reference purposes only and is not guaranteed to be accurate, complete, or **up-to-date. The data is subject to change without notice, and users should independently verify all information. Included maps are not** intended to be used for legal, engineering, or surveying purposes. Neither City of Sterling Heights, Spalding DeDecker, nor their partners are liable for any errors, omissions, or inaccuracies in the **data. Use of this information is at the user's own risk.

Credit: Map created by Spalding DeDecker.

Parking Lot Summary Table

Parking Lot ID	Current Zoning	Use Types	# of Spaces Required by Ordinance	# of Spaces Recomm-ended by ITE	# of Spaces Currently Provided On-Site	# of Cars at Peak	Peak Occupancy, Date	Average Occupancy
1	C-2	Strip Plaza	70	30	90	26	28.89% (2025-01-09)	19.17%
2	R-60	Strip Plaza	329	160	344	108	31.40% (2019-06-22)	28.56%
3	O-2	Henry Ford Emergency Medicine and Accessory lot	822	267	286	147	51.40% (2023-06-17)	33.04%
4	O-2	Strip Plaza	94	41	155	75	48.39% (2018-03-31)	35.16%
5	C-1	Walmart	799	799	857	438	51.11% (2018-11-23)	32.73%
6	C-1	Church	284	1,051	394	290	73.60% (2021-03-12)	19.99%
7	RM-2	Somerset Square Condominiums	150	257	188	104	55.32% (2025-04-12)	44.44%
8	C-2	Strip Plaza	155	67	201	50	24.88% (2024-04-13)	19.07%
9	C-2	Bowling Alley	384	439	600	131	21.83% (2025-04-10)	19.94%
10	C-1	Roger's Roost	137	144	242	110	45.45% (2025-04-10)	28.15%
11	C-3	The Block Apartments	1198	585	811	143	17.63% (2024-03-28)	9.54%

Parking Lot ID	Current Zoning	Use Types	# of Spaces Required by Ordinance	# of Spaces Recomm-ended by ITE	# of Spaces Currently Provided On-Site	# of Cars at Peak	Peak Occupancy, Date	Average Occupancy
12	C-3	MJR Movie Theater	1484	641	1553	348	22.41% (2023-09-24)	15.14%
13	C-2	Strip Plaza	403	197	432	143	33.10% (2021-03-12)	24.54%
14	C-2	Strip Plaza	144	62	208	75	36.06% (2019-04-13)	28.37%
15	C-2	PF/Grocery Strip Plaza	566	245	642	171	26.64% (2021-03-13)	23.57%
16	C-3	Meijer	765	773	1098	253	23.00% (2025-01-09)	21.86%
17	RM-2	Assisted Living	130	40	97	35	36.08% (2024-05-31)	30.24%
18	C-3	Home Depot	415	251	604	114	18.87% (2019-09-18)	15.36%
19	C-3	Strip Plaza	435	212	391	49	12.53% (2019-09-18)	7.61%
20	C-3	LA fitness	300	93	242	67	27.69% (2025-04-10)	14.90%
21	C-3	Strip Plaza	473	256	999	106	10.61% (2021-03-13)	9.06%
22	C-1	Strip Plaza	120	46	209	85	40.67% (2020-03-15)	22.33%
23	C-1	Strip Plaza	157	68	139	32	23.02% (2025-04-09)	15.47%
24	C-1	Strip Plaza	122	53	111	48	43.24% (2019-09-18)	31.83%

Parking Lot ID	Current Zoning	Use Types	# of Spaces Required by Ordinance	# of Spaces Recomm-ended by ITE	# of Spaces Currently Provided On-Site	# of Cars at Peak	Peak Occupancy, Date	Average Occupancy
25	R-60	Strip Plaza	109	47	161	63	39.13% (2019-09-18)	23.19%
26	C-3	Office	337	121	277	144	51.99% (2019-09-18)	32.43%
27	C-3	Motels/hotels/ inns	102	59	171	53	30.99% (2024-03-28)	25.66%
28	C-3	Burlington/Strip Plaza	628	306	616	170	28.00% (2025-04-10)	21.00%
29	C-2	Strip Plaza	413	201	688	232	33.72% (2023-06-17)	30.77%
30	M-1	Multipurpose Recreational Facility	407	514	144	57	40.00% (2025-04-11)	31.55%
31	C-2	Zap Zone/Strip Plaza	167	792	494	108	22.00% (2025-04-11)	21.55%
32	C-3	Strip Plaza	114	62	248	58	23.39% (2023-06-17)	19.76%
33	C-1	Strip Plaza	68	30	82	23	28.05% (2023-06-17)	24.15%
34	C-2	Strip Plaza	92	40	123	40	32.52% (2023-04-02)	29.27%
35	R-60	Medical Office	429	154	248	124	50.00% (2025-04-11)	31.94%

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