

Parking Requirements – Cumberland County

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I. Introduction

A. Brief Explanation of the Problem

We have all heard of the famous saying “what a waste,” whether it be a waste of time, money, resources, talent, etc. Often, times we do not think of this in terms of parking, however we should do so more often. This is ultimately due to the fact that having an overabundance of parking causes a major waste of land use, and as a result it causes many environmental, economic, and even social problems. While some people may wonder how or why this is, the answer is rather simple. When you have an overabundance of parking, you have parking lots with ridiculous amounts of empty spaces (even during peak hours), thus taking up land spaces, which could be used for other important purposes (commerce, the preservation of nature, etc.).

In addition to wasting land, there are other environmental, economic, and social issues which can arise on the subject of parking lots. Some of the more common ones are pollution caused by stormwater runoff, the expensive costs of stormwater management, as well as the substantial costs of ice melt/rock salt used to remove snow and ice during the winter months.¹

B. Key Elements of Ordinances other Municipalities Used to Address this Problem

Fortunately, this particular problem has not only been faced before, but it has been improved upon before. Susquehanna Township, located in Dauphin County, Pennsylvania was faced with this very same problem several years ago.² How did they go about solving this problem

¹ William Selbig, Evaluating the potential benefits of permeable pavement on the quantity and quality of stormwater runoff, Upper Midwest Water Science Center (Nov. 13, 2021 4:15 PM), https://www.usgs.gov/science/evaluating-potential-benefits-permeable-pavement-quantity-and-quality-stormwater-runoff?qt-science_center_objects=0#qt-science_center_objects.

² Susquehanna Township Sustainable Parking Ordinance, *A Paradigm Shift in Parking*, SUSQUEHANNA TOWNSHIP, PA., (Fall 2019) <https://widenerenvironment.files.wordpress.com/2020/01/parking.pdf>.

you might ask? Rather simple, they created a parking ordinance based upon mathematical calculations.³ More specifically, they analyzed the nature and size of different establishments (retail stores, golf courses, restaurants, churches, schools, etc.), in order to calculate the right amount of parking spaces that would be needed within the township.⁴ By doing this they were able to significantly decrease excess parking spaces, while not consequently creating a parking shortage.⁵

In order to decrease excess parking other municipalities have also taken action. These actions include the following: off-street parking, shared parking, joint parking facilities, and bicycle parking. Shared parking has been used by other municipalities for the purpose of allowing establishments with different hours of operation to use the same parking space, thus decreasing the overall amount of parking space that is needed. Other municipalities have taken advantage of joint parking facilities by having establishments with the same or similar hours of operation use the same parking location(s). This has ultimately prevented an overabundance of parking, as well as the unintended consequence of a lack of parking space. In essence, it allows for the right amount of parking to be established. When it came to bicycle parking Susquehanna Township, along with Frisco, Texas, and New York City (NYC) were ahead of the game by placing forth regulations that encouraging people to use bicycle transportation, as opposed to motor vehicle transportation.⁶ Lastly, Susquehanna Township was also able to utilize off-street parking for the purpose of utilizing other areas of land that were already in use.⁷

³ *Id.*

⁴ *Id.*

⁵ *Id.*

⁶ *Id.*; FRISCO, TX., ZONING ORDINANCE § 4.04.12 (2016); (Author N.A.) The Power of Bicycle Parking, Transportation Alternatives (Nov. 11, 2021, 10:45PM), <https://www.transalt.org/the-power-of-bicycle-parking>.

⁷ Susquehanna Township Sustainable Parking Ordinance *supra*, note 2.

With regards to the lack of environmentally friendly pavement, Lower Makefield Township, Pennsylvania took action to solve this problem. More specifically, they enacted an ordinance that required businesses and other entities to implement pervious pavement, in accordance with the regulation set forth by the Pennsylvania Department of Environmental Protection (PADEP).⁸

C. Social, Environmental, and Economic Benefits Received by Other Municipalities

At first glance it may not seem that any let alone all of the above-mentioned actions taken by other municipalities were able to, or at least have the potential to, provide for social, environmental, and economic benefits. Fortunately, however, this is certainly far from the truth. First, with regards to decreasing excess parking, not only will it decrease wasted land space in Susquehanna Township, but it will also (indirectly) decrease air pollution. This ultimately is due to the fact that fewer parking spots, will encourage bicycle use, thus leading to less vehicles on the road, which cause air pollution.⁹ Additionally, by decreasing excess parking spaces in Susquehanna Township, it will also provide additional land space for businesses and other entities to not only build new locations, but to flourish once they get up and running.¹⁰

With regards to pervious pavement, the towns of Shoreview, Minnesota and West Union, Iowa, experienced a plethora of social, economic, and environmental benefits from it. More specifically in Shoreview, the implementation of pervious pavement reduced stormwater runoff, which subsequently decreased their stormwater management costs.¹¹ In West Union, the use of

⁸ TOWNSHIP OF LOWER MAKEFIELD, ZONING ORDINANCE § 200-50.4.

⁹ Susquehanna Township Sustainable Parking Ordinance *supra*, note 2.

¹⁰ *Id.*

¹¹ Cinnamon Janzer, [How a Twin Cities Suburb Has Led The Way With Permeable Pavement](https://nextcity.org/urbanist-news/entry/how-a-twin-cities-suburb-has-led-the-way-with-permeable-pavement), Next City (Nov. 12, 2021, 9:45PM), <https://nextcity.org/urbanist-news/entry/how-a-twin-cities-suburb-has-led-the-way-with-permeable-pavement>.

pervious pavement even went as far as to reduce the cost of rock salt/ice melt needed for their snow and ice removal during the winter months.¹²

D. Brief Explanation of Proposed Ordinance

This ordinance provides a solution to Cumberland County's parking problem in a way that creates sustainable incentives and provides for effective land management for municipalities within the County. The ordinance is divided into chapters that regulate parking lots, off-street parking, joint facility parking, shared parking lots, bicycle parking, and the creation of financial incentives for individuals and businesses to adopt sustainable measures related to parking.

This ordinance is largely based off of the appendix (Appendix 1) listed at the very end. This appendix creates a chart created based off of observable data, which defines what the parking limits should be for different types of uses (residential, commercial, recreational, industrial, institutional, and public). This chart was used to create this ordinance and is the cornerstone of the parking regulations that are set forth in it. The shared parking and the joint parking facilities sections were drafted to allow individual establishments to engage in using the same locations for the purpose of parking. The shared parking ordinance provision allows for establishments to share an area of land that otherwise would be wasted space. By sharing a lot, these establishments are able to use the same land to fulfill their parking needs. Additionally, this section is written in a way that prevents establishments from exploiting a small parking lot to satisfy their parking needs. Bicycle parking has been added to provide for alternate means of transportation and is designed in a way that promotes safety and security. Furthermore, the financial incentives were designed in a way that creates for tax breaks, which will help pay for

¹² (Author N.A.) Reduced Life Cycle Costs of Pervious Pavement, North Texas Council of Government (Nov. 19, 2021, 9:45 PM), <http://eebs.nctcog.org/documents/Case-Study-Permeable-Pavement.pdf>.

the sustainable measures. In essence, the decreased pollution from these sustainable measures will offset municipal contributions to the often expensive clean up costs.

Lastly, this ordinance is ultimately designed to afford the adopting municipalities with choices in utilizing it. These municipalities can take the ordinance and pull provisions from it and tailor it to their specific needs. The goal of this ordinance is to both introduce sustainable measures to municipalities and to provide the effective use of land while regulating parking.

E. Summary of What the Remaining Sections of the Narrative will Cover

In the upcoming sections of this narrative, we will discuss the following: the specific parking problems that Cumberland County is currently suffering from, why existing ordinances will not be able to solve these particular problems, what other municipalities have done to solve these particular problems, our own recommendations, and a brief conclusion.

II. The Problem – Specifically to Cumberland County

Municipalities throughout Cumberland County are currently suffering from the exact same issues listed above. Firstly, Cumberland County has a great deal of excess parking.¹³ This has not only caused there to be mass amounts of wasted land within the county, but it has also prevented commerce from being able to expand and reach its full potential.¹⁴ Additionally, many parking lots throughout Cumberland County do not have pervious pavement, which is also a major problem.¹⁵ This is ultimately due to the fact that the lack of pervious pavement can lead to increase stormwater runoff, causing pollution, and simultaneous increasing stormwater management costs, as well as rock salt/ice melt costs.¹⁶

¹³ Email from Kirk Stoner Director of Planning, Cumberland County, to authors (Sept. 7, 2021, 11:16 a.m. EST) (on file with authors).

¹⁴ *Id.*

¹⁵ Email from Kirk Stoner Director of Planning, Cumberland County, to authors (Oct. 4, 2021, 2:31 p.m. EST) (on file with authors).

¹⁶ Selbig, *supra* note 1.

III. Why Existing Local Ordinances Cannot Adequately Address This Problem

Often times in our society problems are derived from something that already exists. In our scenario that is not the case, as the above stated problem is derived from something that does not exist. More specifically, Cumberland County is currently suffering from being faced with the issue of not having a model parking ordinance on file.¹⁷

Due to this, Cumberland County leaves the regulation of parking up to its local municipality's.¹⁸ At face value, this may seem like a non-issue, however that is far from the case. This is ultimately due to the fact that the parking ordinances of these municipalities are outdated and based upon national data, and therefore, they do not reflect the current parking needs of the municipalities within the County.¹⁹ For example, because these parking studies are based upon national data, they are much more so designed for municipalities with larger populations (and thus more vehicles needed to be parked) than the typical municipality in Cumberland County.²⁰ Additionally, because many of these parking ordinances are outdated, they are not able to account for other environmentally friendly parking benefits, such as the numerous benefits that pervious pavement provides for.²¹

¹⁷ Stoner, *supra* note 12.

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *Id.*

²¹ Stoner, *supra* note 15.

IV. How these Problems have been Addressed by Other Municipalities

A. Explanation of the Key Elements of Principles and Ordinances Used By Other Municipalities to Address this Problem

1. Mathematical Calculations – Susquehanna Township

As stated above, Susquehanna Township was recently faced with the issue of wasted land use, caused by an overabundance of parking. This was a major problem for them, which called for a well thought out plan and subsequent action. The solution involved something that lawyers and law students (including the both of us) often do not like, which is mathematical calculations.

Jumping into the specifics of Susquehanna Township's mathematical calculations, they decided to established parking maximums (the maximum amount of parking that is allowed) based upon the type of the establishment.²² More specifically, Susquehanna Township, analyzed the main use for the particular establishment (residential, commercial, recreational, industrial, institutional, public), and then divided those up into subcategories (for example institutional uses were divided up into religious institutions, institutions of higher education, day cares, grade schools, high schools, and hospitals.).²³ Lastly, Susquehanna Township then took these subcategories and calculated the parking maximums based upon the square foot area of the establishment.²⁴

2. Preventing the Unintended Consequence of Too Little Parking

a. Mini Introduction

It would be silly, perhaps even downright foolish to not acknowledge the fact that there can be unintended consequences of created parking maximums. By far the biggest one of these is

²² Susquehanna Township Sustainable Parking Ordinance *supra*, note 2.

²³ *Id.*

²⁴ *Id.*

the possibility of creating a problem where there is not enough parking. Fortunately, there are multiple ways that will very well prevent, or at least greatly reduce the chances of this becoming a problem. The best potential solutions are as follows: off-street parking, joint parking facilities, shared parking, and bicycle parking.

b. Off-Street Parking, Joint Parking Facilities, & Shared Parking

Off-street parking is parking that can be used for parking by establishments that are not part of the street.²⁵ More specifically, off-street parking is used in conjunction with Appendix 1 for the purpose of determining the level of parking needed for a business or residence.²⁶

Joint parking facilities along with shared parking were ideas that were designed based off of our own personal experiences. First, the joint parking facilities are something that we observed while on a class field trip to the City of Lancaster. We drafted the provision on these, in order to allow establishments to utilize these facilities for the purpose of preventing a scenario with too little parking. For example, our ordinance mandates that an establishment cannot rely on these facilities alone if the aggregate establishments, which use the facility would require more parking than what the facility can provide for.

Shared parking facilities mirror the off-street parking provision; however, they are distinct in their own way. More specifically, they allow for the use of a whole parking lot, for each of the establishments located nearby, regardless the provisions set forth by of off-street parking. For example, under a shared parking lot, two establishments that need twenty (20) parking spots would both be able to use one twenty (20) space lot if they complied with the provisions.

²⁵ *Id.*

²⁶ *Id.*

c. Bicycle Parking

Another way that a municipality can cure the potential problem of having too little parking is by providing parking for bicycles. This particular action was employed by not only Susquehanna Township, but also by Frisco, Texas.²⁷ Additionally, NYC is even in the process of adding additional regulations to its bicycle parking requirements.²⁸ In matter of fact, it will even be doing this for the sole purpose of encouraging more bicycle parking, in order to deal with their problem of having too little vehicle parking.²⁹

Starting off with Susquehanna Township, their bicycle parking requirements focused on the ratio of bicycle parking to vehicle parking.³⁰ More specifically, they required that non-residential establishments provide for three percent (3%) of bicycle parking use for whatever the vehicle parking maximum required was.³¹ Hypothetically speaking, this would mean that a non-residential establishment, which was allowed to have at most one hundred (100) vehicle parking spaces, would be required to provide at least three (3) bicycle parking spaces.

Next, Frisco Texas focused quite a bit on the location of bicycle parking.³² A key element of this was the proximity form where the bicycle parking was located, to the primary entrance (commonly the front door) of the non-residential establishment.³³ Notably, Frisco, even went as far as to divide these regulations up and to have different requirements for both short and long-term uses.³⁴ For example, they required that short-term uses be stationed within one hundred

²⁷ Susquehanna Township Sustainable Parking Ordinance *supra*, note 2; FRISCO, TX., ZONING ORDINANCE § 4.04.12 (2016) *supra*, note 6.

²⁸ The Power of Bicycle Parking *supra*, note 6

²⁹ *Id.*

³⁰ Susquehanna Township Sustainable Parking Ordinance *supra*, note 2; FRISCO, TX., ZONING ORDINANCE § 4.04.12 (2016) *supra*, note 6.

³¹ *Id.*

³² FRISCO, TX., ZONING ORDINANCE § 4.04.12 (2016) *supra*, note 6.

³³ *Id.*

³⁴ *Id.*

(100) feet from the primary entrance and that long-term uses be stationed within five hundred (500) feet from the primary entrance.³⁵

Additionally, Frisco also set forth safety and security requirements with regards to bicycle parking.³⁶ These safety requirements mandated that at least four (4) feet must separate where the bicycle parking is stationed to any sidewalk or pedestrian right-of-way.³⁷ Additionally, these regulations also mandated that bicycle parking be located in well-lit areas, for the purpose of preventing bicycles from being vandalized, or even worse stolen.³⁸

Notably, in NYC they are currently taking bicycle parking into account.³⁹ The key element behind what NYC is doing, is adding “secured” biking racks all throughout the city, for the purpose of encouraging bicycle transportation. This is ultimately designed to reduce the need for vehicle transportation and subsequent parking.⁴⁰

3. Pervious Pavement

Pervious Pavement is designed to allow water to seep through it, thus reducing stormwater runoff and pollution.⁴¹ Lower Makefield Township, put forth pervious pavement requirements that were based upon site location, in order to achieve their goal of reducing stormwater pollution.⁴² For example, they mandated that all pervious pavements must be fifty

³⁵ *Id.*

³⁶ *Id.*

³⁷ *Id.*

³⁸ *Id.*

³⁹ The Power of Bicycle Parking *supra*, note 6.

⁴⁰ (Author N.A.) Secure Parking Would Boost NYC Bike Use, Group Says, Bicycle Retailer, (Nov. 10, 2021, 9:52PM), <https://www.bicycleretailer.com/industry-news/2021/01/05/report-stresses-need-enhanced-expanded-bike-parking-new-york-city#.YaKPO9DMLIX>.

⁴¹ (Author N.A.) What is Green Infrastructure?, United States Environmental Protection Agency (Nov. 11, 2021, 11:15 PM), <https://www.epa.gov/green-infrastructure/what-green-infrastructure>.

⁴² TOWNSHIP OF LOWER MAKEFIELD, ZONING ORDINANCE, *supra* note 8.

(50) feet from individual water supply wells and one hundred (100) feet from any community water well.⁴³

B. How these Ordinances and Principles Solved the Problem

1. Mathematical Calculations – Susquehanna Township

Due to the fact that Susquehanna Township's Parking Ordinance is rather recent, there is no available data of how it solved their problem of excess parking spaces. Fortunately, however, this ordinance was written in a manner that makes it noticeably clear that this particular problem will be significantly reduced, or possibly even outright eliminated.

Probably the number one reason as to why Susquehanna Township's Parking Ordinance will be able to solve their parking woes, is due to the fact that it contains valid mathematical calculations. This is ultimately because using mathematical calculations eliminates or at least significantly reduces subjective and other personal biases. In matter of fact, this is ultimately why mathematical calculations are vital to the process of land use and management planning.⁴⁴

Another major reason as to why Susquehanna Township's Parking Ordinance will be successful, is due to the fact that it analyzed/calculated the correct factor. This is ultimately due to the fact that calculating the wrong factor can lead to invalid results, and thus a statistically flawed parking ordinance. For example, when calculating the required parking maximums many municipalities often analyze the number of employees a particular establishment has on the larger shift.⁴⁵ The problem with this, is that this variable is very sensitive (easily capable of being wrongfully influenced) to other factors (such as overtime, the length of the shift, the time that the

⁴³ *Id.*

⁴⁴ Ruslana Taratula, Oleksandra Kovalyshyn, Zoriana Ryzhok, Svitlana Malakhova, *Application of Mathematical Modelling for Optimization of Land-Use Management*, SCIENDO, Dec. 2019, at 59.

⁴⁵ Susquehanna Township Sustainable Parking Ordinance *supra*, note 2.

shift runs from, the type and nature of the establishment, etc.).⁴⁶ One possible solution would be to perform a sensitivity analysis, in order to account for the above-mentioned factors that could inappropriately influence this variable.⁴⁷ Unfortunately, this could only be done by using rather expensive software programs (such as Precision Tree) and the services of a statistician, both of which would likely have imposed a significant cost burden on the township.⁴⁸

Fortunately, however there was a much easier approach to this. This simply entailed analyzing another variable, one that is constant and easy to measure/analyze.⁴⁹ Wisely, Susquehanna Township decided to measure/analyze a variable that hardly, if ever at all changes. This variable is the type of use that the establishment is used for. By using this particular variable, they were able to use a variable that is free from being wrongly influenced by other factors, and therefore it provides mathematical calculations, and thus parking maximums that are appropriate/correct.⁵⁰ Furthermore, because this variable is constant, it also allowed for Susquehanna Township's ordinance to not only be able to solve the problem, but to also be able to do so for many years to come. For example, establishments are often zoned for a specific purpose (commercial, residential, etc.). While it is possible that a zoning amendment can be made, this often involves a rather difficult and extremely costly process, and therefore it is very unlikely that the type of zoning for a particular establishment will be change and/or altered.⁵¹

⁴⁶ *Id.*

⁴⁷ Prior knowledge learned from the Bloomsburg University MBA program.

⁴⁸ Prior knowledge learned from the Bloomsburg University MBA program.

⁴⁹ Susquehanna Township Sustainable Parking Ordinance *supra*, note 2.

⁵⁰ *Id.*

⁵¹ Kevin Perk, [Can You Build Wealth by Rezoning Your Property? Yes! Here's How](https://www.biggerpockets.com/blog/property-rezoning), *Bigger Pockets* (Nov. 13, 2021, 10:00AM), <https://www.biggerpockets.com/blog/property-rezoning>.

2. Preventing the Issue of Not Enough Parking

a. Joint Parking Facilities, Shared Parking, & Off-Street Parking

The off-street parking requirements will be able to prevent this potential problem from occurring by setting forth appropriate levels within Appendix 1. More specifically, these requirements will allow for establishments to utilize off-street parking, but only in a manner that will prevent the overuse of existing parking, thereby preventing there from being too little available parking.

The joint parking facility provisions will be able to prevent this problem, because they regulate the number of available parking spots per establishment. For example, a parking facility with one hundred (100) parking spots would be able to house two businesses that need fifty (50) spots, but it would not be allowed to house a third business that needs fifty (50) spots.

The shared parking provisions will prevent this problem, mainly because they were designed to reflect the modern trend in society, which is that establishments are utilizing less space, different hours, and are located in the same building. Under this provision, a building would be able to house a karate school, a hairdresser, and a hobby shop. These businesses generally, due to the nature of them, have irregular hours. These places would be able to use the same communal lot because the need would vary based off of the business. Therefore, each of them is utilizing the same lot, effectively managing land, and thus ultimately preventing the potential issue of there being too little parking.

b. Bicycle Parking

Before delving into the reasoning and data behind why increased bicycle parking can decrease the need for vehicle parking, it is important to imagine the following hypothetical scenario. Imagine that you recently purchased an expensive bicycle. Would you ride that bicycle

somewhere if there was nowhere to park it? Would you park it in a dark and dim location? Would you park it in a bark rack that was not secure? How would you feel if you had a long walk from your bicycle to the entrance of the establishment? How would you feel if the bicycle was vandalized or even worse stolen? These are all things that were taken into consideration when Susquehanna Township, Frisco, and NYC all set forth their bicycle parking regulations.⁵²

As previously noted, the data on Susquehanna Township's Parking Ordinance is absent due to its recent enactment. Fortunately, however, it can be stated with near certainty that based upon common sense and logic, requiring non-residential establishments to have bicycle parking will be of an immense benefit. This is ultimate because by requiring non-residential establishments to do this, there is more of an incentive to use your bicycle instead of your vehicle, and therefore there is less of a need for as many vehicle parking spots.

Unfortunately, the data on Frisco's Parking Ordinance is also absent. Fortunately, however, it can also be stated with near certainty that based upon common sense and logic their ordinance will also be able to solve the potential problem of not having enough vehicle parking. This is ultimately because these measures will incentivize more bicycle transportation. For example, having bicycle parking that is located near the primary entrance of an establishment, relieves people of their worries regarding how far they will have to walk from where they can park their bicycle to the primary entrance of the establishment. Additionally, having bicycle parking that is well-lit and highly visible gives people more confidence that their bicycle will be kept secure, and not subject to vandalism or even theft. Providing at least four feet of pedestrian clearance/travel space also makes people more likely to bike as opposed to drive. This is ultimately due to the fact that they will not have to worry about being hit by a car due to the lack

⁵² Susquehanna Township Sustainable Parking Ordinance *supra*, note 2; FRISCO, TX., ZONING ORDINANCE § 4.04.12 (2016) *supra*, note 6; The Power of Bicycle Parking, *supra*, note 6.

of an appropriate amount of pedestrian travel/clearance space. Finally, all of these measures taken by Frisco, (especially when combined) will encourage bicycle transportation, thus decreasing the amount vehicle transportation and subsequent parking that is needed.

The above-mentioned task that NYC is currently up to is still in the proposal phase.⁵³ However, a survey of NYC residents showed that approximately ninety-five (95) percent of cyclists in the city stated that more secure bicycle racks would lead to more bicycle transportation, thus decreasing the need for vehicle use and subsequent parking.⁵⁴

As noted above the data regarding these three different municipalities is limited or even non-existent. Fortunately, however there is data from other sources regarding the above-mentioned principles. For example, there are academic studies, which have shown that approximately six (6) to fifteen (15) bicycles can fit in every single vehicle parking spot.⁵⁵ Notably, other research has indicated that this number may be even higher at ten (10) to twenty (20) bicycles per one parking spot.⁵⁶ This ultimately shows that by increasing the availability of bicycle parking, we can significantly decrease the need for vehicle parking, thus preventing potential parking shortages.

It is certainly the case that all of the above-mentioned measures are not in any way mutually exclusive for the purpose of encouraging bicycle parking. Since our ordinance is a model/menu ordinance this ultimately means that a particular municipality could choose to not adopt one, or even some of these provisions, and still be able to encourage bicycle transportation. However, it cannot go without stating that when these measures are taken together, there is the

⁵³ (Author N.A.) The Power of Bicycle Parking, Transportation Alternatives (Nov. 11, 2021, 10:45PM), <https://www.transalt.org/the-power-of-bicycle-parking>.

⁵⁴ *Id.*

⁵⁵ (Author N.A.), Benefits of Biking, University of Montana (Nov. 12, 2021, 6:15PM), <https://www.umt.edu/transportation/bike/about/benefits/>.

⁵⁶ Elly Blue, The Best Way to Promote City Riding? Bike Racks, Bicycling (Nov. 12, 2021, 5:45PM), <https://www.bicycling.com/news/a20024191/the-best-way-to-promote-city-riding-bike-racks/>.

greatest likelihood of creating a scenario where there is more bicycle use, thus decreasing the need for vehicle transportation and subsequent parking. Ultimately, this will ultimately prevent an unfortunate situation of too little parking from occurring. Lastly, these measures are what will prevent a scenario of there being not enough parking, even after parking maximums have been established.

3. Pervious Pavement

Unfortunately, there is no data on the environmental, economic, and social benefits of Lower Makefield Township's pervious pavement provisions. Fortunately, however, there is data that shows the benefits of pervious pavement in the municipalities of Shoreview, Minnesota and West Union, Iowa. With regards to Shoreview, pervious pavement enabled them to filter more than one acre foot of stormwater runoff, than what they had previously been able to do with traditional concrete pavement.⁵⁷ With regards to West Union, they were able to save more than two million dollars from their significantly decreased need for rock salt/ice melt.⁵⁸ Therefore, from this data, it can be said with near certainty that pervious pavement will entirely (or at least significantly) reduce the problems of excess stormwater runoff, as well as the costs that are associated with rock salt/ice melt usage.

C. Why we Chose these Municipalities

Choosing other municipalities to analyze when writing an ordinance is no easy task. This is ultimately because the demographics (both in terms of geography and population) of the municipality, as well as whether the municipality is located in Pennsylvania, must be carefully considered. This is one of the main reasons as to why we choose Susquehanna Township as the

⁵⁷ (Author N.A.) Pervious Concrete Pavement Reduces Runoff Into Shoreview Lake, Crossroads (Nov. 20, 2021, 10:45 AM), <https://mntransportationresearch.org/2018/08/22/pervious-concrete-pavement-reduces-runoff-into-shoreview-lake/>.

⁵⁸ Reduced Life Cycle Costs of Pervious Pavement, *supra* note 12.

primary municipality for drafting our ordinance. Susquehanna Township is located in Pennsylvania; therefore, we did not have to worry about a different state's law governing. With regards to geography demographics, Susquehanna Township is good to choose from, because it is located just outside of Cumberland County. With regards to population demographics Susquehanna Township is also good to use. This is ultimately because, Susquehanna Township has approximately 25,000 people⁵⁹, which is very similar to the three most populous municipalities in Cumberland County (Hampden Township – Estimated 28,000 people, East Pennsboro Township – Estimated 20,000 people, Carlisle Borough – Estimated 18,000 people).⁶⁰ Therefore, it was easy for us to conclude that Susquehanna Township was a great municipality to choose from, as model in drafting our ordinance.

For the pervious pavement we choose Lower Makefield Township as a model, because it is also located in Pennsylvania, and has a similar population (approximately 32,000 people)⁶¹ to the above listed municipalities in Cumberland County.⁶² Furthermore, when analyzing the data surrounding pervious pavement, we choose to look at Shoreview, Minnesota and West Union, Iowa, as they are both located in cold and snowy climates, like Cumberland County. Therefore, by analyzing the pervious pavement in these municipalities, we were able to design our ordinance to the point where our pervious pavement provisions will be of an immense benefit to municipalities throughout Cumberland County.

⁵⁹(Author N.A.) Susquehanna Township, Dauphin County, Pennsylvania, United States Census Bureau, (Nov. 6, 2021, 4:00 PM), <https://www.census.gov/quickfacts/susquehannatownshipdauphincountypennsylvania>.

⁶⁰ (Author N.A.) Cumberland County Population & Demographics, (Nov. 6, 2021, 5:00 PM), <https://cumberlandbusiness.com/datamap-demographics/population-demographics/>.

⁶¹ (Author N.A.) Lower Makefield Township, Bucks County, Pennsylvania, United States Census Bureau, (Nov. 6, 2021, 9:00 PM), <https://www.census.gov/quickfacts/susquehannatownshipdauphincountypennsylvania>.

⁶² Cumberland County Population & Demographics, *supra* note 58.

D. Explanation of the Social, Environmental, and Economic Benefits that these Municipalities Received/Will Receive

Not only will Susquehanna Township's Parking Ordinance achieve its main goal of decreasing excess parking, but it will also be able to provide for an immense amount of environmental, economic, and social benefits. With regards to environmental benefits, not only will Susquehanna Township be able to have less wasted land as a result of eliminating excess parking, but they will also be able to receive the secondary environmental benefits from this. For example, by incentivizing bicycle transportation and even carpooling they will be able to reduce their air pollution, caused by vehicle transportation. With regards to economic benefits, decreasing excess parking will allow for more land use, thus allowing businesses to flourish. Social benefits can even be derived from this, as improved economic conditions, often lead to better social conditions⁶³. Furthermore, the municipalities that received environmental and economic benefits from their implementation of pervious pavement, will also receive the secondary social benefits, for this exact same reason.

V. Recommendations

The Ordinance approach was taken in a way that started from scratch and built a foundation for the municipalities within Cumberland County. Being a model/menu ordinance, we concluded that municipalities may not have either the best law on the books or the law may be absent. With this in mind, we decided that it be best to draft the ordinance in a user-friendly way in which the elected officials within this municipality can either adopt the provisions in whole or work with their solicitor to come up with tailored needs based off of this ordinance.

⁶³ (Author N.A.) Socioeconomic Environment, Collaborative on Health and the Environment, (Nov. 22, 2021, 10:05 PM) <https://www.healthandenvironment.org/environmental-health/environmental-risks/socioeconomic-environment>.

Being an ordinance that is mainly regulatory, there was not an expressed need for funding. The Ordinance defines parking lots going forward and thus the same approach should be taken by municipalities as in the past. With the tax incentives, we drafted law within it to provide incentive for the sustainability measures. These measures will be offset either through expense allocation of savings from municipal water runoff and the “rain tax” along with grants to be applied for. The data provided by the studies that we have gathered is a cornerstone for municipalities within Cumberland County to base their parking needs off of and to further provide uniformity within the Tri-County Area.

VI. Conclusion

In conclusion, we have identified the problem that Cumberland County has faced which is that there is no model ordinance for municipalities to work off of. We have drafted a solution to provide for adequate parking based off of real observable data and have taken real life ordinances to breathe life into ours. The combination of these adequate parking measures along with sustainability measures such as bicycle parking and pervious pavement, will better the environment within Cumberland County while also providing the law for municipalities to thrive and succeed with their parking issues. Overall, the ordinance is one that can be tailored to the specific needs of a municipality, but it has at its core the elements of both sustainable parking and business-friendly Eco-regulations for a well-managed, and cleaner community.

A Model Menu Ordinance for Cumberland County

Chapter 1 – Preliminary Provisions.

Section 101 - Scope of Chapter.

This ordinance shall be known the Cumberland County Model Efficient Parking and Sustainability Ordinance. Additionally, this ordinance may be cited as such.

Section 102 Purpose.

The purposes for this ordinance are as listed below:

- (a) To provide for a viable and efficient use of land within the municipality.
- (b) To reduce storm water runoff in parking areas within the municipality.
- (c) To increase quality of life for residents within the municipality, by reducing congestion, improving air quality, and reducing pollution.
- (d) To provide for the economic prosperity within the municipality by eliminating excessive parking requirements for businesses, and thus allowing businesses to plan, grow, and expand.

Section 103 - General Definitions.

The following words and phrases when used in this Ordinance shall have the meanings given to them in this section unless the context clearly indicates otherwise:

“Bicycle facilities” An area of land, which is deemed to be used for the purpose of storing bicycles.

This includes, but is not limited to racks, lockers, and access areas, where bicycles are stored.⁶⁴

“Board” The _____ Zoning Board.⁶⁵

“Business” A person, corporation, or partnership entity that is engaged in commerce. This includes but is not limited to restaurants, credit unions, and office locations.⁶⁶

⁶⁴ Post-pandemic Zoning Changes: Reducing Commercial Parking Requirements (Fall 2020).

⁶⁵ Susquehanna Township Sustainable Parking Ordinance: A Paradigm Shift in Parking (Fall 2019). Taken verbatim, except Susquehanna Township was changed to _____ since this this is a model ordinance.

⁶⁶ *Id.*

“Corporation” A legal entity created under the laws of incorporation in any state within the United States or its territories.

“Green Roof” A green roof is a roof in which the area shall be exposed to direct sunlight at noontime and shall be covered with vegetation that is designed to absorb stormwater runoff.

“Gross Floor Area” The sum of the horizontal areas of all the floors of a building or structure as measured from the exterior face of exterior walls, or from the centerline of a wall separating two buildings but excluding any space where the floor-to-ceiling height is less than six feet. The area of parking garages contained within a building are not be included in the gross floor area calculation, nor is sub-basement areas with a finished floor level six feet or more below the adjacent grade.⁶⁷

“Joint Parking Facility” A parking facility that is used by more than one establishment and is dedicated to the main purpose of parking.⁶⁸

“Off-Street Parking Facility” The entire area used for the storage of motor vehicles tied to a specific building or use, and which is not located on a dedicated street right-of-way. The term includes parking spaces, parking lots, parking structures, as well as accompanying driveways, footpaths, and interior landscaping.⁶⁹

“Partnership” A group of two or more individuals engage in commerce or other business transactions.

“Person” A living individual who is age 18 or older.

⁶⁷ Susquehanna Township Sustainable Parking Ordinance: A Paradigm Shift in Parking (Fall 2019). Taken verbatim.

⁶⁸ Susquehanna Township Sustainable Parking Ordinance: A Paradigm Shift in Parking (Fall 2019).

⁶⁹ *Id.* Taken verbatim.

“Permeable Pavement” Building material, including but not limited to, concrete, wood, or other material that permits stormwater and other liquid materials to pass through.⁷⁰

“Shared Parking” Parking that is shared by two or more entities with the common goal of meeting the required parking for the establishment.

“Stormwater Management System” A porous building material, runoff water basin, or other device that is used to mitigate stormwater and other liquid pollutants.

⁷⁰ Pervious Pavement, Lake Superior Duluth Streams, (Oct. 14, 2021, 9:45PM), <https://www.lakesuperiorstreams.org/stormwater/toolkit/paving.html>.

Chapter 3 - Authority.

Section 301 - Legal Authority.

This Ordinance is enacted and ordained:

(a) Under the grant of powers by the General Assembly of the Commonwealth of Pennsylvania under the act of July 31, 1968 (P.L. 805, No. 247) known as the Pennsylvania Municipalities Planning Code, 53 Pa. Stat. Ann. § 5510.⁷¹

(b) Under the act of June 24, 1931 (P.L. 1206, No. 331) known as the First Class Township Code, 53 Pa. Con. Stat. § 5510⁷²

(c) Under the act of May 1, 1933 (P.L. 103, No. 60) known as the Second Class Township Code, 53 Pa. Con. Stat. § 55101.⁷³

(d) Under the act of November 24, 2015 (P.L. 242, No. 67, Part V) known as the Third Class City Code, 11 Pa. Con Stat. § 10101.⁷⁴

(e) Under the act of April 18, 2014 (P.L. 432, No. 37 § 1) known as the Borough Code, 8 Pa. Con. Stat. § 101.⁷⁵

Section 302 – Construction.

This ordinance is to be read as consistent with all other applicable ordinances.⁷⁶

⁷¹ Susquehanna Township Sustainable Parking Ordinance: A Paradigm Shift in Parking (Fall 2019) <https://widenerenvironment.files.wordpress.com/2020/01/parking.pdf>; 53 Pa. Stat. Ann. § 5510 et seq.

⁷² Susquehanna Township Sustainable Parking Ordinance: A Paradigm Shift in Parking (Fall 2019); 53 Pa. Stat. Ann. § 5510 et seq.

⁷³ Post-pandemic Zoning Changes: Reducing Commercial Parking Requirements (Fall 2020) <https://widenerenvironment.files.wordpress.com/2021/01/repurposing-of-commercial-parking.pdf>; 53 Pa. Stat. Ann. § 55101.

⁷⁴ 11 Pa. Stat. Ann. § 10101 et seq.

⁷⁵ 8 Pa. Stat. and Cons. Stat. Ann. § 101 et seq.

⁷⁶ Susquehanna Township Sustainable Parking Ordinance: A Paradigm Shift in Parking (Fall 2019).

Section 303 - Compatibility with Other Requirements.

Approvals that are made, as well as measures put in place, in accordance with this Ordinance do not remove the applicant's duty to obtain the required permits or approvals for activities, events, etc., which are regulated by other law, regulation, or ordinance.⁷⁷

⁷⁷ PA. MODEL STORMWATER MGMT. ACT. vol. 34, tab 25, § 108 (2006).

Chapter 5 - Regulations.

Section 501 - General Parking Regulations.

The off-street parking facilities required under Section 502 shall be available to citizens, customers, etc., throughout the hours of operation for the use(s) that the locations have been provided for.⁷⁸

(a) Each parking locations shall be maintained and not in any way infringed upon, during the time period while the principal use stays the same, except for when an identical amount of parking spaces is offered at a different location.⁷⁹

(b) Parking spaces that are stationed outdoors are not to be considered as being part of the open parking lot space to which it is located.⁸⁰

Section 502 - Off-Street Parking Requirements.

The requirements that pertain to off-street parking shall be the maximum requirement for each use according to the chart that is labeled as Appendix 1 and titled “Off-Street Parking Schedule.”⁸¹

(a) When multiple uses are present at a particular location, the greatest space allowed shall be the maximum of the principal parking, in addition to 50 percent of any secondary use parking. The primary purpose shall be the use that yields the greatest degree of parking.⁸²

(b) In the circumstance of off-street parking having more than one use, additional parking shall be determined on an individual basis by the Board, however anything greater than 50% of additional

⁷⁸ Susquehanna Township Sustainable Parking Ordinance: A Paradigm Shift in Parking (Fall 2019). Taken verbatim except for “Section 4.2”, this was edited in order to reflect the correct section number for our section on Off-Street Parking Requirements.

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ *Id.*

⁸² *Id.* Taken mostly verbatim; clarified secondary and primary.

parking is prohibited. The Board may consider the following factors in making this determination:⁸³

(1) The degree to which the multiple uses overlap with each other.⁸⁴

(2) The degree to which the multiple uses make use of the off-street parking location at different times of the day, different days of the week, and different seasons of the year.⁸⁵

(3) Any additional factors that the Board may consider to be relevant to their parking needs.⁸⁶

(c) Each request that is made for the purpose of providing off-street parking, which is lower than 50 percent of the parking maximum values established in Appendix 1, shall be accompanied by expert proof of mean and peak parking rates from a municipality that is determined to be related to the parking request. This request shall use the same factors test as provided in (b).

(d) Each parking locations shall be maintained and not in any way infringed upon, during the time period while the principal use stays the same, except for when an identical amount of parking spaces is offered at a different location.⁸⁷

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *Id.*

⁸⁷ *Id.*

Chapter 7 - Joint and Shared Parking Facilities.

Section 701 - General Provisions.

The following shall apply to businesses that utilize joint parking facilities pursuant to agreement with the parking provider:

(a) The joint parking facility shall suffice for the parking requirements set forth within the appendix if the parking facility contains enough parking stalls to accommodate for the businesses that utilize the facility if:

(1) The total amount of parking divided by the businesses utilized is greater than or equal to the parking required under the appendix.

(2) The total amount of parking within the facility does not factor any of- street parking.

(3) A joint parking facility shall provide for the required bicycle parking as set forth in Chapter 9.

Section 702 - Shared Parking.

(a) A business that shares parking spaces shall have the shared parking fulfill the requirements of this ordinance if the following are met:

(1) The businesses elect to share parking;

(2) The businesses operate no more than 5 hours a week in which both are open for business and;

(3) The businesses post within the shared parking space the parking in which the space is reserved for.

(b) A business that elects to share parking shall have that parking count towards their parking requirements if:

(1) There is an agreement between the lot provider and businesses utilizing the lot;

(2) The space within the lot is specifically reserved for the business utilizing the lot
and;

(3) The space within the lot complies with the provisions relating to bicycle
parking.

Section 703 - No Rights Afforded.

Nothing within this chapter shall be construed to infringe on an owner's rights nor shall be
construed to grant a right to parking within these facilities unless otherwise explicitly granted by
the property owner.

Chapter 9 - Bicycle Parking.

Section 901 - General Provisions.

(a) A business shall be required to provide off-street bicycle facilities in addition to the off-street parking required under Appendix 1 titled, "Off-street parking schedule."⁸⁸

(b) Off-street bicycle facilities shall be provided for at a minimum rate of 3% of the maximum parking spaces for the respective use.⁸⁹

(c) Bicycle racks and facilities shall provide for a means of securement of the bicycle to the rack or facility.

Section 902 - Location of Bicycle Parking.

(a) Bicycle parking of the short-term shall be stationed within 100 feet of the primary public entrance of the facility.⁹⁰

(b) Bicycle parking of the long-term shall be located within 500 feet of the primary public entrance of the facility.⁹¹

(c) Bicycle parking facilities shall not infringe upon accessible paths of travel or accessible means of parking in accordance the Americans with Disabilities Act (ADA), and any later updated provisions to the ADA.⁹²

(d) When a rack is placed within a sidewalk or pedestrian right-of-way, a minimum of four (4) feet from the required rack dimension shall be provided for pedestrian clearance.⁹³

(e) Bicycle racks shall be stationed at locations that are visible from the road or sheltered and lit.⁹⁴

⁸⁸ Susquehanna Township Sustainable Parking Ordinance: A Paradigm Shift in Parking (Fall 2019). Taken partially verbatim.

⁸⁹ *Id.* Taken verbatim.

⁹⁰ FRISCO, TX., ZONING ORDINANCE § 4.04.12 (2016).

⁹¹ *Id.*

⁹² *Id.*

⁹³ *Id.* Taken verbatim.

⁹⁴ *Id.*

(f) When motor vehicle parking spaces are offered in a structured parking garage, long-term and short-term bicycle spaces are required to be stationed inside the garage and located solely on the ground level.⁹⁵

⁹⁵ *Id.*

Chapter 11 - Sustainability and Incentives.

Section 1101 - General Provisions.

The following [shall be required/ are provided incentives as set forth below] of a [newly created parking lot or facility/each parking facilities within _____ days/months of enactment of this ordinance]

(a) A Green Roof as defined within this Ordinance and in which the vegetation shall be planted in a minimum of four inches of depth of soil or other growing material. Up to 10% of an area of a green roof may include walkways. If the vegetation dies, it shall be required to be replaced within 150 days.

(b) Pervious Pavement.

Section 1102 - Pervious Pavement.

(a) Pervious pavement systems apply to [parking lots/parking facilities/parking structures].

(b) Pervious pavement shall meet the following requirements:

(1) Pervious pavement systems shall be designed in accordance with the newest edition of the PADEP BMP Manual, as amended (BMP 6.4.1 Pervious Pavement with Infiltration Bed) by a registered professional engineer or landscape architect and installed by a contractor, experienced or certified in the construction of the particular proposed system.⁹⁶

(2) The site design shall minimize the potential for routing of sediment laden runoff from other areas directly onto the pervious surface.⁹⁷

(3) If the proposed area of pervious pavement is less than _____ square feet, the designated municipal Engineer may waive the requirement for a subsurface investigation.⁹⁸

⁹² TOWNSHIP OF LOWER MAKEFIELD, ZONING ORDINANCE § 200-50.4(D)(2).⁹⁷ *Id.* at (D)(7). Taken verbatim.

⁹⁷ *Id.* at (D)(7). Taken verbatim.

⁹⁸ *Id.* at (D)(4). Taken verbatim.

(4) Pervious pavement systems shall be so located at least 50 feet from individual water supply wells, and 100 feet from community or municipal water supply wells. ⁹⁹

Section 1103 - Responsibility for Compliance with Pervious Pavement.

The owner of the property upon which a pervious pavement parking lot has been inserted, is hereby required to adequately maintain and clean so that the pavement functions as designed, and if necessary, repair the pervious pavement parking lot, and to do in a manner that fully abides by the provisions of this ordinance.

Section 1104 - Enforcement of Pervious Pavement and Green Roofs.

Failure to abide by the provisions within this Chapter may result in one or more of the following:

(a) A violation of the _____ Zoning Ordinance thus exposing the owner to fines and/or penalties as listed in this ordinance;¹⁰⁰

(b) The property in violation, as well as other properties the owner possesses sole title to, within this jurisdiction, will forfeit the pervious pavement credit granted to it in accordance with this ordinance, even if the other properties are not in violation; ¹⁰¹

(c) A result in the municipality of _____ or its representatives embarking upon the property that has been deemed to be in violation, and utilizing any and all necessary actions, which are needed to maintain the pervious pavement parking lot system.¹⁰² Additionally, the owner bears all costs of this said action. These actions include, but are not limited to, cleaning, repairing, or otherwise utilizing professional services to maintain, repair, or replace the pavement. ¹⁰³

⁹⁹ *Id.* at (D)(8). Taken verbatim.

¹⁰⁰ *Id.* at (F). Taken verbatim.

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ *Id.*

Chapter 13 - Financial Incentives.

Section 1301 - Tax Credits.

The following incentives will be provided for individuals or establishments to enact the mitigation efforts as provided within Chapter 11:

(a) A person or business that provides for permeable pavement within a parking lot or facility will be provided a reduction of [____% or whole dollar amount] towards their yearly municipal tax rate for ____ years.

(b) A person or business that provides for green roofing within any facility will be provided a reduction of [____% or whole dollar amount] towards their yearly municipal tax rate for ____ years.

(c) A person or business that takes substantial measures to implement the mitigation efforts as provided in this chapter shall be eligible for a matching grant by the municipality of no more than [____% or whole dollar amount] pursuant to subsection (1).

(d) The municipality may, at its discretion, apply for a grant to provide funding for the environmental mitigation efforts as provided within this chapter. The criteria for eligibility shall be established by ordinance and eligibility and seniority shall be established by date of received application within the fiscal year.

(e) This section does not create a duty or obligation of the municipality to fund a environmental mitigation effort in excess of grants received nor does it create a duty to provide or fund mitigation efforts through municipal funds.

Chapter 15 – Enforcement.

Section 1501 – Violations.

- (a) All properties that fall out of compliance with this ordinance shall be required to comply within _____ days/months, unless otherwise exempt from the provisions of this ordinance.
- (b) If an exempt property is to transfer title to another owner, that person shall have _____ days/months to be in compliance, unless otherwise exempt from the provisions of this ordinance.
- (c) All requests to deviate from the parking provisions of this ordinance shall be applied for and heard by the Board. All appeals shall be heard by the Municipality’s Council.

Section 1502 - Enforcement Remedies.

A person, partnership, or corporation who or which has violated or permitted the violation a provision of this ordinance, shall upon being found liable therefore in a civil enforcement proceeding commencement by the _____, pay a judgment of not more than five hundred-fifty dollars (\$550) plus all court costs, including reasonable attorney fees incurred by the _____ as a result thereof. No judgment shall commence or be imposed, levied or payable until the date of the determination of a violation by the Magisterial District Judge. If the defendant neither pays nor timely appeals the judgment, the _____ may enforce the judgment of the Court against the defendant pursuant to the applicable rules of civil procedure. Each day that a violation continues shall constitute a separate violation unless the District Judge determines otherwise.¹⁰⁴ All judgments, costs and reasonable attorney fees collected for the violation of this ordinance shall be paid over to the Municipality.

¹⁰⁴ YORK CITY., PA., ZONING ORDINANCE art. V, § 508. Taken verbatim except \$500 was changed to \$550 in order to account for recent inflation. Also “Section 1502” was edited to reflect the Sections numbers more accurately in our ordinance.

Section 1503 – Retroactivity.

Enforcement of this Ordinance shall not apply to a property purchased or erected before enactment of this Ordinance.

Chapter 17 – Severability, Repeals, and Effective Date.

Section 1701 – Severability.

If a term or provision of this ordinance is determined to be invalid, illegal, or otherwise unenforceable, by the judgment of a court of proper jurisdiction, an invalidity, illegality, or unenforceability shall not affect other terms or provisions of this ordinance or invalidate or render unenforceable a term or provision.¹⁰⁵

Section 1702 - Repeals.

All other ordinances that are inconsistent with the terms of this ordinance, whether it be in whole or in part, are repealed upon the enactment of this ordinance.¹⁰⁶

Section 1703 - Effective Date.

This Ordinance will take effect 60 days after its enactment.

¹⁰⁵ Susquehanna Township Sustainable Parking Ordinance: A Paradigm Shift in Parking (Fall 2019).

¹⁰⁶ *Id.*

Appendix 1

Maximum Off-Street Parking Schedule¹¹⁸

Type of Use	Maximum Spaces
A. Residential use:	
1. Single and multifamily dwelling	2 spaces per 1 dwelling unit
2. Group home or halfway house; personal care and nursing care center; and rooming and boarding house	1 space per 4 beds
3. Communities for residents 55-years-and-over	1.1 spaces per 1 dwelling unit
B. Commercial use:	
1. Automotive repair and maintenance; gasoline station; and car wash	2 spaces per 1 service bay area
2. Automotive sales	2 spaces per 1000 square feet of gross floor area
3. Banks, business/office buildings, retail, and grocery stores	2 spaces per 1000 square feet of gross floor area
4. Hotels, motels, and bed and breakfasts	1 space per 1 room
5. Kennels	1 space per every 15 animals of capacity
6. Medical, dental, and veterinarian offices, including outpatient clinics	3 spaces per the maximum shift of doctor, dentist, or veterinarian
7. Restaurants, bars, brewpub, distillery, and winery	1 space per 4 seats; or 3 spaces if no customer seating is provided
C. Recreational use:	
1. Indoor recreation, membership club, or exercise club	1 space per 4 persons of maximum capacity
2. Outdoor recreational facility, sports arena, auditorium, theatre, and assembly hall	1 space per 4 seats
3. Golf course	4 spaces per 9 holes
4. Golf driving range and miniature golf	1 space per 1 tee or hole
D. Industrial use:	
1. Manufacturing plants and research or testing	1 space per 3,000 square feet gross

laboratories	floor area
2. Mini or self-storage	1 space per 20 units
3. Wholesale establishments or warehouses	1 space per 3,000 square feet gross floor area
E. Institutional use:	
1. Churches and religious institutions	1 space per 4 seats
2. Colleges; universities; or business, technical, or fine art schools	1 space per 3 student design capacity
3. Day care centers	1 space per 5 student design capacity
4. Elementary and middle schools	1 space per 7 student design capacity
5. High schools	1 space per 3 student design capacity
6. Hospitals	1 space per 3 beds
F. Public use:	
1. Community buildings and social halls	1 space per 4 persons maximum occupancy

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¹⁰⁷ Susquehanna Township Sustainable Parking Ordinance: A Paradigm Shift in Parking (Fall 2019). Taken verbatim. Notably, these calculations were performed by the Tri-County Regional Planning Commission.