

City Explained^{Inc.}

Development Impact Fee Study Report

Camden, SC



Final Document

August 11, 2023

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Chapter 1

Introduction

INTRODUCTION

The development impact fee report presented herein fulfills the inventory and analytical requirements for the potential adoption of impact fees by the City of Camden, SC. It documents existing conditions, anticipates future year needs and their implementation costs, and recommends maximum allowable impact fees (by category) in accordance with the rules and requirements of the South Carolina Development Impact Fee Act. Three categories are addressed in the study report: parks and recreation, fire protection, and municipal facilities and services.

The report also serves as the foundation for developing the City's list of projects eligible for impact fee funding in the Capital Improvements Plan, and for supporting the City's development impact fee ordinance for enforcing a local development impact fee system under the Act.

WHAT ARE IMPACT FEES?

As communities grow, the demands placed on surrounding infrastructure continue to rise and eventually necessitate additional capacity improvements to maintain adequate levels of services. Traditionally, elected officials rely on rising property taxes, state or federal funding, or the development review process to pay for future year capital improvements. However, recent decreases in outside governmental funding, increases in construction costs for replacing and expanding public facilities, and rising resistance to increased property taxes have led many local governments to consider other funding mechanisms for implementing needed improvements.

Impact fees represent financial payments made from a developer to a local government for funding certain off-site capital improvements needed to accommodate future growth. Fees may be collected for different public facilities and services; including transportation, water, sewer, municipal facilities and services, storm water, police and fire protection, and parks. They generally provide a means for orderly development by mitigating the negative impacts of new growth, while passing costs onto new development rather than existing taxpayers.

Impact fees are most useful in communities that are experiencing rapid growth and have significant land available for development. According to a recent national survey, approximately 59% of cities and towns with a population over 25,000 use some form of impact fees to offset the costs of accommodating new development (results summarized in the Impact Fee Handbook prepared for the National Association of Home Builders, Updated in 2016).

Two factors control the legality of collecting impact fees. First, local governments must have authority to impose the fees as a condition of development approval. Second, the design and implementation of impact fee requirements must not be unfair, arbitrary, unreasonable, or without rational basis. In addition, impact fees may not violate a developer's right to due process or be discriminatory.

STATE ENABLING LEGISLATION

The State of South Carolina grants the power for cities and counties to collect impact fees on new development pursuant to the rules and regulations set forth in the South Carolina Development Impact Fee Act (Code of Laws of South Carolina, Section 6-1-910 et seq.). A copy of the State enabling legislation is included in Appendix A of the report. The process to create a local impact fee system begins with a resolution by City Council directing the Planning Commission to conduct an impact fee study and recommend a development impact fee ordinance for legislative action.

Generally, a governmental entity must have an adopted comprehensive plan to enact impact fees; however, certain provisions in State law allow cities and counties that have not adopted a comprehensive plan to impose development impact fees. Those jurisdictions must prepare a capital improvements plan as well as prepare an impact fee study that substantially complies with Section 6-1-960(B) of the Code of Laws of South Carolina. The City of Camden's Comprehensive Plan, first adopted in 1969, was last updated in January 2019. The City of Camden currently maintains a Priority Investment Element and a list of planned capital facilities projects through 2028 as a part of its Comprehensive Plan. The Element can be amended with new projects to support the local development impact fee system. Alternatively, the city may wish to formally create a Capital Improvements Plan, or an official capital projects list, that organizes and plans the capital needs encompassed by the funding generated through impact fees.

All cities and counties are also required to prepare a report that estimates the effect of impact fees on the availability of affordable housing before imposing impact fees on residential dwelling units. Based on the findings of the study, certain developments may be exempt from impact fees when all or part of the project is determined to create affordable housing and the exempt development's proportionate share of system improvements is funded through a revenue source other than impact fees. A housing affordability analysis in support of the development impact fee study update is published as a separate report.

Eligible costs may include design, acquisition, engineering, and financing attributable to those improvements recommended in the local capital improvements plan that qualify for impact fee funding. Revenues collected by the city or county may not be used for administrative or operating costs associated with imposing the impact fee. All revenues from impact fees must be maintained in an interest-bearing account prior to expenditure on recommended improvements. Monies must be returned to the owner of record of the property for which the impact fee was collected if they are not spent within three years of the date they are scheduled to be encumbered in the local Priority Investments Element (or an official capital improvements plan or capital projects list created to support the development impact fee program). All refunds to private land owners must include the pro rata portion of interest earned while on deposit in the impact fee account.

The City of Camden is also responsible for preparing and publishing an annual report describing the amount of impact fees collected, appropriated, and spent during the preceding

year for each service area in which impact fees were collected. The Planning Commission is required to review and update the impact fee study report, capital improvements plan, housing affordability analysis, and development impact fee ordinance. The updates must occur at least once every five years. Pursuant to State Law, the City of Camden will not be allowed to recommend additional projects eligible for impact fee funding, or charge higher maximum allowable impact fees, until the development impact fee study and capital improvements plan have been updated.

STUDY AREA

The study area for this analysis coincides with the City of Camden Limits in central Kershaw County (see Figure 1.1 on the following page). One service zone was assumed to represent the entire the study area.

ANALYSIS PERIOD

The base year for the development impact fee study (all three categories) is 2022 based on information provided by the City: asset lists, asset values, property characteristics, and tax rates. In some cases, data for 2020 or 2021 was used as “best available data” for the analysis (i.e., data published by the U.S. Census Bureau). The planning horizon is 2032. The ten-year planning horizon (2022 to 2032) is a reasonable period of time pursuant to Section 6-1-960(B)(7) of the South Carolina Development Impact Fee Act.

DEMOGRAPHIC DATA

Demographic data for the development impact fee study was collected from the US Census Bureau. Base year population (7,574) was collected from the 2021 American Community Survey 5-Year Estimates. Base year employment (6,156) estimates for Camden were collected from the US Census Bureau, 2020, LEHD-LODES dataset via the U.S. Census “On the Map” application.

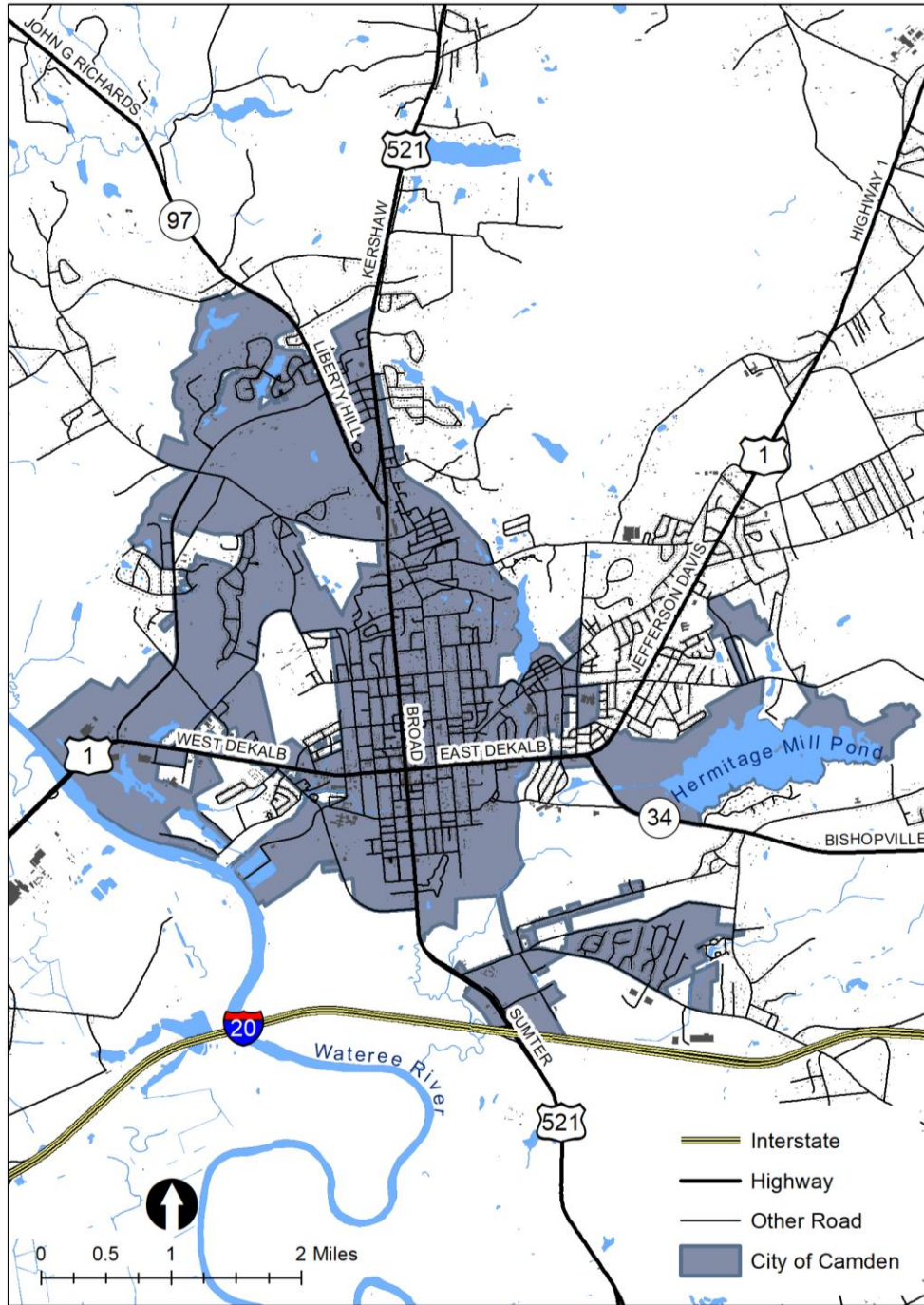
Average persons per household statistics used in the study were based on information published by the US Census Bureau, American Community Survey, 2016-2021 for various dwelling unit categories. Employee space ratios used in the study were based on information published by the Institute of Transportation Engineers in *Trip Generation Manual*, Tenth Edition. Information from both sources is summarized in Appendix B of the report.

SERVICE UNITS

The development impact fee study assumes different service units for the proposed impact fee categories, as follows:

- | | |
|--------------------------------------|--------------------------|
| • Parks and Recreation | Population |
| • Fire Protection | Population and Employees |
| • Municipal Facilities and Equipment | Population and Employees |

Figure 1.1 – Study Area Map



Maximum allowable impact fee schedules, by category, use residential and non-residential uses for reporting results. Statistics were calculated using the service units above and average persons per household or average employee space ratios (as appropriate) assumed for the study area (see Appendix B). The uses included in the maximum allowable impact fee schedules reflect the type of land uses routinely submitted to the City Planning & Development Department for development review.

A note for readers of this report: the calculations presented herein are based on an analysis conducted using Excel software. Many results in this report are rounded to the nearest whole number, sometimes one- or two-digit places are used. All these cases represent rounded figures. However, the analysis itself uses figures carried to their ultimate decimal places; therefore, the sums and products generated in the analysis may not equal the sum or product if the reader replicates the calculation with the factors shown in the report (due to the rounding of figures shown, not in the analysis).

REPORT ORGANIZATION

Each impact fee category considered for the City of Camden is addressed as a separate chapter in the report. For each chapter, a full analysis and resulting maximum allowable impact fee schedule are provided. Impact fee chapters are presented in the following order: parks and recreation, fire protection, and municipal facilities and equipment. Detailed worksheets for each impact fee category are provided in the Appendix of the report.



Chapter 2

Parks & Recreation

The parks and recreation impact fee category includes parkland, recreation facilities, parks and recreation amenities, trails, and open space. This chapter inventories existing park amenities and recreation facilities, estimates replacement costs, and recommends maximum allowable impact fees that could be collected in the City of Camden Study Area (see Chapter 1, Figure 1.1).

METHODOLOGY

The parks and recreation impact fee category assumes a consumption-driven methodology. This approach charges new residential development the cost of replacing existing capacity on a one-for-one basis assuming constant current service delivery standards. Total replacement costs were determined using fee simple land values, site development costs, facility replacement costs, amenity replacement costs, trail system replacement costs, and related professional services. The total replacement value (system-wide) was divided by current population estimates (2021) for the City of Camden Study Area to determine the cost per capita for replacing the facilities and amenities serving current park and recreation users.

The replacement cost per capita was multiplied by average persons per household estimates published in the US Census Bureau, American Community Survey, 2016-2021 to determine the maximum allowable impact fee schedule by dwelling unit category (see Appendix B).

REPLACEMENT VALUE

Replacement values for park amenities and recreation facilities were determined using current estimates for fee simple land value; land lease agreements; site development costs; replacement costs for recreation buildings, recreation amenities, and a walking path; and professional fees. A detailed summary of the cost components included in the analysis is provided below.

Land Value

Property is assessed and appraised by the Kershaw County Assessor and assigned a market value. In one instance, the assessor did not assign a market value to the 57-acre Kendall Lake Park property. In order to estimate the value of this property, the average appraised value of private properties within 500-feet was calculated. This neighborhood-specific estimate was used to approximate the fee simple market value (land value) for Kendall Lake Park under a hypothetical condition where the land was vacant, for sale, and ready to accept development. Based on these estimates, land for all city-owned parks and recreation facilities in the study area was valued at \$7,273,784.

Land Lease Agreements

The City of Camden has one property, Edgewood Park, that is owned by Kershaw County. Park facilities – a basketball court and playground equipment – on the property are owned by the city. A formal lease agreement between the parties does not seem to exist based on information provided to the consultant. Therefore, the land value for replacement of

Edgewood Park in the city's impact fee study was assumed to be zero. There are seven other recreational facilities within the city that are owned and operated by Kershaw County. While available to city residents, they were omitted from this analysis because they are owned and operated by a non-city organization.

Site Development Costs

Site development costs represent incidental expenses incurred by the city for constructing parks, recreation facilities and amenities, and walking trails. Site development costs might include clearing, grading, security lighting, parking, landscaping, or utilities. The amount of site development costs varies greatly from property-to-property based on unique site characteristics.

Historical data was not available to recalculate site development costs associated with existing parks or recreation facilities and amenities in the City of Camden. Therefore, replacement values for parkland, recreation facilities and amenities, and walking trails were factored by 15% to account for associated site development costs. The sole exception to this was for the City's Environmental Park where City staff were able to provide an overall cost for the development of the park that included site development costs. The 15% estimate for all other park locations is consistent with industry standards for pre-planning related activities. Site development costs associated with city-owned parks or recreation facilities and amenities were valued at \$695,561.

Recreation Buildings

Recreation buildings represent heated buildings or structures used for park and recreation needs, including park maintenance. Four recreation buildings were identified at three park locations: Kendall Lake Park, the Tennis Complex at 823 Campbell, and City Arena. In addition, four buildings were identified at the city's maintenance complex that support the maintenance and operation of the city's parks. All four buildings share uses with the Public Works Department or other city functions. Replacement values for the four buildings were adjusted to account for the space allocated to parks and recreation uses. Building replacement costs for all locations were quantified using information published in the *South Carolina Municipal Insurance and Risk Financing Fund for the City of Camden, Property Schedule, Updated in 2022*. Collectively, the replacement value for recreation buildings in the study area was valued at \$1,515,767.

A summary of building replacement values for parks and recreation facilities in the study area is provided in Appendix C of the report.

Park & Recreation Amenities

Park and recreation amenities represent improvements made to support specific uses or activities programmed at each location — ranging from picnic tables to playground equipment to athletic fields and courts. An inventory of park and recreation amenities in the study area is provided in Appendix C of the report.

Replacement costs for the amenities were quantified using information from various sources. The *South Carolina Municipal Insurance and Risk Financing Fund for the City of Camden*, (2022) was used if information was available. Alternatively, amenity costs were estimated using current retail prices for equivalent infrastructure from a web search (e.g., www.theparkcatalog.com). Collectively, the replacement value for park and recreation amenities in the study area was valued at \$3,571,499.

A summary of replacement values for park and recreation amenities in the study area is provided in Appendix C of the report.

Walking, Running, and Multiuse Paths

The city has five paths used for walking, running, or a combination of uses. Scott Park has two: a one-mile asphalt running track and a quarter-mile graded running track. The Sweetgum trail is a two-thirds of a mile shared use path connecting Woodward and Scott Parks. Kendall Park has a half mile walking path. A fifth multiuse path at the City's Environmental Park was developed as a part of the overall park development and its replacement costs were rolled into the replacement costs of the Park's amenities in the previous section of the chapter. Replacement costs for the amenities were quantified using general construction estimates published by the Florida Department of Transportation. These values were deemed comparable for projects in South Carolina. The replacement value for the four paths was estimated to be \$949,806 (see Appendix C).

Professional Services

State enabling legislation allows recovery of certain professional services through impact fees associated with parks or recreation buildings and facilities. Eligible professional services may include: studies and reports, surveys, design plans, legal expenses, permitting, and construction administration. Professional service fees vary greatly based on unique site characteristics. However, city staff assumes 10% of the construction costs for new recreation buildings, park and recreation amenities, and walking paths is a good estimate to represent historical trends. This assumption was carried through for the analysis.

Professional service fee estimates assumed for recreation buildings, park and recreation amenities, and walking paths in the study area are summarized in Appendix C of the report. Collectively, professional service costs associated with existing parks and/or recreation buildings and amenities was valued at \$519,017.

OTHER AVAILABLE FUNDING SOURCES

Non-municipal revenue sources have been used by the city to build existing parks and recreational facilities — including state grants and private donations. Grants or private donations generally represent discretionary, lump-sum funding for specific one-time projects. There is no assurance that previous grant monies or private donations will be made available

again in the future. However, this analysis assumes some growth in the park and recreation system will continue to be funded with other available revenue sources.

For the period between 2012 and 2022, the City of Camden received \$983,993 in grant monies and private donations for improvements to the parks and recreation system. A table summarizing other available revenue sources secured by the city for parkland, amenities, or recreation facilities is provided in Appendix C of the report. This analysis assumes a credit of \$983,994 for the maximum impact fee calculations; representing the average award (\$98,399) per year and a ten-year planning horizon (2022-2032).

TOTAL REPLACEMENT COST

The replacement values noted in this chapter represent the total replacement cost for building again the existing park and recreation system (in 2022 dollars). Offsets applied to the total replacement cost represent other funding sources available for implementing improvements. Based on these assumptions, the net total replacement cost for the existing park and recreation system in the Camden study area is \$13,541,440 as detailed below.

Table 2.1 – Total Replacement Cost Parks and Recreation	
Replacement Category	Cost
Fee Simple Land Value	\$7,273,784
Land Lease Agreement Payments (2022 to 2032)	\$0
Site Development Costs	\$695,561
Recreation Buildings	\$1,515,767
Park & Recreation Amenities	\$3,571,499
Walking/Running/Shared Use Paths	\$949,806
Professional Services	\$519,017
Total Replacement Cost	\$14,525,434
Anticipated Offsets — Grant Funding Forecast (2022 to 2032)	\$983,994
Total Net Replacement Cost	\$13,541,440

COST PER CAPITA

Cost per capita represents a burden to each existing resident in the study area (in 2022 dollars) should the City of Camden have to build again the parks and recreation system using current service delivery standards. This statistic was developed using two factors: 1) net total replacement cost (system-wide) and 2) population estimates (2021) for the City of Camden taken from the 2021 US Census Bureau. A cost per capita for the study area was calculated by dividing the net total replacement cost by the city population estimate:

$$\text{Cost per Capita} = \frac{\text{Total Replacement Cost } (\$13,541,440)}{\text{Population Estimate } (7,574)}$$

Based on this analysis, the calculated cost per capita to replace the existing parks and recreation system is \$1,787.88.

MAXIMUM ALLOWABLE IMPACT FEES

A maximum allowable impact fee schedule was developed to quantify a fair share cost to expand the city's park and recreation system for new residential development. The cost per capita for park and recreation facilities was multiplied by average persons per household estimates published in the US Census Bureau, American Community Survey, 2016-2021 for the various dwelling unit categories to determine recommended maximum allowable impact fees (see Appendix B in the report for household size estimates).

Table 2.2 summarizes recommended maximum allowable impact fees by dwelling unit category to expand the park and recreation system for new residential development based on current service delivery standards.

Table 2.2 – Maximum Allowable Impact Fee Schedule Parks and Recreation			
Land Use Category	Cost per Person	Persons per Household	Max. Allowable Impact Fee
Single Family (Attached or Detached)	\$1,787.88	2.41	\$4,308
Mobile Home	\$1,787.88	1.94	\$3,468
Multifamily (> 2 Dwelling Units)	\$1,787.88	1.52	\$2,717

DISCOUNT RATE

City Council may choose to apply a discount rate to the maximum allowable impact fees presented herein. The discount rate could be used to provide a reasonable fee for continued residential investment or to ensure that impact fees collected for parks and recreation facilities do not exceed the cost of providing capital improvements identified to accommodate new growth. Chapter 5 of the report expands on the notion of discount rates for the City of Camden.



Chapter 3

Fire Protection

The City of Camden Fire Department covers a 50 square mile service area, including all properties within city limits as well as some unincorporated areas in Kershaw County. This chapter inventories existing assets, estimates replacement costs, and recommends maximum allowable impact fees that could be collected in the study area.

METHODOLOGY

The fire protection impact fee category assumes a consumption-driven approach. This approach charges new residential and non-residential development the cost of replacing existing capacity on a one-for-one basis assuming constant current service delivery standards. Total replacement costs were determined using fee simple land values, site development costs, facility replacement costs, vehicle and equipment replacement costs, and related professional services.

The replacement value (system-wide) was calculated in two steps. First, total replacement value was multiplied by the proportionate share of service calls received from residential and non-residential uses. Second, the resulting replacement values for residential and non-residential uses were divided by current population or employment estimates (as appropriate) to determine the cost per capita or cost per employee for replacing fire protection facilities and equipment currently serving the study area.

Cost per capita was converted to cost per dwelling unit category using information published for Camden in the US Census Bureau, American Community Survey, 2016-2021 (see Appendix B). Cost per employee was converted to cost per 1,000 square feet of gross floor area (GFA) using information published in the Institute of Transportation Engineers' *Trip Generation Manual*, Tenth Edition (see Appendix B).

REPLACEMENT VALUE

Replacement value (in 2022 dollars) for fire protection facilities and equipment was determined using current estimates for land value; site development costs; replacement costs for fire protection facilities, vehicles, and equipment; and professional fees. A detailed summary of the cost components included in the analysis is provided below.

Land Value

The city has two fire stations. Station No. 1 is in a shared location with City Hall at 1000 Lyttleton Street. Fire Station No. 2 is located at 2007 Liberty Road. There is also a fire department training facility at 401 Fair Street. Property is typically assessed and appraised by the Kershaw County Assessor and assigned a market value. The assessor did not assign a market value to Station No. 2. In order to estimate the value of this property, the average appraised value of private properties within 500-feet was found. These neighborhood-specific estimates were used to approximate the fee simple market value (land value) for Station No. 2 under a hypothetical condition where the land was vacant, for sale, and ready to accept development. Based on these estimates, land for all fire department properties in the study area was valued at \$276,531.

Fire Protection Facilities

Fire protection facilities include buildings or structures used for fire protection or emergency service needs. Buildings for Station No. 1 and Station No. 2 and a training building were identified in the study area. Building replacement costs for the facilities were quantified using information published in the *South Carolina Municipal Insurance and Risk Financing Fund for the City of Camden, Property Schedule, 2022*. Utilization factors for Station No. 1 were used to isolate areas associated with the work of the fire department versus City Hall. Collectively, the replacement value for fire protection facilities in the study area was valued at \$3,233,365.

A summary of building replacement values for fire protection facilities in the study area is provided in Appendix D of the report.

Site Development Costs

Site development costs represent incidental expenses incurred by the city for constructing fire protection and rescue facilities. Site development costs might include clearing, grading, security lighting, parking, landscaping, utilities, etc. The amount of site development costs varies greatly from property-to-property based on unique site characteristics.

Historical data was not available to recalculate site development costs associated with existing fire protection facilities in the City of Camden. Therefore, replacement values were factored by 15% to account for associated site development costs. This estimate is consistent with industry standards for pre-planning related activities. Based on the above information, site development costs associated with the three fire protection buildings in the study area were valued at \$485,005.

Professional Services

State enabling legislation allows recovery of certain professional services through impact fees associated with land, buildings, or structures to support fire protection facilities. Eligible professional services may include: studies and reports, surveys, design plans, legal expenses, permitting, and construction administration. Professional service fees vary greatly based on unique site characteristics. However, city staff assumes 10% of the construction costs for the three fire protection buildings is a good estimate to represent historical trends.

Professional service fees assumed for fire protection facilities in the study area are summarized in Appendix D of the report. Collectively, professional service costs associated with existing fire protection facilities was valued at \$371,838.

Fire Protection Vehicles & Equipment

Fire protection vehicles and equipment with an individual unit purchase price over \$100,000 were included in the analysis to comply with Section 6-1-920(18)(g) of the South Carolina Development Impact Fee Act. Appendix D of the report inventories eligible fire protection

vehicles and equipment. The total replacement cost for eligible fire protection vehicles and equipment serving the study area is \$3,194,136.

OTHER AVAILABLE FUNDING SOURCES

In the State of South Carolina, it's not uncommon for Fire and Rescue Departments to acquire funding for equipment and facilities from grants or donations. While no grant or donation funding was reported by the City of Camden, the city does have a Project Improvement Fund it can use to purchase fire protection equipment in the future. The funding comes from ad valorem taxes levied on real and personal property. The funds are restricted funds and pay for special projects, grant fund matching, and capital improvements. This analysis assumes some of the growth in fire protection services will be funded through the Project Improvement Fund.

For the period between 2012 and 2022, the City of Camden purchased fire vehicles for a total of \$1,205,000. A table summarizing these purchases through the Project Improvement Fund is provided in Appendix D of the report. This analysis assumes a credit of \$1,205,000 for the maximum impact fee calculations; representing the average award (\$120,500) per year and a ten-year planning horizon (2022-2032).

TOTAL REPLACEMENT COST

Collectively, the replacement values noted in this chapter represent the total replacement cost for rebuilding fire protection facilities or purchasing new, eligible equipment (in 2022 dollars) to maintain current service delivery standards. Based on these assumptions, the net total replacement cost for existing fire protection facilities and eligible equipment in the City of Camden study area is \$6,355,875 detailed in Table 3.1 below.

Table 3.1 – Total Replacement Costs Fire Protection Facilities and Equipment	
Replacement Category	Cost
Land Value	\$276,531
Fire Protection Facilities	\$3,233,365
Site Development Costs	\$485,005
Professional Services	\$371,838
Fire Protection Vehicles & Equipment (> \$100,000)	\$3,194,136
Total Replacement Cost	\$7,560,875
Anticipated Offsets — Grant Funding Forecast (2022-2032)	\$1,205,000
Total Net Replacement Cost	\$6,355,875

FIRE SERVICE CALLS BY LAND USE

The City of Camden responded to 1,926 calls for service in 2022. About 83% of those calls were made to a destination with either a residential or non-residential land use. The remainder (17%) were to a location without a distinct land use (e.g., street or highway incident or mutual aid response). Only calls to residential or non-residential land uses (1,600) were used for the calculations.

Calls to residential uses (1,216) represented 76% of the total eligible call volume. Calls to non-residential uses (384) represented 24% of the total eligible call volume. The proportionate share between residential and non-residential uses to rebuild fire protection facilities and purchase eligible equipment is as follows: residential uses — \$4,830,465 and non-residential uses — \$1,525,410.

COST PER CAPITA

Cost per capita represents a burden to each existing resident in the study area (in 2022 dollars) should the City of Camden have to build again fire protection facilities and replace eligible equipment at current service delivery standards. This statistic was developed using two factors: 1) net total replacement cost (system-wide) attributable to residential uses, and 2) population estimates (2021) for the City of Camden provided by the US Census Bureau. A cost per capita for the study area was calculated by dividing the net total replacement cost attributable to residential uses by the city population estimate:

$$\text{Cost per Capita} = \frac{\text{Total Replacement Cost Attributable to City Residents } (\$4,830,465)}{\text{Population Estimate } (7,574)}$$

Based on this analysis, the calculated cost per capita to replace fire protection facilities and eligible equipment is \$637.77.

COST PER EMPLOYEE

Cost per employee represents a burden to each existing employee in the study area (in 2022 dollars) should the City of Camden have to build again fire protection facilities and replace eligible equipment using current service delivery standards. This statistic was developed using two factors: 1) net total replacement cost (system-wide) attributable to non-residential uses, and 2) employment estimates (2020) for the City of Camden from the US Census Bureau. A cost per employee for the study area was calculated by dividing the net total replacement cost attributable to non-residential uses by the city employment estimate:

$$\text{Cost per Employee} = \frac{\text{Total Replacement Cost Attributable to Employees } (\$1,525,410)}{\text{Employee Estimate } (6,156)}$$

Based on this analysis, the calculated cost per employee to replace fire protection facilities and eligible equipment is \$247.79.

MAXIMUM ALLOWABLE IMPACT FEES

A maximum allowable impact fee schedule was developed to quantify the fair share cost to build fire protection facilities and purchase eligible equipment to serve new development. The cost per capita for fire protection facilities and equipment was multiplied by average persons per household estimates published in the US Census Bureau, American Community Survey, 2016-2021 for various dwelling unit categories to determine recommended maximum allowable impact fees (see Appendix B of the report for household size estimates). The cost per employee for fire protection facilities and equipment was multiplied by employee space ratios developed from information published in the Institute of Transportation Engineers' *Trip Generation Manual*, Tenth Edition to determine recommended maximum allowable impact fees (see Appendix B of the report for employee space ratio estimates).

Table 3.2, starting on page 3-6, summarizes recommended maximum allowable impact fees, by dwelling unit category or non-residential land use category, to build fire protection facilities and purchase eligible equipment to serve new development.

DISCOUNT RATE

City Council may choose to apply a discount rate to the maximum allowable impact fees presented herein. The discount rate could be used to provide a reasonable fee for continued residential or non-residential investment or to ensure that impact fees collected for fire protection facilities and equipment do not exceed the cost of providing capital improvements identified to accommodate new growth. Chapter 5 of the report expands on the notion of discount rates for the City of Camden.

Table 3.2 – Maximum Allowable Impact Fee Schedule for Fire Protection

Land Use Category	Units	Persons per Household	Employee Space Ratio	Cost per Person	Cost per Employee	Max Allowable Impact Fee
Residential Uses						
Single Family (Attached or Detached)	d.u.	2.41	—	\$637.77	—	\$1,537
Mobile Home	d.u.	1.94	—	\$637.77	—	\$1,235
Multifamily (>2 Dwelling Units)	d.u.	1.52	—	\$637.77	—	\$967
Hotel / Motel Uses						
Hotel	room	—	0.58	—	\$247.79	\$143
All Suites Hotel	room	—	0.09	—	\$247.79	\$22
Business Hotel	room	—	0.12	—	\$247.79	\$29
Motel	room	—	0.13	—	\$247.79	\$32
Resort Hotel	room	—	1.92	—	\$247.79	\$475
Recreation						
Golf Driving Range	tee	—	0.25	—	\$247.79	\$61
Movie Theater	1,000 s.f.	—	1.47	—	\$247.79	\$364
Multiplex Movie Theater	1,000 s.f.	—	1.35	—	\$247.79	\$334
Amusement Park	acre	—	9.60	—	\$247.79	\$2,378
Water Slide Park	acre	—	8.99	—	\$247.79	\$2,227
Recreation Community Center	1,000 s.f.	—	1.06	—	\$247.79	\$262
Institutional						
School District Office	1,000 s.f.	—	2.83	—	\$247.79	\$701
Junior/Community College	1,000 s.f.	—	1.39	—	\$247.79	\$344
University/College	1,000 s.f.	—	2.93	—	\$247.79	\$726
Daycare	1,000 s.f.	—	2.23	—	\$247.79	\$552
Cemetery	acre	—	0.12	—	\$247.79	\$29
Prison	1,000 s.f.	—	16.75	—	\$247.79	\$4,150
Museum	1,000 s.f.	—	0.31	—	\$247.79	\$76
Library	1,000 s.f.	—	1.29	—	\$247.79	\$319
Medical						
Hospital	1,000 s.f.	—	2.83	—	\$247.79	\$701
Nursing Home	1,000 s.f.	—	2.28	—	\$247.79	\$564

Table 3.2 – Maximum Allowable Impact Fee Schedule for Fire Protection (cont.)

Land Use Category	Units	Persons per Household	Employee Space Ratio	Cost per Person	Cost per Employee	Max Allowable Impact Fee
Medical (cont.)						
Clinic	1,000 s.f.	—	4.13	—	\$247.79	\$1,023
Animal Hospital/Veterinary Clinic	1,000 s.f.	—	1.69	—	\$247.79	\$418
Medical/Dentist Office	1,000 s.f.	—	4.00	—	\$247.79	\$991
Office						
General Office Building	1,000 s.f.	—	2.97	—	\$247.79	\$735
Small Office Building	1,000 s.f.	—	2.03	—	\$247.79	\$503
Corporate Headquarters	1,000 s.f.	—	3.44	—	\$247.79	\$852
Single Tenant Office Building	1,000 s.f.	—	2.98	—	\$247.79	\$738
Government Office Building	1,000 s.f.	—	3.03	—	\$247.79	\$750
US Post Office	1,000 s.f.	—	1.80	—	\$247.79	\$446
State Motor Vehicles Department	1,000 s.f.	—	4.09	—	\$247.79	\$1,013
Government Office Complex	1,000 s.f.	—	2.56	—	\$247.79	\$634
Office Park	1,000 s.f.	—	3.13	—	\$247.79	\$775
Research and Development Center	1,000 s.f.	—	3.42	—	\$247.79	\$847
Business Park	1,000 s.f.	—	3.08	—	\$247.79	\$763
Retail						
Building Materials/Lumber	1,000 s.f.	—	0.74	—	\$247.79	\$183
Variety Store	1,000 s.f.	—	0.66	—	\$247.79	\$163
Free Standing Discount Store	1,000 s.f.	—	2.16	—	\$247.79	\$535
Hardware Paint Store	1,000 s.f.	—	0.25	—	\$247.79	\$61
Nursery (Garden Center)	1,000 s.f.	—	3.12	—	\$247.79	\$773
Nursery (Wholesale)	1,000 s.f.	—	1.67	—	\$247.79	\$413
Shopping Center	1,000 s.f.	—	2.34	—	\$247.79	\$579
Auto Sales (New)	1,000 s.f.	—	2.49	—	\$247.79	\$616
Auto Sales (Used)	1,000 s.f.	—	2.17	—	\$247.79	\$537
Recreation Vehicle Sales	1,000 s.f.	—	0.63	—	\$247.79	\$156
Automobile Parts Sales	1,000 s.f.	—	1.64	—	\$247.79	\$406
Tire Store	1,000 s.f.	—	1.55	—	\$247.79	\$384
Supermarket	1,000 s.f.	—	1.42	—	\$247.79	\$351

Table 3.2 – Maximum Allowable Impact Fee Schedule for Fire Protection (cont.)

Land Use Category	Units	Persons per Household	Employee Space Ratio	Cost per Person	Cost per Employee	Max Allowable Impact Fee
Retail (cont.)						
Convenience Market	1,000 s.f.	—	1.56	—	\$247.79	\$386
Convenience Market w/ Gas Pumps	1,000 s.f.	—	2.56	—	\$247.79	\$634
Discount Superstore	1,000 s.f.	—	2.25	—	\$247.79	\$557
Discount Club	1,000 s.f.	—	1.30	—	\$247.79	\$322
Sporting Goods Superstore	1,000 s.f.	—	6.48	—	\$247.79	\$1,605
Pharmacy w/ Drive-Through Window	1,000 s.f.	—	1.58	—	\$247.79	\$391
Furniture Store	1,000 s.f.	—	0.58	—	\$247.79	\$143
Beverage Container Recycling Depot	1,000 s.f.	—	0.89	—	\$247.79	\$220
Liquor Store	1,000 s.f.	—	2.86	—	\$247.79	\$708
Industrial						
Intermodal Truck Terminal	1,000 s.f.	—	2.63	—	\$247.79	\$651
General Light Industrial	1,000 s.f.	—	1.63	—	\$247.79	\$403
Industrial Park	1,000 s.f.	—	1.16	—	\$247.79	\$287
Manufacturing	1,000 s.f.	—	1.59	—	\$247.79	\$393
Warehousing	1,000 s.f.	—	0.34	—	\$247.79	\$84
Utility	1,000 s.f.	—	3.22	—	\$247.79	\$797
Specialty Trade Contractor	1,000 s.f.	—	2.75	—	\$247.79	\$681
Services						
Walk-in Bank	1,000 s.f.	—	4.27	—	\$247.79	\$1,058
Drive-in Bank	1,000 s.f.	—	3.15	—	\$247.79	\$780
Copy, Print and Express Ship Store	1,000 s.f.	—	1.86	—	\$247.79	\$386
Quality Restaurant	1,000 s.f.	—	4.63	—	\$247.79	\$1,147
High-Turnover Restaurant	1,000 s.f.	—	5.28	—	\$247.79	\$1,308
Fast-Food w/o Drive-Through Window	1,000 s.f.	—	5.18	—	\$247.79	\$1,283
Fast Food w/ Drive-Through Window	1,000 s.f.	—	10.35	—	\$247.79	\$2,564
Fast-Food w/ Drive-Thru (No Seating)	1,000 s.f.	—	13.36	—	\$247.79	\$3,310
Quick Lubrication Vehicle Shop	1,000 s.f.	—	4.35	—	\$247.79	\$1,077
Automobile Care Center	1,000 s.f.	—	2.45	—	\$247.79	\$607
Automobile Parts and Service Center	1,000 s.f.	—	1.50	—	\$247.79	\$371

Table 3.2 – Maximum Allowable Impact Fee Schedule for Fire Protection (cont.)

Land Use Category	Units	Persons per Household	Employee Space Ratio	Cost per Person	Cost per Employee	Max Allowable Impact Fee
Services (cont.)						
Gas/Service Station	1,000 s.f.	—	4.36	—	\$247.79	\$1,080
Gas/Service Station w/ Convenience	1,000 s.f.	—	5.91	—	\$247.79	\$1,464
Super Convenience w/ Gas	1,000 s.f.	—	3.63	—	\$247.79	\$899



Chapter 4

Municipal Facilities & Equipment

The municipal facilities and equipment impact fee category was defined to include items under the city's public works, police, and government service departments responsible for managing or serving future growth (i.e., planning, building, and permitting departments). This chapter inventories existing assets, estimates replacement costs, and recommends maximum allowable impact fees that could be collected in the City of Camden Study Area (see Chapter 1, Figure 1.1).

METHODOLOGY

The municipal facilities and equipment impact fee category assumes a consumption-driven approach. This approach charges new residential and non-residential development the cost of replacing existing capacity on a one-for-one basis, assuming constant current service delivery standards. Total replacement costs were determined using fee simple land values, site development costs, facility replacement costs, vehicle and equipment replacement costs, and related professional services.

The replacement value (system-wide) was calculated in two steps. First, total replacement value was multiplied by the proportionate share of residents and employees in the study area. Second, the resulting replacement values for residents and employees were divided by current population or employment estimates (as appropriate) to determine the cost per capita or cost per employee for replacing municipal facilities and equipment currently serving the study area.

Cost per capita was converted to cost per dwelling unit category using information published for Camden in the US Census Bureau, American Community Survey, 2016-2021 (see Appendix B). Cost per employee was converted to cost per 1,000 square feet of gross floor area (GFA) using information published in the Institute of Transportation Engineers' *Trip Generation Manual*, Tenth Edition (see Appendix B).

REPLACEMENT VALUE

Replacement value (in 2022 dollars) for municipal facilities and equipment was determined using current estimates for fee simple land value; site development costs; replacement costs for municipal facilities, vehicles, and equipment; and professional fees. A detailed summary of the cost components included in the analysis is provided below.

Land Value

The city's municipal functions are split between three complexes. City hall is located at 1000 Lyttleton St. Next door is the city's maintenance facility. A third property is the city's police station at 816 W Dekalb. All properties were assigned a market value by the Kershaw County Assessor. No property value estimates were required for the impact fee category.

Utilization factors for three sites — city hall, city maintenance complex, and police station — were used to isolate areas associated with the work of departments that typically manage or serve future growth (i.e., public works, police, planning, building, and permitting departments). The city owns additional properties, but these were not deemed to have a direct connection to

the municipal service delivery defined for the impact fee category. Based on these assumptions, land for municipal facilities and equipment storage in the study area was valued at \$317,753.

Municipal Facilities

Municipal facilities represent buildings or structures used for growth-related services and equipment storage needs. Nine buildings were identified in the study area that meet the criteria.

Building replacement costs were quantified using information published in the *South Carolina Municipal Insurance and Risk Financing Fund for the City of Camden, Property Schedule, Updated in 2022*. Utilization factors for the nine buildings were used to isolate areas associated with the work of departments that typically manage or serve future growth (i.e., public works, police, planning, building, and permitting departments). Collectively, the replacement value for municipal facilities in the study area was valued at \$2,268,046.

A summary of building and structure replacement values for municipal facilities in the study area is provided in Appendix E of the report.

Site Development Costs

Site development costs represent incidental expenses incurred by the city for constructing municipal facilities. Site development costs might include clearing, grading, security lighting, parking, landscaping or utilities. The amount of site development costs varies greatly from property-to-property based on unique site characteristics.

Historical data was not available to recalculate site development costs associated with existing municipal facilities in the City of Camden. Therefore, replacement values for municipal facilities were factored by 15% to account for associated site development costs. This estimate is consistent with industry standards for pre-planning related activities. Based on the above information, site development costs to serve municipal facilities and equipment storage locations in the study area were valued at \$340,207.

Professional Services

State enabling legislation allows recovery of certain professional services through impact fees associated with land, buildings, or structures to support municipal facilities. Eligible professional services may include: studies and reports, surveys, design plans, legal expenses, permitting, and construction administration. Professional service fees vary greatly based on unique site characteristics. However, city staff assumes 10% of the construction costs for new municipal facilities is a good estimate to represent historical trends. This assumption was carried through for the analysis.

Professional service fees assumed for municipal facilities in the study area are summarized in Appendix E of the report. Collectively, professional service costs associated with existing municipal facilities was valued at \$260,827.

Municipal Vehicles & Equipment

Only municipal vehicles and equipment with an individual unit purchase price over \$100,000 are included in the analysis to comply with Section 6-1-920(18)(g) of the South Carolina Development Impact Fee Act. Appendix E of the report inventories eligible city-owned municipal vehicles and equipment. The total replacement cost for eligible municipal vehicles and equipment serving the study area is \$1,572,992.

OTHER AVAILABLE FUNDING SOURCES

The city has multiple sources of revenue to fund capital improvements for its municipal services. The city's Project Improvement Fund comes from ad valorem taxes levied on real and personal property. The funds are restricted funds and pay for special projects, grant fund matching, and capital improvements. This analysis assumes some of the growth in municipal facilities and services will be funded through the Project Improvement Fund.

In addition, the public works department collects sanitation fee revenues from residential and non-residential users. An estimated 90% of this revenue covers operating and maintenance costs associated with sanitation services, with the remaining 10% available for capacity-increasing projects or equipment. This analysis assumes some growth in municipal facilities and services will continue to be funded with sanitation fee revenues.

For the period between 2012 and 2022, the public works department received \$700,230 in funding from the Project Improvement Fund for new sanitation vehicles. In 2022, the city also received \$1,219,270 in sanitation fee revenues. Sanitation fee revenues were factored down to represent the percentage of revenue assumed for capital projects (10%): \$121,927.

In total, the analysis assumed a credit of \$1,919,500 for the maximum impact fee calculations; representing an average award of \$191,950 per year and a ten-year planning horizon (2022-2032). A table summarizing other available revenue sources secured by the city for municipal facilities and equipment is provided in Appendix E of the report.

TOTAL REPLACEMENT COST

Collectively, the replacement values noted in this chapter represent the total replacement cost for rebuilding municipal facilities or purchasing new, eligible equipment (in 2022 dollars) to maintain current service delivery standards. Based on these assumptions, the net total replacement cost for existing municipal facilities and eligible equipment in the City of Camden study area is \$2,840,325 detailed in Table 4.1 on page 4-4.

Table 4.1 – Total Replacement Costs Municipal Facilities and Equipment	
Replacement Category	Cost
Land Value	\$317,753
Municipal Facilities	\$2,268,046
Site Development Costs	\$340,207
Professional Services	\$260,827
Municipal Vehicles (> \$100,000)	\$1,572,992
Total Replacement Cost	\$4,759,825
Anticipated Offsets — Grant Funding Forecast (2022-2032)	\$1,919,500
Total Net Replacement Cost	\$2,840,325

CITY RESIDENT / EMPLOYEE RATIO

Information published for the City of Camden study area estimates 7,574 residents and 6,156 employees live or work in the area for the base year 2022. The proportionate share between residents (55%) and employees (45%) to rebuild municipal facilities and purchase eligible equipment is as follows: residents — \$1,562,178 and employees — \$1,278,147.

COST PER CAPITA

Cost per capita represents a burden to each existing resident in the study area (in 2022 dollars) should the City of Camden have to build again municipal facilities and replace eligible equipment at current service delivery standards. This statistic was developed using two factors: 1) net total replacement cost (system-wide) attributable to residents, and 2) population estimates (2021) for the City of Camden provided by the U.S. Census Bureau. A cost per capita for the study area was calculated by dividing the net total replacement cost attributable to residents by the city population estimate:

$$\text{Cost per Capita} = \frac{\text{Total Replacement Cost Attributable to City Residents } (\$1,562,178)}{\text{Population Estimate } (7,574)}$$

Based on this analysis, the calculated cost per capita to replace municipal facilities and eligible equipment is \$206.25.

COST PER EMPLOYEE

Cost per employee represents a burden to each existing employee in the study area (in 2022 dollars) should the City of Camden have to build again municipal facilities and replace eligible equipment at current service delivery standards. This statistic was developed using two factors: 1) net total replacement cost (system-wide) attributable to employees, and 2)

employment estimates (2020) for the City of Camden provided by the U.S. Census Bureau. A cost per employee for the study area was calculated by dividing the net total replacement cost attributable to employees by the city employment estimate:

$$\text{Cost per Employee} = \frac{\text{Total Replacement Cost Attributable to Employees } (\$1,278,147)}{\text{Employee Estimate } (6,156)}$$

Based on this analysis, the calculated cost per employee to replace municipal facilities and eligible equipment is \$207.62.

MAXIMUM ALLOWABLE IMPACT FEES

A maximum allowable impact fee schedule was developed to quantify the fair share cost to build municipal facilities and purchase eligible equipment to serve new development. The cost per capita for municipal facilities and equipment was multiplied by average persons per household estimates published in the US Census Bureau, American Community Survey, 2016-2021 for various dwelling unit categories to determine recommended maximum allowable impact fees (see Appendix B of the report for household size estimates). The cost per employee for municipal facilities and equipment was multiplied by employee space ratios developed from information published in the Institute of Transportation Engineers' *Trip Generation Manual*, Tenth Edition to determine recommended maximum allowable impact fees (see Appendix B of the report for employee space ratio estimates).

Table 4.2, starting on page 4-6, summarizes recommended maximum allowable impact fees, by dwelling unit category or non-residential land use category, to build municipal facilities and purchase eligible equipment to serve new development.

DISCOUNT RATE

City Council may choose to apply a discount rate to the maximum allowable impact fees presented herein. The discount rate could be used to provide a reasonable fee for continued residential or non-residential investment or to ensure that impact fees collected for municipal facilities and equipment do not exceed the cost of providing capital improvements identified to accommodate new growth. Chapter 5 of the report expands on the notion of discount rates for the City of Camden.

Table 4.2 – Maximum Allowable Impact Fee Schedule for Municipal Facilities and Equipment

Land Use Category	Units	Persons per Household	Employee Space Ratio	Cost per Person	Cost per Employee	Max Allowable Impact Fee
Residential Uses						
Single Family (Attached or Detached)	d.u.	2.41	—	\$206.25	—	\$497
Mobile Home	d.u.	1.94	—	\$206.25	—	\$400
Multifamily (>2 Dwelling Units)	d.u.	1.52	—	\$206.25	—	\$313
Hotel / Motel Uses						
Hotel	room	—	0.58	—	\$207.62	\$120
All Suites Hotel	room	—	0.09	—	\$207.62	\$18
Business Hotel	room	—	0.12	—	\$207.62	\$24
Motel	room	—	0.13	—	\$207.62	\$26
Resort Hotel	room	—	1.92	—	\$207.62	\$398
Recreation						
Golf Driving Range	tee	—	0.25	—	\$207.62	\$51
Movie Theater	1,000 s.f.	—	1.47	—	\$207.62	\$305
Multiplex Movie Theater	1,000 s.f.	—	1.35	—	\$207.62	\$280
Amusement Park	acre	—	9.60	—	\$207.62	\$1,993
Water Slide Park	acre	—	8.99	—	\$207.62	\$1,866
Recreation Community Center	1,000 s.f.	—	1.06	—	\$207.62	\$220
Institutional						
School District Office	1,000 s.f.	—	2.83	—	\$207.62	\$587
Junior/Community College	1,000 s.f.	—	1.39	—	\$207.62	\$288
University/College	1,000 s.f.	—	2.93	—	\$207.62	\$608
Daycare	1,000 s.f.	—	2.23	—	\$207.62	\$462
Cemetery	acre	—	0.12	—	\$207.62	\$24
Prison	1,000 s.f.	—	16.75	—	\$207.62	\$3,477
Museum	1,000 s.f.	—	0.31	—	\$207.62	\$64
Library	1,000 s.f.	—	1.29	—	\$207.62	\$267
Medical						
Hospital	1,000 s.f.	—	2.83	—	\$207.62	\$587
Nursing Home	1,000 s.f.	—	2.28	—	\$207.62	\$473

Table 4.2 – Maximum Allowable Impact Fee Schedule for Municipal Facilities and Equipment (cont.)

Land Use Category	Units	Persons per Household	Employee Space Ratio	Cost per Person	Cost per Employee	Max Allowable Impact Fee
Medical (cont.)						
Clinic	1,000 s.f.	—	4.13	—	\$207.62	\$857
Animal Hospital/Veterinary Clinic	1,000 s.f.	—	1.69	—	\$207.62	\$350
Medical/Dentist Office	1,000 s.f.	—	4.00	—	\$207.62	\$830
Office						
General Office Building	1,000 s.f.	—	2.97	—	\$207.62	\$616
Small Office Building	1,000 s.f.	—	2.03	—	\$207.62	\$421
Corporate Headquarters	1,000 s.f.	—	3.44	—	\$207.62	\$714
Single Tenant Office Building	1,000 s.f.	—	2.98	—	\$207.62	\$618
Government Office Building	1,000 s.f.	—	3.03	—	\$207.62	\$629
US Post Office	1,000 s.f.	—	1.80	—	\$207.62	\$373
State Motor Vehicles Department	1,000 s.f.	—	4.09	—	\$207.62	\$849
Government Office Complex	1,000 s.f.	—	2.56	—	\$207.62	\$531
Office Park	1,000 s.f.	—	3.13	—	\$207.62	\$649
Research and Development Center	1,000 s.f.	—	3.42	—	\$207.62	\$710
Business Park	1,000 s.f.	—	3.08	—	\$207.62	\$639
Retail						
Building Materials/Lumber	1,000 s.f.	—	0.74	—	\$207.62	\$153
Variety Store	1,000 s.f.	—	0.66	—	\$207.62	\$137
Free Standing Discount Store	1,000 s.f.	—	2.16	—	\$207.62	\$448
Hardware Paint Store	1,000 s.f.	—	0.25	—	\$207.62	\$51
Nursery (Garden Center)	1,000 s.f.	—	3.12	—	\$207.62	\$647
Nursery (Wholesale)	1,000 s.f.	—	1.67	—	\$207.62	\$346
Shopping Center	1,000 s.f.	—	2.34	—	\$207.62	\$485
Auto Sales (New)	1,000 s.f.	—	2.49	—	\$207.62	\$516
Auto Sales (Used)	1,000 s.f.	—	2.17	—	\$207.62	\$450
Recreation Vehicle Sales	1,000 s.f.	—	0.63	—	\$207.62	\$130
Automobile Parts Sales	1,000 s.f.	—	1.64	—	\$207.62	\$340
Tire Store	1,000 s.f.	—	1.55	—	\$207.62	\$321
Supermarket	1,000 s.f.	—	1.42	—	\$207.62	\$294

Table 4.2 – Maximum Allowable Impact Fee Schedule for Municipal Facilities and Equipment (cont.)

Land Use Category	Units	Persons per Household	Employee Space Ratio	Cost per Person	Cost per Employee	Max Allowable Impact Fee
Retail (cont.)						
Convenience Market	1,000 s.f.	—	1.56	—	\$207.62	\$323
Convenience Market w/ Gas Pumps	1,000 s.f.	—	2.56	—	\$207.62	\$531
Discount Superstore	1,000 s.f.	—	2.25	—	\$207.62	\$467
Discount Club	1,000 s.f.	—	1.30	—	\$207.62	\$269
Sporting Goods Superstore	1,000 s.f.	—	6.48	—	\$207.62	\$1,345
Pharmacy w/ Drive-Through Window	1,000 s.f.	—	1.58	—	\$207.62	\$328
Furniture Store	1,000 s.f.	—	0.58	—	\$207.62	\$120
Beverage Container Recycling Depot	1,000 s.f.	—	0.89	—	\$207.62	\$184
Liquor Store	1,000 s.f.	—	2.86	—	\$207.62	\$593
Industrial						
Intermodal Truck Terminal	1,000 s.f.	—	2.63	—	\$207.62	\$546
General Light Industrial	1,000 s.f.	—	1.63	—	\$207.62	\$338
Industrial Park	1,000 s.f.	—	1.16	—	\$207.62	\$240
Manufacturing	1,000 s.f.	—	1.59	—	\$207.62	\$330
Warehousing	1,000 s.f.	—	0.34	—	\$207.62	\$70
Utility	1,000 s.f.	—	3.22	—	\$207.62	\$668
Specialty Trade Contractor	1,000 s.f.	—	2.75	—	\$207.62	\$570
Services						
Walk-in Bank	1,000 s.f.	—	4.27	—	\$207.62	\$886
Drive-in Bank	1,000 s.f.	—	3.15	—	\$207.62	\$654
Copy, Print and Express Ship Store	1,000 s.f.	—	1.86	—	\$207.62	\$386
Quality Restaurant	1,000 s.f.	—	4.63	—	\$207.62	\$961
High-Turnover Restaurant	1,000 s.f.	—	5.28	—	\$207.62	\$1,096
Fast-Food w/o Drive-Through Window	1,000 s.f.	—	5.18	—	\$207.62	\$1,075
Fast Food w/ Drive-Through Window	1,000 s.f.	—	10.35	—	\$207.62	\$2,148
Fast-Food w/ Drive-Thru (No Seating)	1,000 s.f.	—	13.36	—	\$207.62	\$2,773
Quick Lubrication Vehicle Shop	1,000 s.f.	—	4.35	—	\$207.62	\$903
Automobile Care Center	1,000 s.f.	—	2.45	—	\$207.62	\$508
Automobile Parts and Service Center	1,000 s.f.	—	1.50	—	\$207.62	\$311

Table 4.2 – Maximum Allowable Impact Fee Schedule for Municipal Facilities and Equipment (cont.)

	Units	Persons per Household	Employee Space Ratio	Cost per Person	Cost per Employee	Max Allowable Impact Fee
Gasoline/Service Station	1,000 s.f.	—	4.36	—	\$207.62	\$905
Gasoline/Service Station with Convenience Market	1,000 s.f.	—	5.91	—	\$207.62	\$1,227
Super Convenience Market/Gas Station	1,000 s.f.	—	3.63	—	\$207.62	\$753



Chapter 5

Discount Rates

Significant growth and development in the Camden Study Area (see Chapter 1, Figure 1.1) is expected to continue through 2032, which will likely overburden existing parks and recreation facilities, fire protection services, and municipal facilities and equipment beyond current service delivery standards or maximum service capacities. Therefore, it is appropriate to implement a development impact fee program to mitigate a proportionate share of the anticipated future deficiencies associated with new growth.

DISCOUNT RATE

Maximum allowable impact fees may be adopted at less than 100% of the amounts presented in previous chapters. Typically, the elected body will apply a discount rate to provide a reasonable fee for continued residential or non-residential investment or to ensure that impact fees collected for the various categories do not exceed the cost of providing recommended capital improvements. The study recommends a discount rate be applied to the maximum allowable impact fees presented in the report. The discount rate does not need to be the same across all three impact fee categories; however, a discount rate for any one impact category must be applied uniformly across all the land use categories represented in the schedule.

Tables 5.1 through 5.4 provide a comparison of different impact fee amounts that may be collected in the City of Camden under a set of hypothetical discount rates. Ultimately, the discount rate applied to maximum allowable impact fees will be a policy decision of City Council.

Table 5.1 – Discount Rate Comparison Table # Parks & Recreation						
Land Use Category	Units	Max	0%	25%	50%	75%
Single Family (Attached or Detached)	d.u.	\$4,308	\$4,308	\$3,231	\$2,154	\$1,077
Multifamily (>2 Dwelling Units)	d.u.	\$2,717	\$2,717	\$2,037	\$1,358	\$679

Note:

= Hypothetical impact fees presented in Table 5.1 were calculated as Maximum Allowable Impact Fee x (1 – discount rate).

Table 5.2 – Discount Rate Comparison Table # Fire Protection						
Land Use Category	Units	Max	0%	25%	50%	75%
Single Family (Attached or Detached)	d.u.	\$1,537	\$1,537	\$1,152	\$768	\$384
Multifamily (>2 Dwelling Units)	d.u.	\$969	\$969	\$726	\$484	\$242
General Office Building	1,000 s.f.	\$735	\$735	\$551	\$367	\$183
Shopping Center	1,000 s.f.	\$579	\$579	\$434	\$289	\$144
General Light Industrial	1,000 s.f.	\$403	\$403	\$302	\$201	\$100

Note:

= Hypothetical impact fees presented in Table 5.2 were calculated as Maximum Allowable Impact Fee x (1 – discount rate).

Table 5.3 – Discount Rate Comparison Table # Municipal Facilities & Equipment						
Land Use Category	Units	Max	0%	25%	50%	75%
Single Family (Attached or Detached)	d.u.	\$497	\$497	\$372	\$248	\$124
Multifamily (>2 Dwelling Units)	d.u.	\$313	\$313	\$234	\$156	\$78
General Office Building	1,000 s.f.	\$616	\$616	\$462	\$308	\$154
Shopping Center	1,000 s.f.	\$485	\$485	\$363	\$242	\$121
General Light Industrial	1,000 s.f.	\$338	\$338	\$253	\$169	\$84

Note:

= Hypothetical impact fees presented in Table 5.3 were calculated as Maximum Allowable Impact Fee x (1 – discount rate).

Table 5.4 – Discount Rate Comparison Table # All Impact Fee Categories Combined						
Land Use Category	Units	Max	0%	25%	50%	75%
Single Family (Attached or Detached)	d.u.	\$6,342	\$6,342	\$4,755	\$3,170	\$1,585
Multifamily (>2 Dwelling Units)	d.u.	\$3,999	\$3,999	\$2,997	\$1,998	\$999
General Office Building	1,000 s.f.	\$1,351	\$1,351	\$1,013	\$675	\$337
Shopping Center	1,000 s.f.	\$1,064	\$1,064	\$797	\$531	\$265
General Light Industrial	1,000 s.f.	\$741	\$741	\$555	\$370	\$184

Note:

= Hypothetical impact fees presented in Table 5.4 were calculated as Maximum Allowable Impact Fee x (1 – discount rate).



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Appendix B — US Census Data & ITE Employee Space Ratio Calculations

Appendix C — Parks & Recreation Inventory & Analysis Tables

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Title 6 – Local Government

Provisions Applicable to Special Purpose Districts and Other Political Subdivisions

[downloaded from South Carolina Legislature website on October 5, 2021]
<https://www.scstatehouse.gov/code/title6.php>

CHAPTER 1 General Provisions

ARTICLE 9 Development Impact Fees

SECTION 6-1-910. Short title.

This article may be cited as the "South Carolina Development Impact Fee Act".

HISTORY: 1999 Act No. 118, Section 1.

SECTION 6-1-920. Definitions.

As used in this article:

(1) "Affordable housing" means housing affordable to families whose incomes do not exceed eighty percent of the median income for the service area or areas within the jurisdiction of the governmental entity.

(2) "Capital improvements" means improvements with a useful life of five years or more, by new construction or other action, which increase or increased the service capacity of a public facility.

(3) "Capital improvements plan" means a plan that identifies capital improvements for which development impact fees may be used as a funding source.

(4) "Connection charges" and "hookup charges" mean charges for the actual cost of connecting a property to a public water or public sewer system, limited to labor and materials involved in making pipe connections, installation of water meters, and other actual costs.

(5) "Developer" means an individual or corporation, partnership, or other entity undertaking development.

(6) "Development" means construction or installation of a new building or structure, or a change in use of a building or structure, any of which creates additional demand and need for public facilities. A building or structure shall include, but not be limited to, modular buildings and manufactured housing. "Development" does not include alterations made to existing single-family homes.

(7) "Development approval" means a document from a governmental entity which authorizes the commencement of a development.

(8) "Development impact fee" or "impact fee" means a payment of money imposed as a condition of development approval to pay a proportionate share of the cost of system improvements needed to serve the people utilizing the improvements. The term does not include:

(a) a charge or fee to pay the administrative, plan review, or inspection costs associated with permits required for development;

(b) connection or hookup charges;

(c) amounts collected from a developer in a transaction in which the governmental entity has incurred expenses in constructing capital improvements for the development if the owner or developer has agreed to be financially responsible for the construction or installation of the capital improvements;

(d) fees authorized by Article 3 of this chapter.

(9) "Development permit" means a permit issued for construction on or development of land when no subsequent building permit issued pursuant to Chapter 9 of Title 6 is required.

(10) "Fee payor" means the individual or legal entity that pays or is required to pay a development impact fee.

(11) "Governmental entity" means a county, as provided in Chapter 9, Title 4, and a municipality, as defined in Section 5-1-20.

(12) "Incidental benefits" are benefits which accrue to a property as a secondary result or as a minor consequence of the provision of public facilities to another property.

(13) "Land use assumptions" means a description of the service area and projections of land uses, densities, intensities, and population in the service area over at least a ten-year period.

(14) "Level of service" means a measure of the relationship between service capacity and service demand for public facilities.

(15) "Local planning commission" means the entity created pursuant to Article 1, Chapter 29, Title 6.

(16) "Project" means a particular development on an identified parcel of land.

(17) "Proportionate share" means that portion of the cost of system improvements determined pursuant to Section 6-1-990 which reasonably relates to the service demands and needs of the project.

(18) "Public facilities" means:

(a) water supply production, treatment, laboratory, engineering, administration, storage, and transmission facilities;

(b) wastewater collection, treatment, laboratory, engineering, administration, and disposal facilities;

(c) solid waste and recycling collection, treatment, and disposal facilities;

(d) roads, streets, and bridges including, but not limited to, rights-of-way and traffic signals;

(e) storm water transmission, retention, detention, treatment, and disposal facilities and flood control facilities;

(f) public safety facilities, including law enforcement, fire, emergency medical and rescue, and street lighting facilities;

(g) capital equipment and vehicles, with an individual unit purchase price of not less than one hundred thousand dollars including, but not limited to, equipment and vehicles used in the delivery of public safety services, emergency preparedness services, collection and disposal of solid waste, and storm water management and control;

(h) parks, libraries, and recreational facilities;

(i) public education facilities for grades K-12 including, but not limited to, schools, offices, classrooms, parking areas, playgrounds, libraries, cafeterias, gymnasiums, health and music rooms, computer and science laboratories, and other facilities considered necessary for the proper public education of the state's children.

(19) "Service area" means, based on sound planning or engineering principles, or both, a defined geographic area in which specific public facilities provide service to development within the area defined. Provided, however, that no provision in this article may be interpreted to alter, enlarge, or reduce the service area or boundaries of a political subdivision which is authorized or set by law.

(20) "Service unit" means a standardized measure of consumption, use, generation, or discharge attributable to an individual unit of development calculated in accordance with generally accepted engineering or planning standards for a particular category of capital improvements.

(21) "System improvements" means capital improvements to public facilities which are designed to provide service to a service area.

(22) "System improvement costs" means costs incurred for construction or reconstruction of system improvements, including design, acquisition, engineering, and other costs attributable to the improvements, and also including the costs of providing additional public facilities needed to serve new growth and development. System improvement costs do not include:

(a) construction, acquisition, or expansion of public facilities other than capital improvements identified in the capital improvements plan;

(b) repair, operation, or maintenance of existing or new capital improvements;

(c) upgrading, updating, expanding, or replacing existing capital improvements to serve existing development in order to meet stricter safety, efficiency, environmental, or regulatory standards;

(d) upgrading, updating, expanding, or replacing existing capital improvements to provide better service to existing development;

- (e) administrative and operating costs of the governmental entity; or
- (f) principal payments and interest or other finance charges on bonds or other indebtedness except financial obligations issued by or on behalf of the governmental entity to finance capital improvements identified in the capital improvements plan.

HISTORY: 1999 Act No. 118, Section 1; 2016 Act No. 229 (H.4416), Section 2, eff June 3, 2016.

Effect of Amendment

2016 Act No. 229, Section 2, added (18)(i), relating to certain public education facilities.

SECTION 6-1-930. Developmental impact fee.

(A)(1) Only a governmental entity that has a comprehensive plan, as provided in Chapter 29 of this title, and which complies with the requirements of this article may impose a development impact fee. If a governmental entity has not adopted a comprehensive plan, but has adopted a capital improvements plan which substantially complies with the requirements of Section 6-1-960(B), then it may impose a development impact fee. A governmental entity may not impose an impact fee, regardless of how it is designated, except as provided in this article. However, a special purpose district or public service district which (a) provides fire protection services or recreation services, (b) was created by act of the General Assembly prior to 1973, and (c) had the power to impose development impact fees prior to the effective date of this section is not prohibited from imposing development impact fees.

(2) Before imposing a development impact fee on residential units, a governmental entity shall prepare a report which estimates the effect of recovering capital costs through impact fees on the availability of affordable housing within the political jurisdiction of the governmental entity.

(B)(1) An impact fee may be imposed and collected by the governmental entity only upon the passage of an ordinance approved by a positive majority, as defined in Article 3 of this chapter.

(2) The amount of the development impact fee must be based on actual improvement costs or reasonable estimates of the costs, supported by sound engineering studies.

(3) An ordinance authorizing the imposition of a development impact fee must:

(a) establish a procedure for timely processing of applications for determinations by the governmental entity of development impact fees applicable to all property subject to impact fees and for the timely processing of applications for individual assessment of development impact fees, credits, or reimbursements allowed or paid under this article;

(b) include a description of acceptable levels of service for system improvements; and

(c) provide for the termination of the impact fee.

(C) A governmental entity shall prepare and publish an annual report describing the amount of all impact fees collected, appropriated, or spent during the preceding year by category of public facility and service area.

(D) Payment of an impact fee may result in an incidental benefit to property owners or developers within the service area other than the fee payor, except that an impact fee that results in benefits to property owners or developers within the service area, other than the fee payor, in an amount which is greater than incidental benefits is prohibited.

HISTORY: 1999 Act No. 118, Section 1.

SECTION 6-1-940. Amount of impact fee.

A governmental entity imposing an impact fee must provide in the impact fee ordinance the amount of impact fee due for each unit of development in a project for which an individual building permit or certificate of occupancy is issued. The governmental entity is bound by the amount of impact fee specified in the ordinance and may not charge higher or additional impact fees for the same purpose unless the number of service units increases or the scope of the development changes and the amount of additional impact fees is limited to the amount attributable to the additional service units or change in scope of the development. The impact fee ordinance must:

- (1) include an explanation of the calculation of the impact fee, including an explanation of the factors considered pursuant to this article;
- (2) specify the system improvements for which the impact fee is intended to be used;
- (3) inform the developer that he may pay a project's proportionate share of system improvement costs by payment of impact fees according to the fee schedule as full and complete payment of the developer's proportionate share of system improvements costs;
- (4) inform the fee payor that:
 - (a) he may negotiate and contract for facilities or services with the governmental entity in lieu of the development impact fee as defined in Section 6-1-1050;
 - (b) he has the right of appeal, as provided in Section 6-1-1030;
 - (c) the impact fee must be paid no earlier than the time of issuance of the building permit or issuance of a development permit if no building permit is required.

HISTORY: 1999 Act No. 118, Section 1.

SECTION 6-1-950. Procedure for adoption of ordinance imposing impact fees.

(A) The governing body of a governmental entity begins the process for adoption of an ordinance imposing an impact fee by enacting a resolution directing the local planning commission to conduct the studies and to recommend an impact fee ordinance, developed in accordance with the requirements of this article. Under no circumstances may the governing body of a governmental entity impose an impact fee for any public facility which has been paid for entirely by the developer.

(B) Upon receipt of the resolution enacted pursuant to subsection (A), the local planning commission shall develop, within the time designated in the resolution, and make recommendations to the governmental entity for a capital improvements plan and impact fees by service unit. The local planning commission shall prepare and adopt its recommendations in the same manner and using the same procedures as those used for developing recommendations for a comprehensive plan as provided in Article 3, Chapter 29, Title 6, except as otherwise provided in this article. The commission shall review and update the capital improvements plan and impact fees in the same manner and on the same review cycle as the governmental entity's comprehensive plan or elements of it.

HISTORY: 1999 Act No. 118, Section 1.

SECTION 6-1-960. Recommended capital improvements plan; notice; contents of plan.

(A) The local planning commission shall recommend to the governmental entity a capital improvements plan which may be adopted by the governmental entity by ordinance. The recommendations of the commission are not binding on the governmental entity, which may amend or alter the plan. After reasonable public notice, a public hearing must be held before final action to adopt the ordinance approving the capital improvements plan. The notice must be published not less than thirty days before the time of the hearing in at least one newspaper of general circulation in the county. The notice must advise the public of the time and place of the hearing, that a copy of the capital improvements plan is available for public inspection in the offices of the governmental entity, and that members of the public will be given an opportunity to be heard.

(B) The capital improvements plan must contain:

(1) a general description of all existing public facilities, and their existing deficiencies, within the service area or areas of the governmental entity, a reasonable estimate of all costs, and a plan to develop the funding resources, including existing sources of revenues, related to curing the existing deficiencies including, but not limited to, the upgrading, updating, improving, expanding, or replacing of these facilities to meet existing needs and usage;

(2) an analysis of the total capacity, the level of current usage, and commitments for usage of capacity of existing public facilities, which must be prepared by a qualified professional using generally accepted principles and professional standards;

- (3) a description of the land use assumptions;
 - (4) a definitive table establishing the specific service unit for each category of system improvements and an equivalency or conversion table establishing the ratio of a service unit to various types of land uses, including residential, commercial, agricultural, and industrial, as appropriate;
 - (5) a description of all system improvements and their costs necessitated by and attributable to new development in the service area, based on the approved land use assumptions, to provide a level of service not to exceed the level of service currently existing in the community or service area, unless a different or higher level of service is required by law, court order, or safety consideration;
 - (6) the total number of service units necessitated by and attributable to new development within the service area based on the land use assumptions and calculated in accordance with generally accepted engineering or planning criteria;
 - (7) the projected demand for system improvements required by new service units projected over a reasonable period of time not to exceed twenty years;
 - (8) identification of all sources and levels of funding available to the governmental entity for the financing of the system improvements; and
 - (9) a schedule setting forth estimated dates for commencing and completing construction of all improvements identified in the capital improvements plan.
- (C) Changes in the capital improvements plan must be approved in the same manner as approval of the original plan.

HISTORY: 1999 Act No. 118, Section 1.

SECTION 6-1-970. Exemptions from impact fees.

The following structures or activities are exempt from impact fees:

- (1) rebuilding the same amount of floor space of a structure that was destroyed by fire or other catastrophe;
- (2) remodeling or repairing a structure that does not result in an increase in the number of service units;
- (3) replacing a residential unit, including a manufactured home, with another residential unit on the same lot, if the number of service units does not increase;
- (4) placing a construction trailer or office on a lot during the period of construction on the lot;
- (5) constructing an addition on a residential structure which does not increase the number of service units;
- (6) adding uses that are typically accessory to residential uses, such as a tennis court or a clubhouse, unless it is demonstrated clearly that the use creates a significant impact on the system's capacity;
- (7) all or part of a particular development project if:
 - (a) the project is determined to create affordable housing; and
 - (b) the exempt development's proportionate share of system improvements is funded through a revenue source other than development impact fees;
- (8) constructing a new elementary, middle, or secondary school; and
- (9) constructing a new volunteer fire department.

HISTORY: 1999 Act No. 118, Section 1; 2016 Act No. 229 (H.4416), Section 1, eff June 3, 2016.

Effect of Amendment

2016 Act No. 229, Section 1, added (8) and (9), relating to certain schools and volunteer fire departments.

SECTION 6-1-980. Calculation of impact fees.

(A) The impact fee for each service unit may not exceed the amount determined by dividing the costs of the capital improvements by the total number of projected service units that potentially could use the capital improvement. If the number of new service units projected over a reasonable period of time is less than the total number of new service units shown by the approved land use assumptions at full development of the service area, the maximum impact fee for each service unit must be calculated by dividing the costs of the

part of the capital improvements necessitated by and attributable to the projected new service units by the total projected new service units.

(B) An impact fee must be calculated in accordance with generally accepted accounting principles.

HISTORY: 1999 Act No. 118, Section 1.

SECTION 6-1-990. Maximum impact fee; proportionate share of costs of improvements to serve new development.

(A) The impact fee imposed upon a fee payor may not exceed a proportionate share of the costs incurred by the governmental entity in providing system improvements to serve the new development. The proportionate share is the cost attributable to the development after the governmental entity reduces the amount to be imposed by the following factors:

(1) appropriate credit, offset, or contribution of money, dedication of land, or construction of system improvements; and

(2) all other sources of funding the system improvements including funds obtained from economic development incentives or grants secured which are not required to be repaid.

(B) In determining the proportionate share of the cost of system improvements to be paid, the governmental entity imposing the impact fee must consider the:

(1) cost of existing system improvements resulting from new development within the service area or areas;

(2) means by which existing system improvements have been financed;

(3) extent to which the new development contributes to the cost of system improvements;

(4) extent to which the new development is required to contribute to the cost of existing system improvements in the future;

(5) extent to which the new development is required to provide system improvements, without charge to other properties within the service area or areas;

(6) time and price differentials inherent in a fair comparison of fees paid at different times; and

(7) availability of other sources of funding system improvements including, but not limited to, user charges, general tax levies, intergovernmental transfers, and special taxation.

HISTORY: 1999 Act No. 118, Section 1.

SECTION 6-1-1000. Fair compensation or reimbursement of developers for costs, dedication of land or oversize facilities.

A developer required to pay a development impact fee may not be required to pay more than his proportionate share of the costs of the project, including the payment of money or contribution or dedication of land, or to oversize his facilities for use of others outside of the project without fair compensation or reimbursement.

HISTORY: 1999 Act No. 118, Section 1.

SECTION 6-1-1010. Accounting; expenditures.

(A) Revenues from all development impact fees must be maintained in one or more interest-bearing accounts. Accounting records must be maintained for each category of system improvements and the service area in which the fees are collected. Interest earned on development impact fees must be considered funds of the account on which it is earned, and must be subject to all restrictions placed on the use of impact fees pursuant to the provisions of this article.

(B) Expenditures of development impact fees must be made only for the category of system improvements and within or for the benefit of the service area for which the impact fee was imposed as shown by the capital improvements plan and as authorized in this article. Impact fees may not be used for:

- (1) a purpose other than system improvement costs to create additional improvements to serve new growth;
- (2) a category of system improvements other than that for which they were collected; or
- (3) the benefit of service areas other than the area for which they were imposed.

HISTORY: 1999 Act No. 118, Section 1.

SECTION 6-1-1020. Refunds of impact fees.

(A) An impact fee must be refunded to the owner of record of property on which a development impact fee has been paid if:

(1) the impact fees have not been expended within three years of the date they were scheduled to be expended on a first-in, first-out basis; or

(2) a building permit or permit for installation of a manufactured home is denied.

(B) When the right to a refund exists, the governmental entity shall send a refund to the owner of record within ninety days after it is determined by the entity that a refund is due.

(C) A refund must include the pro rata portion of interest earned while on deposit in the impact fee account.

(D) A person entitled to a refund has standing to sue for a refund pursuant to this article if there has not been a timely payment of a refund pursuant to subsection (B) of this section.

HISTORY: 1999 Act No. 118, Section 1.

SECTION 6-1-1030. Appeals.

(A) A governmental entity which adopts a development impact fee ordinance shall provide for administrative appeals by the developer or fee payor.

(B) A fee payor may pay a development impact fee under protest. A fee payor making the payment is not estopped from exercising the right of appeal provided in this article, nor is the fee payor estopped from receiving a refund of an amount considered to have been illegally collected. Instead of making a payment of an impact fee under protest, a fee payor, at his option, may post a bond or submit an irrevocable letter of credit for the amount of impact fees due, pending the outcome of an appeal.

(C) A governmental entity which adopts a development impact fee ordinance shall provide for mediation by a qualified independent party, upon voluntary agreement by both the fee payor and the governmental entity, to address a disagreement related to the impact fee for proposed development. Participation in mediation does not preclude the fee payor from pursuing other remedies provided for in this section or otherwise available by law.

HISTORY: 1999 Act No. 118, Section 1.

SECTION 6-1-1040. Collection of development impact fees.

A governmental entity may provide in a development impact fee ordinance the method for collection of development impact fees including, but not limited to:

- (1) additions to the fee for reasonable interest and penalties for nonpayment or late payment;
- (2) withholding of the certificate of occupancy, or building permit if no certificate of occupancy is required, until the development impact fee is paid;
- (3) withholding of utility services until the development impact fee is paid; and
- (4) imposing liens for failure to pay timely a development impact fee.

HISTORY: 1999 Act No. 118, Section 1.

SECTION 6-1-1050. Permissible agreements for payments or construction or installation of improvements by fee payors and developers; credits and reimbursements.

A fee payor and developer may enter into an agreement with a governmental entity, including an agreement entered into pursuant to the South Carolina Local Government Development Agreement Act, providing for payments instead of impact fees for facilities or services. That agreement may provide for the construction or installation of system improvements by the fee payor or developer and for credits or reimbursements for costs incurred by a fee payor or developer including interproject transfers of credits or reimbursement for project improvements which are used or shared by more than one development project. An impact fee may not be imposed on a fee payor or developer who has entered into an agreement as described in this section.

HISTORY: 1999 Act No. 118, Section 1.

SECTION 6-1-1060. Article shall not affect existing laws.

(A) The provisions of this article do not repeal existing laws authorizing a governmental entity to impose fees or require contributions or property dedications for capital improvements. A development impact fee adopted in accordance with existing laws before the enactment of this article is not affected until termination of the development impact fee. A subsequent change or reenactment of the development impact fee must comply with the provisions of this article. Requirements for developers to pay in whole or in part for system improvements may be imposed by governmental entities only by way of impact fees imposed pursuant to the ordinance.

(B) Notwithstanding another provision of this article, property for which a valid building permit or certificate of occupancy has been issued or construction has commenced before the effective date of a development impact fee ordinance is not subject to additional development impact fees.

HISTORY: 1999 Act No. 118, Section 1.

SECTION 6-1-1070. Shared funding among units of government; agreements.

(A) If the proposed system improvements include the improvement of public facilities under the jurisdiction of another unit of government including, but not limited to, a special purpose district that does not provide water and wastewater utilities, a school district, and a public service district, an agreement between the governmental entity and other unit of government must specify the reasonable share of funding by each unit. The governmental entity authorized to impose impact fees may not assume more than its reasonable share of funding joint improvements, nor may another unit of government which is not authorized to impose impact fees do so unless the expenditure is pursuant to an agreement under Section 6-1-1050 of this section.

(B) A governmental entity may enter into an agreement with another unit of government including, but not limited to, a special purpose district that does not provide water and wastewater utilities, a school district, and a public service district, that has the responsibility of providing the service for which an impact fee may be imposed. The determination of the amount of the impact fee for the contracting governmental entity must be made in the same manner and is subject to the same procedures and limitations as provided in this article. The agreement must provide for the collection of the impact fee by the governmental entity and for the expenditure of the impact fee by another unit of government including, but not limited to, a special purpose district that does not provide water and wastewater utilities, a school district, and a public services district unless otherwise provided by contract.

HISTORY: 1999 Act No. 118, Section 1.

SECTION 6-1-1080. Exemptions; water or wastewater utilities.

The provisions of this chapter do not apply to a development impact fee for water or wastewater utilities, or both, imposed by a city, county, commissioners of public works, special purpose district, or nonprofit corporation organized pursuant to Chapter 35 or 36 of Title 33, except that in order to impose a development

impact fee for water or wastewater utilities, or both, the city, county, commissioners of public works, special purpose district or nonprofit corporation organized pursuant to Chapter 35 or 36 of Title 33 must:

- (1) have a capital improvements plan before imposition of the development impact fee; and
- (2) prepare a report to be made public before imposition of the development impact fee, which shall include, but not be limited to, an explanation of the basis, use, calculation, and method of collection of the development impact fee; and
- (3) enact the fee in accordance with the requirements of Article 3 of this chapter.

HISTORY: 1999 Act No. 118, Section 1.

SECTION 6-1-1090. Annexations by municipalities.

A county development impact fee ordinance imposed in an area which is annexed by a municipality is not affected by this article until the development impact fee terminates, unless the municipality assumes any liability which is to be paid with the impact fee revenue.

HISTORY: 1999 Act No. 118, Section 1.

SECTION 6-1-2000. Taxation or revenue authority by political subdivisions.

This article shall not create, grant, or confer any new or additional taxing or revenue raising authority to a political subdivision which was not specifically granted to that entity by a previous act of the General Assembly.

HISTORY: 1999 Act No. 118, Section 1.

SECTION 6-1-2010. Compliance with public notice or public hearing requirements.

Compliance with any requirement for public notice or public hearing in this article is considered to be in compliance with any other public notice or public hearing requirement otherwise applicable including, but not limited to, the provisions of Chapter 4, Title 30, and Article 3 of this chapter.

HISTORY: 1999 Act No. 118, Section 1.



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Land Use: 030

Intermodal Truck Terminal

Description

An intermodal truck terminal is a facility where goods are transferred between trucks, between trucks and railroads, or between trucks and ports.

Additional Data

The average numbers of person trips per vehicle trip at the six general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.09 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.04 during Weekday, AM Peak Hour of Generator
- 1.06 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.07 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1990s and the 2010s in Alberta (CAN) and Oregon.

Source Numbers

443, 969

Land Use: 110

General Light Industrial

Description

A light industrial facility is a free-standing facility devoted to a single use. The facility has an emphasis on activities other than manufacturing and typically has minimal office space. Typical light industrial activities include printing, material testing, and assembly of data processing equipment. Industrial park (Land Use 130) and manufacturing (Land Use 140) are related uses.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the 30 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:30 and 8:30 a.m. and 4:30 and 5:30 p.m., respectively.

The sites were surveyed in the 1980s, the 2000s, and the 2010s in Colorado, Connecticut, Indiana, New Jersey, New York, Oregon, Pennsylvania, and Texas.

Source Numbers

106, 157, 174, 177, 179, 184, 191, 251, 253, 286, 300, 611, 874, 875, 912

Land Use: 130 Industrial Park

Description

An industrial park contains a number of industrial or related facilities. It is characterized by a mix of manufacturing, service, and warehouse facilities with a wide variation in the proportion of each type of use from one location to another. Many industrial parks contain highly diversified facilities—some with a large number of small businesses and others with one or two dominant industries. General light industrial (Land Use 110) and manufacturing (Land Use 140) are related uses.

Additional Data

The sites were surveyed in the 1980s, the 2000s, and the 2010s in California, Georgia, New Jersey, New York, Ontario (CAN), and Pennsylvania.

Source Numbers

106, 162, 184, 251, 277, 422, 706, 747, 753, 937

Land Use: 140 Manufacturing

Description

A manufacturing facility is an area where the primary activity is the conversion of raw materials or parts into finished products. Size and type of activity may vary substantially from one facility to another. In addition to the actual production of goods, manufacturing facilities generally also have office, warehouse, research, and associated functions. General light industrial (Land Use 110) and industrial park (Land Use 130) are related uses.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the 17 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 6:30 and 7:30 a.m. and 3:00 and 4:00 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Minnesota, New Jersey, New York, Oregon, Pennsylvania, South Dakota, Texas, Vermont, and Washington.

Source Numbers

177, 184, 241, 357, 384, 418, 443, 583, 598, 611, 728, 747, 875, 940, 969

Land Use: 150 Warehousing

Description

A warehouse is primarily devoted to the storage of materials, but it may also include office and maintenance areas. High-cube transload and short-term storage warehouse (Land Use 154), high-cube fulfillment center warehouse (Land Use 155), high-cube parcel hub warehouse (Land Use 156), and high-cube cold storage warehouse (Land Use 157) are related uses.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the 13 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:30 a.m. and 12:30 p.m. and 3:00 and 4:00 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Connecticut, Minnesota, New Jersey, New York, Ohio, Oregon, Pennsylvania, and Texas.

Source Numbers

184, 331, 406, 411, 443, 579, 583, 596, 598, 611, 619, 642, 752, 869, 875, 876, 914, 940

Land Use: 170 Utility

Description

A utility is a free-standing building that can house office space, a storage area, and electromechanical or industrial equipment that support a local electrical, communication, water supply or control, or sewage treatment utility.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the 14 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:15 and 8:15 a.m. and 4:30 and 5:30 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Delaware, Oregon, and Texas.

Source Numbers

422, 443, 538, 876

Land Use: 180

Specialty Trade Contractor

Description

A specialty trade contractor is a business primarily involved in providing contract repairs and services to meet industrial or residential needs. This land use includes businesses that provide the following services: plumbing, heating and cooling, machine repair, electrical and mechanical repair, industrial supply, roofing, locksmith, weed and pest control, and cleaning.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the 19 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:30 and 8:30 a.m. and 4:15 and 5:15 p.m., respectively.

The sites were surveyed in the 2010s in Texas.

Source Numbers

889, 890

Land Use: 310 Hotel

Description

A hotel is a place of lodging that provides sleeping accommodations and supporting facilities such as restaurants, cocktail lounges, meeting and banquet rooms or convention facilities, limited recreational facilities (pool, fitness room), and/or other retail and service shops. All suites hotel (Land Use 311), business hotel (Land Use 312), motel (Land Use 320), and resort hotel (Land Use 330) are related uses.

Additional Data

Studies of hotel employment density indicate that, on the average, a hotel will employ 0.9 employees per room.¹

Twenty-five studies provided information on occupancy rates at the time the studies were conducted. The average occupancy rate for these studies was approximately 82 percent.

Some properties contained in this land use provide guest transportation services such as airport shuttles, limousine service, or golf course shuttle service, which may have an impact on the overall trip generation rates.

Time-of-day distribution data for this land use are presented in Appendix A. For the one center city core site with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 8:30 and 9:30 a.m. and 3:15 and 4:15 p.m., respectively. On Saturday and Sunday, the peak hours were between 5:00 and 6:00 p.m. and 10:15 and 11:15 a.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, District of Columbia, Florida, Georgia, Indiana, Minnesota, New York, Pennsylvania, South Dakota, Texas, Vermont, Virginia, and Washington.

For all lodging uses, it is important to collect data on occupied rooms as well as total rooms in order to accurately predict trip generation characteristics for the site.

Trip generation at a hotel may be related to the presence of supporting facilities such as convention facilities, restaurants, meeting/banquet space, and retail facilities. Future data submissions should specify the presence of these amenities. Reporting the level of activity at the supporting facilities such as full, empty, partially active, number of people attending a meeting/banquet during observation may also be useful in further analysis of this land use.

Source Numbers

170, 260, 262, 277, 280, 301, 306, 357, 422, 507, 577, 728, 867, 872, 925, 951

¹ Butlke, Carl H. Unpublished studies of building employment densities, Portland, Oregon.

Land Use: 311 All Suites Hotel

Description

An all suites hotel is a place of lodging that provides sleeping accommodations, a small restaurant and lounge, and small amounts of meeting space. Each suite includes a sitting room and separate bedroom; limited kitchen facilities are provided within the suite. Hotel (Land Use 310), business hotel (Land Use 312), motel (Land Use 320), and resort hotel (Land Use 330) are related uses.

Additional Data

Six studies provided information on occupancy rates at the time the studies were conducted. The average occupancy rate for these studies was approximately 74 percent.

Time-of-day distribution data for this land use are presented in Appendix A. For the three general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 6:30 and 7:30 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, and the 2010s in Florida, Georgia, Minnesota, Virginia, and Washington.

For all lodging uses, it is important to collect data on occupied rooms as well as total rooms in order to accurately predict trip generation characteristics for the site.

Source Numbers

216, 436, 818, 870, 872

Land Use: 312 Business Hotel

Description

A business hotel is a place of lodging aimed toward the business traveler but also accommodates a growing number of recreational travelers. These hotels provide sleeping accommodations and other limited facilities, such as a breakfast buffet bar and afternoon beverage bar (no lunch or dinner is served and limited meeting facilities are provided). Each unit is a large single room. Business hotels provide very few or none of the supporting facilities provided at hotels or suite hotels and are usually smaller in size. Hotel (Land Use 310), all suites hotel (Land Use 311), motel (Land Use 320), and resort hotel (Land Use 330) are related uses.

Additional Data

Ten studies provided information on room occupancy at the time of data collection. The average occupancy rate for these sites was approximately 86 percent.

Time-of-day distribution data for this land use are presented in Appendix A. For the eight general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:30 and 8:30 a.m. and 7:00 and 8:00 p.m., respectively. Vehicle counts at three general urban/suburban sites determined their Saturday and Sunday peak hours to be between 4:15 and 5:15 p.m. and 10:00 and 11:00 a.m., respectively.

For one center city core site with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:30 and 8:30 a.m. and 9:00 and 10:00 p.m., respectively. Vehicle counts at the one center city core site determined its Saturday and Sunday peak hours to be between 9:15 and 10:15 p.m. and 10:15 and 11:15 a.m., respectively.

The average numbers of person trips per vehicle trip at the three general urban/suburban sites at which both person trip and vehicle trip data were collected, were as follows:

- 1.31 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.34 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.

The sites were surveyed in the 1980s, the 1990s, and the 2010s in the District of Columbia, Florida, Georgia, Indiana, Minnesota, Texas, Vermont, Washington, and Wisconsin.

For all lodging uses, it is important to collect data on occupied rooms as well as total rooms in order to accurately predict trip generation characteristics for the site.

Source Numbers

216, 301, 306, 436, 507, 867, 870, 872, 877, 925, 945, 951, 959

Land Use: 320 Motel

Description

A motel is a place of lodging that provides sleeping accommodations and often a restaurant. Motels generally offer free on-site parking and provide little or no meeting space and few (if any) supporting facilities. Exterior corridors accessing rooms—immediately adjacent to a parking lot—commonly characterize motels. Hotel (Land Use 310), all suites hotel (Land Use 311), business hotel (Land Use 312), and resort hotel (Land Use 330) are related uses.

Additional Data

Typically, the average employment at motels is much lower than at hotels.

Sixteen studies provided information on occupancy rates at the time the studies were conducted. The average occupancy rate for these studies was approximately 82 percent.

Time-of-day distribution data for this land use are presented in Appendix A. For the four general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 5:30 and 6:30 a.m. and 5:15 and 6:15 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Florida, Indiana, New Jersey, New York, Oregon, South Dakota, and Texas.

For all lodging uses, it is important to collect data on occupied rooms as well as total rooms in order to accurately predict trip generation characteristics for the site.

Source Numbers

172, 187, 191, 277, 295, 300, 357, 439, 443, 598, 877, 915

Land Use: 330 Resort Hotel

Description

A resort hotel is similar to a hotel (Land Use 310) in that it provides sleeping accommodations, restaurants, cocktail lounges, retail shops, and guest services. The primary difference is that a resort hotel caters to the tourist and vacation industry, often providing a wide variety of recreational facilities/programs (golf courses, tennis courts, beach access, or other amenities) rather than convention and meeting business. Hotel (Land Use 310), all suites hotel (Land Use 311), business hotel (Land Use 312), and motel (Land Use 320) are related uses.

Additional Data

Nine studies provided information on room occupancy at the time of data collection. The average occupancy rate for these sites was approximately 88 percent.

Some properties contained in this land use provide guest transportation services such as airport shuttles, limousine service, or golf course shuttle service, which may have an impact on the overall trip generation rates.

The sites were surveyed in the 1980s and the 1990s in California, Florida, and South Carolina.

For all lodging uses, it is important to collect data on occupied rooms as well as total rooms in order to accurately predict trip generation characteristics for the site.

Source Numbers

270, 381, 436

Land Use: 432 Golf Driving Range

Description

A golf driving range is an outdoor facility that contains driving tees for golfers to practice. The facility may provide individual or small group lessons. Some sites have pro shops and/or small refreshment facilities. Driving ranges affiliated with full-sized golf courses are included in golf course (Land Use 430). Golf course (Land Use 430), miniature golf course (Land Use 431), and multipurpose recreational facility (Land Use 435) are related uses.

Additional Data

The sites were surveyed in the 1990s in California, Maryland, Massachusetts, New Hampshire, and New York.

Source Numbers

361, 363, 365, 393, 426, 517

Land Use: 444 Movie Theater

Description

A traditional movie theater consists of audience seating, typically less than 10 screens, a lobby, and a refreshment stand. The sites show movies on weekday afternoons and evenings as well as on weekends. Multiplex movie theater (Land Use 445) is a related use.

Additional Data

Caution should be used when applying these data, as the peaking characteristics for this land use could have a significant impact on trip generation rates. Peaking at movie theaters typically occurred in time periods shorter than an hour. Some movie theaters' start and end times may be staggered to reduce peak surging impacts.

Traditional theaters characteristically house a larger number of seats per screen than multiplex theaters. For the eight sites in Land Use 444 with data for both number of movie screens and number of seats, the average number of seats per movie screen was 343. For the 19 sites in Land Use 445 with data for both number of movie screens and number of seats, the average number of seats per movie screen was 230.

For additional information on traditional movie theaters, refer to the ITE Informational Report, *Trip Generation Characteristics of Traditional and Multiplex Movie Theaters*.¹

The sites were surveyed in the 1980s, the 1990s, and the 2010s in California, Maryland, and Oregon.

Source Numbers

213, 215, 241, 283, 387, 397, 418, 433, 440, 544, 959

¹ *Trip Generation Characteristics of Traditional and Multiplex Movie Theaters*. Washington DC, USA: Institute of Transportation Engineers, March 2001.

Land Use: 445

Multiplex Movie Theater

Description

A multiplex movie theater consists of audience seating, a minimum of 10 screens, a lobby, and a refreshment area. The development generally has one or more of the following amenities: digital sound, tiered stadium seating, and moveable or expandable walls. Theaters included in this category are primarily stand-alone facilities with separate parking and dedicated driveways. All theaters in the category show only first-run movies or movies not previously seen through any other media. They may also have matinee showings. Movie theater (Land Use 444) is a related use.

Additional Data

Caution should be used when applying these data, as the peaking characteristics for this land use could have a significant impact on trip generation rates. Peaking at movie theaters typically occurred in time periods shorter than an hour. Movie theaters' start and end times may be staggered to reduce peak surging impacts.

Multiplex theaters typically house a smaller number of seats per screen than traditional theaters. For the 19 sites in Land Use 445 with data for both number of movie screens and number of seats, the average number of seats per movie screen was 230. For the eight sites in Land Use 444 with data for both number of movie screens and number of seats, the average number of seats per movie screen was 343.

The peak hour of the generator for multiplex movie theaters occurred during Friday and Saturday evenings between 6:00 p.m. and 10:00 p.m.

For additional information on multiplex movie theaters, refer to the ITE Informational Report, *Trip Generation Characteristics of Traditional and Multiplex Movie Theaters*.²

The sites were surveyed in the 1990s, the 2000s, and the 2010s in California, Connecticut, Georgia, Hawaii, New York, North Carolina, Ohio, Oregon, Pennsylvania, South Carolina, Texas, Virginia, and Wisconsin.

Source Numbers

418, 433, 443, 450, 451, 452, 453, 455, 456, 457, 458, 459, 513, 618, 959

² *Trip Generation Characteristics of Traditional and Multiplex Movie Theaters*. Washington, DC, USA: Institute of Transportation Engineers, March 2001.

Land Use: 480 Amusement Park

Description

An amusement park contains rides, entertainment, refreshment stands, and picnic areas.

Additional Data

The sites were surveyed in the 1980s in New York and Oklahoma.

Source Numbers

186, 269

Land Use: 482

Water Slide Park

Description

A water slide park contains water slides, wading pools, and refreshment stands. Some water slide parks may include picnic areas.

Additional Data

The sites were surveyed in the 1980s and the 1990s in Idaho, New Hampshire, and Oklahoma.

Specialized Land Use Data

A 2011 study provided data on three indoor water slide parks with attached lodging in Pennsylvania and Ohio. The number of rooms in the attached hotels varied between 200 and 395. The gross floor area ranged between 50,000 and 80,000 square feet, with an average of 63,000. The number of parking spaces ranged between 472 and 790 with an average of 580. The information collected for these sites is presented below.

The following weighted average vehicle trip generation rates were observed:

- 0.21 per parking space or 1.92 per 1,000 square feet gross floor area during the weekday, PM peak hour of adjacent street traffic
- 0.10 per parking space or 0.89 per 1,000 square feet gross floor area during the weekday, AM peak hour of the generator
- 0.23 per parking space or 2.03 per 1,000 square feet gross floor area during the weekday, PM peak hour of the generator
- 0.39 per parking space or 3.58 per 1,000 square feet gross floor area during the Saturday, peak hour of the generator
- 0.33 per parking space or 3.01 per 1,000 square feet gross floor area during the Sunday, peak hour of the generator

Source Numbers

206, 269, 617, 748

Land Use: 495

Recreational Community Center

Description

A recreational community center is a stand-alone public facility similar to and including YMCAs. These facilities often include classes and clubs for adults and children; a day care or nursery school; meeting rooms; swimming pools and whirlpools; saunas; tennis, racquetball, handball, basketball and volleyball courts; outdoor athletic fields/courts; exercise classes; weightlifting and gymnastics equipment; locker rooms; and a restaurant or snack bar. Public access is typically allowed but a fee may be charged. Racquet/tennis club (Land Use 491), health/fitness club (Land Use 492), and athletic club (Land Use 493) are related land uses.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the one general urban/suburban site with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:30 and 8:30 a.m. and 5:00 and 6:00 p.m., respectively.

The average numbers of person trips per vehicle trip at the four general urban/suburban sites at which both person trip and vehicle trip data were collected, were as follows:

- 1.86 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.69 during Weekday, AM Peak Hour of Generator
- 1.82 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.82 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), Arizona, Indiana, Minnesota, New Hampshire, New York, Oregon, Pennsylvania, and Utah.

Source Numbers

281, 410, 443, 571, 618, 705, 719, 850, 866, 971

Land Use: 538

School District Office

Description

A school district office is an administrative office building that provides services and support to parents, students, and the community. School district offices typically offer centralized services for multiple schools in a district including staff training, purchasing, technology services, strategic planning, public information, student transportation, and student assessments.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the 12 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:30 and 8:30 a.m. and 3:45 and 4:45 p.m., respectively.

The sites were surveyed in the 2010s in Texas.

Source Number

889

Land Use: 540

Junior/Community College

Description

This land use includes two-year junior, community, and technical colleges. Four-year (or more) colleges or universities are included in university/college (Land Use 550). A number of two-year institutions have sizable evening programs.

Additional Data

The trip generation for weekend time periods varied considerably; therefore, caution should be used when applying weekend statistics. Information describing the weekend activities conducted at junior/community colleges was not available.

To assist in future analysis of this land use, it is important to specify if transit service was available within close proximity to the site.

Acreage, floor space, staff, and parking accommodations varied widely with the populations served and the social and economic characteristics of the area; thus, the number of students may be a more reliable independent variable on which to establish trip generation rates.

Time-of-day distribution data for this land use are presented in Appendix A. For the seven general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:30 a.m. and 12:30 p.m. and 12:30 and 1:30 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, and the 2010s in Alberta (CAN), Kansas, New Mexico, and Texas.

Source Numbers

396, 413, 533, 628, 877, 971

Land Use: 550 University/College

Description

This land use includes four-year universities or colleges that may or may not offer graduate programs. Two-year junior, community, and technical colleges are included in junior/community college (Land Use 540). Off-campus student apartment (Land Use 225) is a related land use.

Additional Data

The trip generation for weekend time periods varied considerably; therefore, caution should be used when applying weekend statistics. Information describing the weekend activities conducted at universities/colleges was not available.

To assist in future analysis of this land use, it is important to specify if transit service was available within close proximity to the site.

Acreage, floor space, staff, and parking accommodations varied widely with the populations served and the social and economic characteristics of the area; thus, the number of students may be a more reliable independent variable on which to establish trip generation rates.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Oregon, Utah, and Washington.

Source Numbers

365, 423, 440, 612, 702, 901, 971

Land Use: 565 Day Care Center

Description

A day care center is a facility where care for pre-school age children is provided, normally during the daytime hours. Day care facilities generally include classrooms, offices, eating areas and playgrounds. Some centers also provide after-school care for school-age children.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the 21 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:15 and 8:15 a.m. and 4:45 and 5:45 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Florida, Georgia, Maryland, Minnesota, New Hampshire, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Tennessee, Texas, Virginia, and Wisconsin.

Source Numbers

169, 208, 216, 253, 335, 336, 337, 355, 418, 423, 536, 550, 562, 583, 633, 734, 866, 869, 877, 878, 954, 959, 981

Land Use: 566 Cemetery

Description

A cemetery is a place for burying the deceased, possibly including buildings used for funeral services, a mausoleum, and a crematorium.

Additional Data

The sites were surveyed in the 1990s and the 2010s in California and New Jersey.

Source Numbers

392, 430, 954

Land Use: 571 Prison

Description

A prison is a building where persons who have been convicted of a crime or are awaiting trial are confined. A prison usually consists of cells, dining and food preparation facilities, limited recreational facilities, work areas, and offices.

Additional Data

The weekend peak hours of the generator varied between 9:00 a.m. and 11:00 a.m. and 2:00 p.m. and 3:00 p.m.

The sites were surveyed in the 1990s in Connecticut, Florida, and Oregon.

Source Numbers

247, 326, 583

Land Use: 580 Museum

Description

A museum is a facility that includes displays, shows, exhibits, and/or demonstration of historical, science, nature, art, entertainment, or other cultural significance.

Additional Data

Due to variation in type of museums, caution should be exercised when using the trip generation rates for this land use because they may not be appropriate for all museum types.

The site surveyed has 45,000 square feet of exhibition space.

The weekday AM peak hour of the generator was between 11:00 a.m. and 12:00 p.m. The Saturday peak hour of the generator was between 1:00 p.m. and 2:00 p.m.

The site was surveyed in the 2010s in Tennessee.

Source Number

725

Land Use: 590 Library

Description

A library can be either a public or private facility that consists of shelved books, reading rooms, or areas, and, sometimes, meeting rooms.

Additional Data

The sites were surveyed in the 1930s, the 1990s, and the 2000s in Florida, Georgia, New Jersey, Ohio, and Oregon.

Source Numbers

275, 407, 415, 444, 590

Land Use: 610

Hospital

Description

A hospital is any institution where medical or surgical care and overnight accommodations are provided to non-ambulatory and ambulatory patients. However, the term "hospital" does not refer to medical clinics (facilities that provide diagnoses and outpatient care only) or nursing homes (facilities devoted to the care of persons unable to care for themselves), which are covered elsewhere in this report. Clinic (Land Use 630) and free-standing emergency room (Land Use 650) are related uses.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the four general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:30 and 8:30 a.m. and 12:00 and 1:00 p.m., respectively.

The average numbers of person trips per vehicle trip at the four general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.60 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.60 during Weekday, AM Peak Hour of Generator
- 1.72 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.66 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, New Jersey, New York, Pennsylvania, Texas, and Washington.

Specialized Land Use Data

A 2008 study provided data on a research hospital in Baltimore, Maryland (source 749). The trip generation characteristics of this site differed from sites included in this land use; therefore, trip generation information for this site is presented here and was excluded from the data plots. The site gross floor area is 2.8 million square feet and the number of employees is 5,500. The number of vehicle trips during the weekday, AM peak hour for adjacent street traffic was 1,168. The number of vehicle trips during the weekday, PM peak hour for adjacent street traffic was 1,080.

Source Numbers

112, 186, 253, 262, 423, 429, 533, 573, 591, 601, 630, 719, 749, 878, 901, 904, 908, 909, 971

Land Use: 620

Nursing Home

Description

A nursing home is any facility whose primary function is to provide care for persons who are unable to care for themselves. Examples of such facilities include rest homes and chronic care and convalescent homes. Skilled nurses and nursing aides are present 24 hours a day at these sites. Nursing homes are occupied by residents who do little or no driving; traffic is primarily generated by employees, visitors, and deliveries. Assisted living (Land Use 254) and continuing care retirement community (Land Use 255) are related uses.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the four general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:00 a.m. and 12:00 p.m. and 1:30 and 2:30 p.m., respectively.

The average numbers of person trips per vehicle trip at the three general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.03 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.12 during Weekday, AM Peak Hour of Generator
- 1.46 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), Florida, New Hampshire, New Jersey, New York, Ontario, Canada, and Texas.

Source Numbers

436, 502, 598, 734, 878, 971, 972

Land Use: 630 Clinic

Description

A clinic is any facility that provides limited diagnostic and outpatient care but is unable to provide prolonged in-house medical and surgical care. Clinics commonly have lab facilities, supporting pharmacies, and a wide range of services (compared to the medical office, which may only have specialized or individual physicians). Hospital (Land Use 610), free-standing emergency room (Land Use 650), and medical-dental office building (Land Use 720) are related uses.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the three general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 10:30 and 11:30 a.m. and 3:30 and 4:30 p.m., respectively.

The average numbers of person trips per vehicle trip at the five general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.40 during Weekday, AM Peak Hour of Generator
- 1.69 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.52 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, New Hampshire, Texas, and Vermont.

Source Numbers

440, 734, 878, 926, 972

Land Use: 640

Animal Hospital/Veterinary Clinic

Description

An animal hospital or veterinary clinic is a facility that specializes in the medical care and treatment of animals.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the six general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:30 and 8:30 a.m. and 3:15 and 4:15 p.m., respectively.

The sites were surveyed in the 2000s and the 2010s in California, New Jersey, and Texas.

Source Numbers

597, 662, 878

Land Use: 720

Medical-Dental Office Building

Description

A medical-dental office building is a facility that provides diagnoses and outpatient care on a routine basis but is unable to provide prolonged in-house medical and surgical care. One or more private physicians or dentists generally operate this type of facility. Clinic (Land Use 630) is a related use.

Additional Data

Time-of-day distribution data for this land use for a weekday, Saturday, and Sunday are presented in Appendix A. For the 19 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 9:30 and 10:30 a.m. and 2:15 and 3:15 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Connecticut, Kentucky, Maryland, Minnesota, New Jersey, New York, Ohio, Oregon, Pennsylvania, South Dakota, Texas, Virginia, Washington, and Wisconsin.

Source Numbers

104, 109, 120, 157, 184, 209, 211, 253, 287, 294, 295, 304, 357, 384, 404, 407, 423, 444, 509, 601, 715, 867, 879, 901, 902, 908, 959, 972

Land Use: 710

General Office Building

Description

A general office building houses multiple tenants; it is a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted. An office building or buildings may contain a mixture of tenants including professional services, insurance companies, investment brokers, and tenant services, such as a bank or savings and loan institution, a restaurant, or cafeteria and service retail facilities. A general office building with a gross floor area of 5,000 square feet or less is classified as a small office building (Land Use 712). Corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), office park (Land Use 750), research and development center (Land Use 760), and business park (Land Use 770) are additional related uses.

If information is known about individual buildings, it is suggested that the general office building category be used rather than office parks when estimating trip generation for one or more office buildings in a single development. The office park category is more general and should be used when a breakdown of individual or different uses is not known. If the general office building category is used and if additional buildings, such as banks, restaurants, or retail stores are included in the development, the development should be treated as a multiuse project. On the other hand, if the office park category is used, internal trips are already reflected in the data and do not need to be considered.

When the buildings are interrelated (defined by shared parking facilities or the ability to easily walk between buildings) or house one tenant, it is suggested that the total area or employment of all the buildings be used for calculating the trip generation. When the individual buildings are isolated and not related to one another, it is suggested that trip generation be calculated for each building separately and then summed.

Additional Data

The average building occupancy varied considerably within the studies for which occupancy data were provided. The reported occupied gross floor area was 88 for general urban/suburban sites and 96 percent for the center city core and dense multi-use urban sites.

Time-of-day distribution data for this land use for a weekday, Saturday, and Sunday are presented in Appendix A. For the 16 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:30 and 8:30 a.m. and 4:30 and 5:30 p.m., respectively.

For the three general urban/suburban sites with person trip data, the overall highest volumes during the AM and PM on a weekday were counted between 8:45 and 9:45 a.m. and 12:45 and 1:45 p.m., respectively. For the three dense multi-use urban sites with person trip data, the overall highest volumes during the AM and PM on a weekday were counted between 8:30 and 9:30 a.m. and 4:45 and 5:45 p.m., respectively. For the four center city core sites with person trip data, the overall highest volumes during the AM and PM on a weekday were counted between 9:00 and 10:00 a.m. and 12:45 and 1:45 p.m., respectively.

The average numbers of person trips per vehicle trip at the eight center city core sites at which both person trip and vehicle trip data were collected were as follows:

- 2.76 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 2.90 during Weekday, AM Peak Hour of Generator
- 2.91 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 3.02 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 18 dense multi-use urban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.47 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.47 during Weekday, AM Peak Hour of Generator
- 1.46 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.53 during Weekday, PM Peak Hour of Generator

The average numbers of person trips per vehicle trip at the 23 general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.30 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.34 during Weekday, AM Peak Hour of Generator
- 1.32 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.41 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Colorado, Connecticut, Georgia, Illinois, Indiana, Kansas, Kentucky, Maine, Maryland, Michigan, Minnesota, Missouri, Montana, New Hampshire, New Jersey, New York, Pennsylvania, Texas, Utah, Virginia, and Washington.

Source Numbers

161, 175, 183, 184, 185, 207, 212, 217, 247, 253, 257, 260, 262, 273, 279, 297, 298, 300, 301, 302, 303, 304, 321, 322, 323, 324, 327, 404, 407, 408, 418, 419, 423, 562, 734, 850, 859, 862, 867, 869, 883, 884, 890, 891, 904, 940, 944, 946, 964, 965, 972

Land Use: 712 Small Office Building

Description

A small office building houses a single tenant and is less than or equal to 5,000 gross square feet in size. It is a location where affairs of a business, commercial or industrial organization, or professional person or firm are conducted. General office building (Land Use 710) is a related use.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the 18 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:30 a.m. and 12:30 p.m. and 5:00 and 6:00 p.m., respectively.

The sites were surveyed in the 1980s and the 2010s in Alberta (CAN), Texas, and Wisconsin.

Source Numbers

890, 891, 959, 976

Land Use: 714

Corporate Headquarters Building

Description

A corporate headquarters building is a single tenant office building that houses the corporate headquarters of a company or organization, which generally consists of offices, meeting rooms, space for file storage and data processing, a restaurant or cafeteria and other service functions. General office building (Land Use 710), small office building (Land Use 712), single tenant office building (Land Use 715), office park (Land Use 750), research and development center (Land Use 760), and business park (Land Use 770) are related uses.

Additional Data

Time-of-day distribution data for this land use for a weekday, Saturday, and Sunday are presented in Appendix A. For the one center city core site with person trip data, the overall highest volumes during the AM and PM on a weekday were counted between 8:45 and 9:45 a.m. and 5:30 and 6:30 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Connecticut, Georgia, Maryland, Minnesota, New Jersey, New York, Ohio, Oregon, Pennsylvania, Vermont, Virginia, and Washington.

Source Numbers

247, 251, 262, 273, 298, 302, 303, 304, 322, 323, 324, 327, 406, 444, 524, 552, 717, 862, 904

Land Use: 715

Single Tenant Office Building

Description

A single tenant office building generally contains offices, meeting rooms, and space for file storage and data processing of a single business or company and possibly other service functions including a restaurant or cafeteria. General office building (Land Use 710), small office building (Land Use 712), corporate headquarters building (Land Use 714), office park (Land Use 750), research and development center (Land Use 760), and business park (Land Use 770) are related uses.

Additional Data

The sites were surveyed in the 1980s, the 1990s, and the 2000s in California, Kansas, Maryland, Missouri, New Jersey, New York, Pennsylvania, and Virginia.

Source Numbers

212, 262, 273, 279, 303, 304, 322, 323, 324, 327, 407, 510, 701

Land Use: 730

Government Office Building

Description

A government office building is an individual building containing either the entire function or simply one agency of a city, county, state, federal, or other governmental unit. This type of building differs from a government office complex (Land Use 733) in that it is not a group of buildings that are interconnected by pedestrian walkways.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the seven general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:45 and 8:45 a.m. and 2:00 and 3:00 p.m., respectively.

The sites were surveyed in the 2000s and the 2010s in Oregon and Texas.

Source Numbers

579, 889

Land Use: 732

United States Post Office

Description

A United States post office is a federal building that contains service windows for mailing packages and letters, post office boxes, offices, sorting and distributing facilities for mail, and vehicle storage areas.

Additional Data

The weekday AM peak hour was between 9:00 and 10:00 a.m. The weekday PM peak hour was between 3:00 and 4:00 p.m. The Saturday peak hour was between 11:00 a.m. and 12:00 p.m.

The sites were surveyed in the 1980s, the 1990s, and the 2000s in Alabama, California, Indiana, New Hampshire, New Mexico, Ohio, Oklahoma, Oregon, South Dakota, and Virginia.

Source Numbers

170, 248, 269, 275, 357, 435, 444, 579, 609, 732, 734

Land Use: 733

Government Office Complex

Description

A government office complex is a related group of buildings where a variety of functions of a city, county, state, federal, other governmental unit, or multiple governmental units are carried out. This complex differs from a government office building (Land Use 730) in that it is a group of buildings that are interconnected by pedestrian walkways.

Additional Data

The site was surveyed in the 1990s in California.

Source Number

508

Land Use: 750 Office Park

Description

An office park is usually a suburban subdivision or planned unit development containing general office buildings and support services, such as banks, restaurants, and service stations, arranged in a park- or campus-like atmosphere. General office building (Land Use 710), corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), research and development center (Land Use 760), and business park (Land Use 770) are related uses.

Additional Data

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), Connecticut, Georgia, Indiana, Massachusetts, New Jersey, New York, and Pennsylvania.

Source Numbers

160, 161, 184, 185, 253, 300, 301, 356, 550, 618, 912, 972, 973

Land Use: 760

Research and Development Center

Description

A research and development center is a facility or group of facilities devoted almost exclusively to research and development activities. The range of specific types of businesses contained in this land use category varies significantly. Research and development centers may contain offices and light fabrication areas. General office building (Land Use 710), corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), office park (Land Use 750), and business park (Land Use 770) are related uses.

Additional Data

The average numbers of person trips per vehicle trip at the 11 general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.36 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 7 and 9 a.m.
- 1.36 during Weekday, AM Peak Hour of Generator
- 1.45 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.43 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Iowa, Maryland, Minnesota, Montana, and Pennsylvania.

Source Numbers

105, 157, 213, 218, 253, 332, 384, 423, 630, 723, 911, 973

Land Use: 770 Business Park

Description

A business park consists of a group of flex-type or incubator one- or two-story buildings served by a common roadway system. The tenant space is flexible and lends itself to a variety of uses; the rear side of the building is usually served by a garage door. Tenants may be start-up companies or small mature companies that require a variety of space. The space may include offices, retail and wholesale stores, restaurants, recreational areas and warehousing, manufacturing, light industrial, or scientific research functions. The average mix is 20 to 30 percent office/commercial and 70 to 80 percent industrial/warehousing. Industrial park (Land Use 130), warehousing (Land Use 150), general office building (Land Use 710), corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), office park (Land Use 750), and research and development center (Land Use 760) are related uses.

Additional Data

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Georgia, New Jersey, Oregon, Vermont, and Virginia.

Source Numbers

155, 211, 212, 213, 216, 407, 423, 715, 926

Land Use: 812

Building Materials and Lumber Store

Description

A building materials and lumber store is a free-standing building that sells hardware, building materials, and lumber. The lumber may be stored in the main building, yard, or storage shed. Hardware/paint store (Land Use 816) and home improvement superstore (Land Use 862) are related uses.

Additional Data

Outside storage areas are not included in the overall gross floor area measurements. However, if storage areas are located within the principal outside faces of the exterior walls, they are included in the overall gross floor area of the building.

Time-of-day distribution data for this land use are presented in Appendix A. For the nine general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 9:30 and 10:30 a.m. and 12:30 and 1:30 p.m., respectively.

The sites were surveyed in the 1980s and the 2010s in California, New York, and Texas.

Source Numbers

126, 280, 879

Land Use: 814 Variety Store

Description

A variety store is a retail store that sells a broad range of inexpensive items often at a single price. These stores are typically referred to as "dollar stores." Items sold at these stores typically include kitchen supplies, cleaning products, home office supplies, food products, household goods, decorations, and toys. These stores are sometimes stand-alone sites, but they may also be located in small strip shopping centers. Free-standing discount store (Land Use 815) is a related use.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the 10 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:30 a.m. and 12:30 p.m. and 4:45 and 5:45 p.m., respectively.

The sites were surveyed in the 2010s in Florida, Minnesota, and Texas.

Source Numbers

731, 869, 879, 880

Land Use: 815

Free-Standing Discount Store

Description

A discount store is similar to a free-standing discount superstore described in Land Use 813 with the exception that it does not contain a full-service grocery department. It is also similar to a department store described in Land Use 875 with the exception that it generally offers centralized cashiering and sells products that are advertised at discount prices. Discount stores offer a variety of customer services and typically maintain long store hours 7 days a week. The stores included in this land use are often the only ones on the site, but they can also be found in mutual operation with a related or unrelated garden center and/or service station. Free-standing discount stores are also sometimes found as separate parcels within a retail complex, with or without their own dedicated parking. Free-standing discount superstore (Land Use 813), variety store (Land Use 814) and department store (Land Use 875) are related uses.

Additional Data

Time-of-day data are limited for this land use. For the sites with vehicle counts over a several hour period, the weekday site peak hour ranged between 11:00 a.m. and 5:00 p.m. and the Saturday site peak hour ranged between 11:00 a.m. and 4:00 p.m.

Garden centers contained within the principal outside faces of the exterior building walls were included in the gross square floor areas reported. Outdoor or fenced-in areas outside the principal outside faces of the exterior building walls were excluded.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Connecticut, Delaware, Florida, Maryland, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Oregon, Pennsylvania, South Dakota, and Wisconsin.

To assist in the future analysis of this land use, it is important to collect and include information on the presence and size of garden centers, outdoor fenced-in space and service stations in trip generation data submissions.

Source Numbers

305, 340, 353, 358, 376, 386, 417, 504, 528, 579, 588, 595, 630, 735, 842, 946, 960

Land Use: 816 Hardware/Paint Store

Description

A hardware/paint store is a free-standing building that sells hardware and paint supplies. Building materials and lumber store (Land Use 812) and home improvement superstore (Land Use 862) are related uses.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the five general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 10:15 and 11:15 a.m. and 1:00 and 2:00 p.m., respectively.

The sites were surveyed in the 1990s and the 2010s in California, Oregon, South Dakota, Texas, and Wisconsin.

Source Numbers

358, 531, 880, 959, 966

Land Use: 817 Nursery (Garden Center)

Description

A nursery or garden center is a free-standing building with an outside storage area for planting or landscape stock. The nurseries surveyed primarily serve the general public. Some have large greenhouses and offer landscaping services. Most have office, storage, and shipping facilities. Nurseries are characterized by seasonal variations in trip characteristics. Nursery (wholesale) (Land Use 818) is a related use.

Additional Data

Outside storage areas are not included in the overall gross floor area measurements. However, if storage areas are located within the principal outside faces of the exterior walls, they are included in the overall gross floor area of the building.

The sites were surveyed in the 1980s and the 2010s in California and Vermont.

Source Numbers

205, 240, 926

Land Use: 818 Nursery (Wholesale)

Description

A wholesale nursery is a free-standing building with an outside storage area for planting or landscape stock. The nurseries surveyed primarily serve contractors and suppliers. Some have large greenhouses and offer landscaping services. Most have office, storage, and shipping facilities. Nurseries are characterized by seasonal variations in trip characteristics. Nursery (garden center) (Land Use 817) is a related use.

Additional Data

Outside storage areas are not included in the overall gross floor area measurements. However, if storage areas are located within the principal outside faces of the exterior walls, they are included in the overall gross floor area of the building.

The sites were surveyed in the 1980s in California.

Source Numbers

205, 240

Land Use: 820

Shopping Center

Description

A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. A shopping center's composition is related to its market area in terms of size, location, and type of store. A shopping center also provides on-site parking facilities sufficient to serve its own parking demands. Factory outlet center (Land Use 823) is a related use.

Additional Data

Shopping centers, including neighborhood centers, community centers, regional centers, and super regional centers, were surveyed for this land use. Some of these centers contained non-merchandising facilities, such as office buildings, movie theaters, restaurants, post offices, banks, health clubs, and recreational facilities (for example, ice skating rinks or indoor miniature golf courses).

Many shopping centers, in addition to the integrated unit of shops in one building or enclosed around a mall, include outparcels (peripheral buildings or pads located on the perimeter of the center adjacent to the streets and major access points). These buildings are typically drive-in banks, retail stores, restaurants, or small offices. Although the data herein do not indicate which of the centers studied included peripheral buildings, it can be assumed that some of the data show their effect.

The vehicle trips generated at a shopping center are based upon the total GLA of the center. In cases of smaller centers without an enclosed mall or peripheral buildings, the GLA could be the same as the gross floor area of the building.

Time-of-day distribution data for this land use are presented in Appendix A. For the 10 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 12:15 and 1:15 p.m., respectively.

The average numbers of person trips per vehicle trip at the 27 general urban/suburban sites at which both person trip and vehicle trip data were collected were as follows:

- 1.31 during Weekday, AM Peak Hour of Generator
- 1.43 during Weekday, Peak Hour of Adjacent Street Traffic, one hour between 4 and 6 p.m.
- 1.46 during Weekday, PM Peak Hour of Generator

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), British Columbia (CAN), California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nevada, New Jersey, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia, and Wisconsin.

Source Numbers

105, 110, 154, 156, 159, 186, 190, 198, 199, 202, 204, 211, 213, 239, 251, 259, 260, 269, 294, 295, 299, 300, 301, 304, 305, 307, 308, 309, 310, 311, 314, 315, 316, 317, 319, 358, 365, 376, 385, 390, 400, 404, 414, 420, 423, 428, 437, 440, 442, 444, 446, 507, 562, 580, 598, 629, 658, 702, 715, 728, 868, 870, 871, 880, 899, 908, 912, 915, 926, 936, 944, 946, 960, 961, 962, 973, 974, 978

Land Use: 840 Automobile Sales (New)

Description

A new automobile sales dealership is typically located along a major arterial street characterized by abundant commercial development. The sale or leasing of new cars is the primary business at these facilities; however, automobile services, parts sales, and used car sales may also be available. Some dealerships also include leasing options, truck sales, and servicing. Automobile sales (used) (Land Use 841) and recreational vehicle sales (Land Use 842) are related uses.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the six general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:15 a.m. and 12:15 p.m. and 1:45 and 2:45 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Delaware, Florida, Georgia, Indiana, New York, North Carolina, Oregon, Texas, Vermont, and Virginia.

Source Numbers

260, 271, 280, 328, 414, 424, 427, 438, 440, 507, 571, 583, 612, 715, 728, 880, 881, 936, 974, 975

Land Use: 841 Automobile Sales (Used)

Description

A used automobile sales dealership is typically located along a major arterial street characterized by abundant commercial development. The sale or lease of used cars is the primary business at these facilities; however, automobile services and parts sales may also be available. Some dealerships also include leasing options, truck sales, and servicing. Automobile sales (new) (Land Use 840) and recreational vehicle sales (Land Use 842) are related uses.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the 14 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 9:45 and 10:45 a.m. and 4:30 and 5:30 p.m., respectively.

The sites were surveyed in the 2010s in Texas.

Source Numbers

880, 881

Land Use: 842

Recreational Vehicle Sales

Description

A recreational vehicle (RV) sales dealership is a free-standing facility that specializes in the sales of new RVs. Recreational vehicle services, parts and accessories sales, and substantial used RV sales may also be available. Some RV dealerships may also include boat sales and servicing. Automobile sales (Land Use 841) is a related use.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the five general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 9:30 and 10:30 a.m. and 12:00 and 1:00 p.m., respectively.

The sites were surveyed in the 2000s and the 2010s in Florida and Texas.

Source Numbers

721, 881

Land Use: 843

Automobile Parts Sales

Description

An automobile parts sales facility specializes in the sale of automobile parts for maintenance and repair. Items sold at these facilities include spark plugs, oil, batteries, and a wide range of automobile parts. These facilities are not equipped for on-site vehicle repair. Tire store (Land Use 848), tire superstore (Land Use 849), and automobile parts and service center (Land Use 943) are related uses.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the seven general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:15 a.m. and 12:15 p.m. and 12:45 and 1:45 p.m., respectively.

The sites were surveyed in the 1990s, the 2000s, and the 2010s in Alberta (CAN), Florida, New Hampshire, Texas, and Wisconsin.

Source Numbers

436, 439, 618, 881, 882, 959, 975

Land Use: 848

Tire Store

Description

The primary business associated with a tire store is the sale and marketing of tires for automotive vehicles. Services offered by these stores usually include tire installation and repair, as well as other automotive maintenance or repair services and customer assistance. These stores generally do not contain large storage or warehouse areas. Automobile parts sales (Land Use 843), tire superstore (Land Use 849), and automobile parts and service center (Land Use 943) are related uses.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the six general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 9:30 and 10:30 a.m. and 1:30 and 2:30 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Florida, Minnesota, New Jersey, New York, Oregon, Pennsylvania, South Dakota, Texas, and Wisconsin.

Source Numbers

328, 359, 438, 555, 571, 583, 599, 870, 886, 887, 959

Land Use: 850 Supermarket

Description

A supermarket is a free-standing retail store selling a complete assortment of food, food preparation and wrapping materials, and household cleaning items. Supermarkets may also contain the following products and services: ATMs, automobile supplies, bakeries, books and magazines, dry cleaning, floral arrangements, greeting cards, limited-service banks, photo centers, pharmacies, and video rental areas. Some facilities may be open 24 hours a day. Discount supermarket (Land Use 854) is a related use.

Additional Data

Caution should be used when applying daily trip generation rates for supermarkets, as the database contains a mixture of facilities with varying hours of operation. Future data submissions should specify hours of operation of a site.

Time-of-day distribution data for this land use for a weekday, Saturday, and Sunday are presented in Appendix A. For the one general urban/suburban site with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:00 a.m. and 12:00 p.m. and 4:00 and 5:00 p.m., respectively. For the one dense multi-use urban site with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 5:15 and 6:15 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Colorado, Connecticut, District of Columbia, Florida, Illinois, Kentucky, Maryland, Minnesota, New Jersey, New York, Oregon, Pennsylvania, South Dakota, Texas, Vermont, Virginia, Washington, and Wisconsin.

Source Numbers

213, 251, 273, 305, 359, 365, 438, 442, 447, 448, 514, 520, 552, 577, 610, 715, 716, 728, 746, 854, 870, 882, 917, 926, 935, 946, 961, 966, 975

Land Use: 851

Convenience Market

Description

The convenience markets in this classification are open between 15 and 24 hours per day. These markets sell convenience foods, newspapers, magazines, and often beer and wine; they do not have gasoline pumps. Convenience market with gasoline pumps (Land Use 853) and gasoline/service station with convenience market (Land Use 945) are related uses.

Additional Data

Time-of-day distribution data for this land use for a weekday, Saturday, and Sunday are presented in Appendix A. For the two general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 9:30 and 10:30 a.m. and 4:45 and 5:45 p.m., respectively. For the three general urban/suburban sites with person trip data, the overall highest person volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 12:00 and 1:00 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), Arizona, California, New Jersey, New York, Ontario, Canada, Oregon, Pennsylvania, Texas, and Virginia.

Source Numbers

168, 253, 282, 542, 550, 862, 863, 882, 931, 955, 975

Land Use: 853

Convenience Market with Gasoline Pumps

Description

This land use includes convenience markets with gasoline pumps where the primary business is the selling of convenience items, not the fueling of motor vehicles. The sites included in this land use category have the following two specific characteristics:

- The gross floor area of the convenience market is at least 2,000 gross square feet
- The number of vehicle fueling positions is less than 10

Convenience market (Land Use 851), gasoline/service station (Land Use 944), gasoline/service station with convenience market (Land Use 945), and super convenience market/gas station (Land Use 960) are related uses.

Additional Data

The independent variable, vehicle fueling positions, is defined as the maximum number of vehicles that can be fueled simultaneously.

Time-of-day distribution data for this land use are presented in Appendix A. For the 31 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:30 and 8:30 a.m. and 4:45 and 5:45 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), Arkansas, Delaware, Florida, Indiana, Iowa, Kentucky, Maryland, Massachusetts, Minnesota, New Hampshire, Rhode Island, South Dakota, Texas, Vermont, and Washington.

Source Numbers

221, 274, 288, 300, 340, 350, 351, 352, 355, 359, 718, 810, 813, 853, 882, 883, 888, 926, 927, 936, 977

Land Use: 854

Discount Supermarket

Description

A discount supermarket is a free-standing retail store selling a complete assortment of food (often in bulk), food preparation and wrapping materials, and household cleaning and servicing items at discounted prices. Some facilities may be open 24 hours a day. Supermarket (Land Use 850) is a related use.

Additional Data

For the limited number of sites with multi-hour count data, the weekday site peak hours fell between 2:00 and 6:00 p.m. The Saturday and Sunday site peak hours fell between 1:00 and 5:00 p.m.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), Canada, California, Nevada, New York, Oregon, Washington, and Wisconsin.

Caution should be used when applying daily trip generation rates for discount supermarkets, as the database contains a mixture of facilities with varying hours of operation. Future data submissions should specify the hours of operation of the study site.

Source Numbers

221, 236, 440, 537, 566, 738, 893, 959

Land Use: 857 Discount Club

Description

A discount club is a discount store or warehouse where shoppers pay a membership fee in order to take advantage of discounted prices on a wide variety of items such as food, clothing, tires, and appliances; many items are sold in large quantities or bulk. Some sites may include on-site fueling pumps.

Additional Data

For the limited number of sites with multi-hour count data, the weekday, Saturday, and Sunday site peak hours fell between 12:00 and 4:00 p.m.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alabama, Alberta (CAN), California, Connecticut, Delaware, Florida, Maryland, Massachusetts, Ohio, Oregon, Pennsylvania, and Washington.

To assist in the future analysis of this land use, it is important to collect and include information on the presence of vehicle fueling stations in trip generation data submissions.

Source Numbers

212, 245, 333, 344, 345, 346, 424, 438, 445, 580, 584, 700, 715, 719, 975

Land Use: 861

Sporting Goods Superstore

Description

A sporting goods superstore is a free-standing facility that specializes in the sale of athletic and outdoor-oriented merchandise. It typically offers a variety of customer services and centralized cashiering. These stores often maintain long store hours 7 days a week. Examples of items sold in these stores include outdoor/athletic clothing, sports equipment, shoes, and hunting/boating/fishing gear. Some may also carry automotive supplies. Sporting goods superstores are sometimes also found as separate parcels within a retail complex, with or without their own dedicated parking.

Additional Data

Time-of-day distribution data for this land use for a weekday, Friday, Saturday, and Sunday are presented in Appendix A. For the one general urban/suburban site with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 4:00 and 5:00 p.m., respectively. For the one dense multi-use urban site with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 10:45 and 11:45 a.m. and 12:45 and 1:45 p.m., respectively.

The sites were surveyed in the 2000s and the 2010s in Massachusetts, Minnesota, Nevada, New Hampshire, Washington, and Wisconsin.

Source Numbers

618, 745, 853, 868, 959

Land Use: 881

Pharmacy/Drugstore with Drive-Through Window

Description

A pharmacy/drugstore is a retail facility that primarily sells prescription and non-prescription drugs. These facilities may also sell cosmetics, toiletries, medications, stationery, personal care products, limited food products, and general merchandise. The drug stores in this category contain drive-through windows. Pharmacy/drugstore without a drive-through window (Land Use 880) is a related use.

Additional Data

Several studies indicated that they had two drive-through windows.

To assist in the future analysis of this land use, it is important that the number of drive-through lanes at the study site be reported.

Time-of-day distribution data for this land use for a weekday, Saturday, and Sunday are presented in Appendix A. For the six general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 5:00 and 6:00 p.m., respectively.

The sites were surveyed in the 1990s, the 2000s, and the 2010s in California, Colorado, Florida, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Texas, Vermont, and Wisconsin.

Source Numbers

369, 418, 436, 547, 550, 552, 563, 568, 573, 599, 621, 716, 727, 728, 734, 810, 870, 883

Land Use: 890 Furniture Store

Description

A furniture store is a full-service retail facility that specializes in the sale of furniture and often carpeting. Furniture stores are generally large and may include storage areas. The sites surveyed included both traditional retail furniture stores and warehouse stores with showrooms. Although some home accessories may be sold, furniture stores primarily focus on the sale of pre-assembled furniture. A majority of items sold at these facilities must be ordered for delivery. Discount home furnishing superstore (Land Use 869) is a related use.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the seven general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:00 a.m. and 12:00 p.m. and 4:30 and 5:30 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Florida, Massachusetts, New Hampshire, New York, Texas, and Wisconsin.

Source Numbers

126, 280, 439, 532, 617, 883, 959, 975

Land Use: 895 Beverage Container Recycling Depot

Description

A beverage container recycling depot is a facility designed and operated for receiving and temporarily storing recyclable beverage containers.

Additional Data

The sites were surveyed in the 1980s and the 2010s in Alberta (CAN).

Source Number

975

Land Use: 899

Liquor Store

Description

A liquor store specializes in the sale of prepackaged alcoholic beverages intended to be consumed off the store's premises.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the one general urban/suburban site with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:30 a.m. and 12:30 p.m. and 5:00 and 6:00 p.m., respectively.

The sites were surveyed in the 1990s and the 2010s in Alberta (CAN) and Minnesota.

Source Numbers

870, 973

Land Use: 911

Walk-in Bank

Description

A walk-in bank is generally a free-standing building with its own parking lot. These banks do not have drive-in lanes but usually contain non-drive-through automatic teller machines (ATMs). Drive-in bank (Land Use 912) is a related use.

Additional Data

The weekday PM peak hour varied between 4:00 p.m. and 5:30 p.m.

The sites were surveyed in the 1980s and the 2000s in Alberta (CAN) and California.

To assist in the future analysis of this land use, it is important that Friday data be collected and reported separately from weekday data. It is also important to specify the date and month of the data collection period.

Source Numbers

594, 976

Land Use: 912

Drive-in Bank

Description

A drive-in bank provides banking facilities for motorists who conduct financial transactions from their vehicles; many also serve patrons who walk into the building. The drive-in lanes may or may not provide automatic teller machines (ATMs). Walk-in bank (Land Use 911) is a related use.

Additional Data

The independent variable, drive-in lanes, refers to all lanes at a banking facility used for financial transactions, including ATM-only lanes.

Time-of-day distribution data for this land use are presented in Appendix A. For the 18 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 12:15 and 1:15 p.m., respectively. For the one center city core site with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:15 a.m. and 12:15 p.m. and 12:45 and 1:45 p.m., respectively.

The sites were surveyed in the 2000s and the 2010s in Colorado, Kentucky, Minnesota, Nebraska, New Jersey, New York, Oregon, Pennsylvania, Texas, Vermont, Virginia, Washington, and Wisconsin.

To assist in the future analysis of this land use, it is important that Friday data be collected and reported separately from weekday data. It is also important to specify the date and month of the data collection period and the number of drive-through lanes that are open at the time of the study.

Source Numbers

535, 539, 553, 555, 573, 577, 600, 624, 626, 629, 630, 637, 656, 657, 710, 724, 728, 866, 869, 883, 884, 927, 935, 961

Land Use: 920

Copy, Print, and Express Ship Store

Description

A copy, print, and express ship store is a facility that offers a variety of copying, printing, binding, and shipping services. Retail sales of a limited range of office-related items including packing and shipping supplies are also commonly available. Technology services, such as computer rental and wireless Internet may also be provided. Copy, print, and express ship stores typically maintain long store hours 7 days a week. Some stores may be open 24 hours a day.

Additional Data

The weekday AM peak hour occurred between 10:30 and 11:30 a.m. The weekday PM peak hour occurred between 3:30 and 4:30 p.m.

The site was surveyed in the 2000s in Texas.

Source Number

608

Land Use: 931 Quality Restaurant

Description

This land use consists of high quality, full-service eating establishments with a typical duration of stay of at least one hour. Quality restaurants generally do not serve breakfast; some do not serve lunch; all serve dinner. This type of restaurant often requests and sometimes requires reservations and is generally not part of a chain. Patrons commonly wait to be seated, are served by a waiter/waitress, order from menus and pay for meals after they eat. While some of the study sites have lounge or bar facilities (serving alcoholic beverages), they are ancillary to the restaurant. Fast casual restaurant (Land Use 930) and high-turnover (sit-down) restaurant (Land Use 932) are related uses.

Additional Data

The outdoor seating area is not included in the overall gross floor area. Therefore, the number of seats may be a more reliable independent variable on which to establish trip generation rates for facilities having significant outdoor seating.

The sites were surveyed in the 1980s and the 1990s in Alberta (CAN), California, Colorado, Florida, Indiana, Kentucky, New Jersey, and Utah.

Source Numbers

126, 260, 291, 301, 338, 339, 368, 437, 440, 976

Land Use: 932

High-Turnover (Sit-Down) Restaurant

Description

This land use consists of sit-down, full-service eating establishments with typical duration of stay of approximately one hour. This type of restaurant is usually moderately priced and frequently belongs to a restaurant chain. Generally, these restaurants serve lunch and dinner; they may also be open for breakfast and are sometimes open 24 hours a day. These restaurants typically do not take reservations. Patrons commonly wait to be seated, are served by a waiter/waitress, order from menus and pay for their meal after they eat. Some facilities contained within this land use may also contain a bar area for serving food and alcoholic drinks. Fast casual restaurant (Land Use 930), quality restaurant (Land Use 931), fast-food restaurant without drive-through window (Land Use 933), fast-food restaurant with drive-through window (Land Use 934), and fast-food restaurant with drive-through window and no indoor seating (Land Use 935) are related uses.

Additional Data

Users should exercise caution when applying statistics during the AM peak periods, as the sites contained in the database for this land use may or may not be open for breakfast. In cases where it was confirmed that the sites were not open for breakfast, data for the AM peak hour of the adjacent street traffic were removed from the database.

The outdoor seating area is not included in the overall gross floor area. Therefore, the number of seats may be a more reliable independent variable on which to establish trip generation rates for facilities having significant outdoor seating.

Time-of-day distribution data for this land use for a weekday, Saturday, and Sunday are presented in Appendix A. For the 38 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 12:00 and 1:00 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Florida, Georgia, Indiana, Kentucky, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Texas, Vermont, and Wisconsin.

Source Numbers

126, 269, 275, 280, 300, 301, 305, 338, 340, 341, 358, 384, 424, 432, 437, 438, 444, 507, 555, 577, 589, 617, 618, 728, 868, 884, 885, 903, 927, 944, 961, 962, 977

Land Use: 933

Fast-Food Restaurant without Drive-Through Window

Description

This land use includes fast-food restaurants without drive-through windows. This type of restaurant is characterized by a large carry-out clientele, long hours of service (some are open for breakfast, all are open for lunch and dinner, some are open late at night or 24 hours a day) and high turnover rates for eat-in customers. These limited-service eating establishments do not provide table service. Patrons generally order at a cash register and pay before they eat. Fast casual restaurant (Land Use 930), high-turnover (sit-down) restaurant (Land Use 932), fast-food restaurant with drive-through window (Land Use 934), and fast-food restaurant with drive-through window and no indoor seating (Land Use 935) are related uses.

Additional Data

The outdoor seating area is not included in the overall gross floor area. Therefore, the number of seats may be a more reliable independent variable on which to establish trip generation rates for facilities having significant outdoor seating.

Time-of-day distribution data for this land use are presented in Appendix A. For the four general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 12:15 and 1:15 p.m., respectively.

The sites were surveyed in the 1980s and the 2010s in Alberta (CAN), California, Colorado, Connecticut, Maryland, Montana, and Texas.

Specialized Land Use Data

One study provided data for a yogurt shop without a drive-through (source 414). The trip generating characteristics of this site differed from the sites included in this land use; therefore, trip generation information for this site is presented here and was excluded from the data plots. The site had a gross floor area of 860 square feet. It generated 13 vehicle trips during the weekday PM peak hour of adjacent street traffic and 16 vehicle trips during the weekday PM peak hour of the generator.

Source Numbers

163, 247, 278, 319, 342, 414, 885, 977

Land Use: 934

Fast-Food Restaurant with Drive-Through Window

Description

This category includes fast-food restaurants with drive-through windows. This type of restaurant is characterized by a large drive-through clientele, long hours of service (some are open for breakfast, all are open for lunch and dinner, some are open late at night or 24 hours a day) and high turnover rates for eat-in customers. These limited-service eating establishments do not provide table service. Non-drive-through patrons generally order at a cash register and pay before they eat. Fast casual restaurant (Land Use 930), high-turnover (sit-down) restaurant (Land Use 932), fast-food restaurant without drive-through window (Land Use 933), and fast-food restaurant with drive-through window and no indoor seating (Land Use 935) are related uses.

Additional Data

Users should exercise caution when applying statistics during the AM peak periods, as the sites contained in the database for this land use may or may not be open for breakfast. In cases where it was confirmed that the sites were not open for breakfast, data for the AM peak hour of the adjacent street traffic were removed from the database.

The outdoor seating area is not included in the overall gross floor area. Therefore, the number of seats may be a more reliable independent variable on which to establish trip generation rates for facilities having significant outdoor seating.

Time-of-day distribution data for this land use for a weekday, Saturday, and Sunday are presented in Appendix A. For the 46 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 12:00 and 1:00 p.m., respectively. For the one dense multi-use urban site with data, the same AM and PM peak hours were observed.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alaska, Alberta (CAN), California, Colorado, Florida, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Montana, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Dakota, Texas, Vermont, Virginia, Washington, and Wisconsin.

Source Numbers

163, 164, 168, 180, 181, 241, 245, 278, 294, 300, 301, 319, 338, 340, 342, 358, 389, 438, 502, 552, 577, 583, 584, 617, 640, 641, 704, 715, 728, 810, 866, 867, 869, 885, 886, 927, 935, 962, 977

Land Use: 935

Fast-Food Restaurant with Drive-Through Window and No Indoor Seating

Description

This category includes fast-food restaurants with drive-through service only. These facilities typically have very small building areas and may provide a limited amount of outside seating. These limited-service eating establishments usually do not provide table service. Fast casual restaurant (Land Use 930), high-turnover (sit-down) restaurant (Land Use 932), fast-food restaurant without drive-through window (Land Use 933), and fast-food restaurant with drive-through window (Land Use 934) are related uses.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the five general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 12:00 and 1:00 p.m., respectively.

The sites were surveyed in the 1990s, the 2000s, and the 2010s in California, Indiana, Kentucky, New Jersey, New York, and Texas.

Source Numbers

404, 713, 720, 886

Land Use: 941

Quick Lubrication Vehicle Shop

Description

A quick lubrication vehicle shop is a business where the primary activity is to perform oil change services for vehicles. Other ancillary services provided may include preventative maintenance, such as fluid and filter changes. Automobile repair service is generally not provided. Automobile care center (Land Use 942) and automobile parts and service center (Land Use 943) are related uses.

Additional Data

For the purpose of this land use, the independent variable, servicing positions, is defined as the maximum number of vehicles that can be serviced simultaneously.

Time-of-day distribution data for this land use are presented in Appendix A. For the one general urban/suburban site with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 9:45 and 10:45 a.m. and 3:30 and 4:30 p.m., respectively.

The sites were surveyed in the 1990s and the 2010s in California, Texas, Washington, and Wisconsin.

Source Numbers

362, 441, 886, 960

Land Use: 942 Automobile Care Center

Description

An automobile care center houses numerous businesses that provide automobile-related services, such as repair and servicing, stereo installation, and seat cover upholstery. Quick lubrication vehicle shop (Land Use 941) and automobile parts and service center (Land Use 943) are related uses.

Additional Data

The PM peak hour of the generator typically coincided with the peak hour of the adjacent street traffic.

The sites were surveyed in the 1980s and the 1990s in California and Florida.

Source Numbers

267, 273, 439, 715

Land Use: 943

Automobile Parts and Service Center

Description

An automobile parts and service center sells automobile parts for do-it-yourself maintenance and repair including tires, batteries, oil, and sparks plugs. The stores may also sell automobile parts to retailers and repair facilities. Automobile parts and service centers also provide a full array of on-site services for various automobiles. These facilities provide centralized cashiering and maintain long hours 7 days a week. Automobile parts and service centers are sometimes found as separate parcels within a retail complex. Automobile parts sales (Land Use 843), tire store (Land Use 848), tire superstore (Land Use 849), quick lubrication vehicle shop (Land Use 941), and automobile care center (Land Use 942) are related uses.

Additional Data

Time-of-day distribution data for this land use are presented in Appendix A. For the 30 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 10:15 and 11:15 a.m. and 4:15 and 5:15 p.m., respectively.

The sites were surveyed in the 2000s and the 2010s in New York and Texas.

Source Numbers

555, 886, 887, 888

Land Use: 944

Gasoline/Service Station

Description

This land use includes gasoline/service stations where the primary business is the fueling of motor vehicles. The sites included generally have a small building (less than 2,000 gross square feet) that houses a cashier and limited space for motor vehicle maintenance supplies and general convenience products. A gasoline/service station may also have ancillary facilities for servicing and repairing motor vehicles and may have a car wash. Convenience market with gasoline pumps (Land Use 853), gasoline/service station with convenience market (Land Use 945), and truck stop (Land Use 950) are related uses.

Additional Data

The independent variable—vehicle fueling positions—is defined as the maximum number of vehicles that can be fueled simultaneously.

Gasoline/service stations in this land use include “pay-at-the-pump” and traditional fueling stations.

Time-of-day distribution data for this land use for a weekday, Saturday, and Sunday are presented in Appendix A. For the 16 general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 11:45 a.m. and 12:45 p.m. and 5:45 and 6:45 p.m., respectively. For the one center city core site with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 10:30 a.m. and 11:30 p.m. and 5:00 and 6:00 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Florida, Kentucky, Maryland, Massachusetts, Minnesota, New Hampshire, New Jersey, Ontario (CAN), Oregon, South Dakota, Texas, and Washington.

Specialized Land Use Data

A 2006 study provided data on four private fuel facilities in Florida (source 721). These facilities provide self-fuel service, but are not open for use by the general public. To use the services offered at the facility, a pre-established membership account is required. The trip generation characteristics of this site differed from sites included in this land use; therefore, trip generation information for this site is presented here and was excluded from the data plots. The sites had an average of nine vehicle fueling positions. An average of 12 vehicle trips were counted during the weekday, AM peak hour of adjacent traffic and seven were counted during the weekday, PM peak hour of adjacent street traffic.

Source Numbers

221, 274, 278, 288, 340, 350, 351, 355, 359, 366, 440, 583, 617, 618, 631, 721, 867, 882, 883, 888, 954, 977

Land Use: 945

Gasoline/Service Station with Convenience Market

Description

This land use includes gasoline/service stations with convenience markets where the primary business is the fueling of motor vehicles. These service stations may also have ancillary facilities for servicing and repairing motor vehicles and may have a car wash. Some commonly sold convenience items are newspapers, coffee or other beverages, and snack items that are usually consumed in the car. The sites included in this land use category have the following two specific characteristics:

- The gross floor area of the convenience market is between 2,000 and 3,000 gross square feet
- The number of vehicle fueling positions is at least 10

Convenience market (Land Use 851), convenience market with gasoline pumps (Land Use 853), gasoline/service station (Land Use 944), truck stop (Land Use 950), and super convenience market/gas station (Land Use 960) are related uses.

Additional Data

The independent variable, vehicle fueling positions, is defined as the maximum number of vehicles that can be fueled simultaneously.

Gasoline/service stations in this land use include "pay-at-the-pump" and traditional fueling stations.

Time-of-day distribution data for this land use are presented in Appendix A. For the five general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:30 and 8:30 a.m. and 3:45 and 4:45 p.m., respectively.

A multi-variable regression analysis based on both the convenience market gross floor area (GFA) and the number of vehicle fueling positions (VFP) produced a series of fitted curve equations. The equations are in the form of:

$$\text{Vehicle Trips} = [(\text{VFP Factor}) \times (\text{Number of VFP})] + [(\text{GFA Factor}) \times (\text{GFA})] + (\text{Constant})$$

The values for the VFP factor, GFA factor, and constant are presented in the following table for each time period for which a fitted curve equation could produce an R² value of at least 0.50.

Time Period	VFP Factor	GFA Factor	Constant	R ²
Weekday, AM Peak Hour of Generator	15.6	108	-295	0.62
Weekday, PM Peak Hour of Generator	Not Available			
Weekday, AM Peak Hour of Adjacent Street	15.7	97.3	-284	0.59
Weekday, PM Peak Hour of Adjacent Street	Not Available			

Land Use: 960

Super Convenience Market/Gas Station

Description

This land use includes gasoline/service stations with convenience markets where there is significant business related to the sale of convenience items and the fueling of motor vehicles. Some commonly sold convenience items include newspapers, freshly brewed coffee, daily-made donuts, bakery items, hot and cold beverages, breakfast items, dairy items, fresh fruits, soups, light meals, ready-to-go and freshly made sandwiches and wraps, and ready-to-go salads. Stores typically also had automated teller machines (ATMs), and public restrooms. The sites included in this land use category have the following two specific characteristics:

- The gross floor area of the convenience market is at least 3,000 gross square feet
- The number of vehicle fueling positions is at least 10

Convenience market with gasoline pumps (Land Use 853) and gasoline/service station with convenience market (Land Use 945) are related uses.

Additional Data

To reflect changing characteristics of the convenience market component of this land use, only data from the past two decades have been included in this land use.

The independent variable, vehicle fueling positions, is defined as the maximum number of vehicles that can be fueled simultaneously. Gasoline/service stations in this land use include "pay-at-the-pump" and traditional fueling stations.

A multi-variable regression analysis based on both the convenience market gross floor area (GFA) and the number of vehicle fueling positions (VFP) produced a series of fitted curve equations. The equations are in the form of:

$$\text{Vehicle Trips} = [(\text{VFP Factor}) \times (\text{Number of VFP})] + [(\text{GFA Factor}) \times (\text{GFA})] + (\text{Constant})$$

The values for the VFP factor, GFA factor, and constant are presented in the following table for each time period for which a fitted curve equation could produce an R² value of at least 0.50.

Time Period	VFP Factor	GFA Factor	Constant	R ²
Weekday, AM Peak Hour of Generator	10.3	105	-290	0.62
Weekday, PM Peak Hour of Generator	6.91	76.0	-133	0.68
Weekday, AM Peak Hour of Adjacent Street	16.1	135	-483	0.66
Weekday, PM Peak Hour of Adjacent Street	11.5	82.9	-226	0.51

The sites were surveyed in the late 1990's, 2000s and the 2010s in Florida, Iowa, Maryland, Minnesota, New Hampshire, New Jersey, Pennsylvania, Texas, Utah, and Wisconsin.

Source Numbers

617, 813, 844, 850, 864, 865, 867, 869, 882, 888, 904, 938, 954, 960, 962

Table B.4 - Calculated Employee Space Ratios, ITE Trip Generation Manual, Tenth Edition Data ^A

Land Use Category	ITE Code	Units	Reported Trips per Unit	Reported Trips per Employee	Employee Space Ratio
Hotel/Motel					
Hotel	310	room	8.36	14.34	0.58
All Suites Hotel ^B	311	room	0.38	4.44	0.09
Business Hotel	312	room	4.02	32.31	0.12
Motel	320	room	3.35	25.17	0.13
Resort Hotel ^B	330	room	0.50	0.26	1.92
Recreational					
Public Park	411	acre	0.78	59.53	0.01
Golf Driving Range	432	Tee	13.65	55.57	0.25
Movie Theater	444	1,000 s.f.	78.09	53.12	1.47
Multiplex Movie Theater ^C	445	1,000 s.f.	17.87	13.20	1.35
Amusement Park ^B	480	acre	4.99	0.52	9.60
Water Slide Park ^D	482	acre	22.92	2.55	8.99
Recreational Community Center	495	1,000 s.f.	28.82	27.25	1.06
Institutional					
Elementary School	520	1,000 s.f.	19.52	21.00	0.93
Middle/Junior High School	522	1,000 s.f.	20.17	25.15	0.80
High School	530	1,000 s.f.	14.07	22.25	0.63
Private School (K-8) ^B	534	1,000 s.f.	6.53	5.72	1.14
Private School (K-12) ^B	536	1,000 s.f.	5.50	3.82	1.44
School District Office	538	1,000 s.f.	14.37	5.08	2.83
Junior/Community College	540	1,000 s.f.	20.25	14.61	1.39
University/College	550	1,000 s.f.	26.04	8.89	2.93
Daycare	565	1,000 s.f.	47.62	21.38	2.23
Cemetery	566	acre	6.02	51.75	0.12
Prison ^B	571	1,000 s.f.	11.39	0.68	16.75
Fire and Rescue Station ^E	575	1,000 s.f.	0.48	0.44	1.09
Museum ^F	580	1,000 s.f.	0.35	1.13	0.31
Library	590	1,000 s.f.	72.05	55.64	1.29
Medical					
Hospital	610	1,000 s.f.	10.72	3.79	2.83
Nursing Home	620	1,000 s.f.	6.64	2.91	2.28
Clinic	630	1,000 s.f.	38.16	9.25	4.13
Animal Hospital/Veterinary Clinic	640	1,000 s.f.	21.50	12.69	1.69
Medical/Dental Office	720	1,000 s.f.	34.80	8.70	4.00
Office					
General Office Building	710	1,000 s.f.	9.74	3.28	2.97
Small Office Building	712	1,000 s.f.	16.19	7.98	2.03
Corporate Headquarters	714	1,000 s.f.	7.95	2.31	3.44
Single Tenant Office Building	715	1,000 s.f.	11.25	3.77	2.98
Government Office Building	730	1,000 s.f.	22.59	7.45	3.03
State Motor Vehicles Department ^B	731	1,000 s.f.	7.68	4.27	1.80
United States Post Office	732	1,000 s.f.	103.94	25.40	4.09
Government Office Complex	733	1,000 s.f.	33.98	13.29	2.56
Office Park	750	1,000 s.f.	11.07	3.54	3.13
Research and Development Center	760	1,000 s.f.	11.26	3.29	3.42
Business Park	770	1,000 s.f.	12.44	4.04	3.08
Retail					
Building Materials/Lumber Store	812	1,000 s.f.	18.05	24.55	0.74
Variety Store	814	1,000 s.f.	63.47	95.59	0.66
Free-Standing Discount Store	815	1,000 s.f.	53.12	24.63	2.16
Hardware/Paint Store	816	1,000 s.f.	9.14	36.53	0.25
Nursery (Garden Center)	817	1,000 s.f.	68.10	21.83	3.12
Nursery (Wholesale)	818	1,000 s.f.	39.00	23.40	1.67
Shopping Center	820	1,000 s.f.	37.75	16.11	2.34

Automobile Sales (New)	840	1,000 s.f.	27.84	11.20	2.49
Automobile Sales (Used)	841	1,000 s.f.	27.06	12.48	2.17
Recreational Vehicle Sales	842	1,000 s.f.	5.00	7.88	0.63
Automobile Parts Sales	843	1,000 s.f.	55.34	33.73	1.64
Tire Store	848	1,000 s.f.	28.52	18.43	1.55
Supermarket	850	1,000 s.f.	106.78	75.01	1.42
Convenience Market ^B	851	1,000 s.f.	53.51	34.33	1.56
Convenience Market with Gasoline Pumps	853	1,000 s.f.	624.20	243.38	2.56
Discount Superstore	854	1,000 s.f.	90.87	40.36	2.25
Discount Club	857	1,000 s.f.	41.80	32.21	1.30
Farmers Market ^B	858	acre	179.84	2.06	87.30
Sporting Goods Superstore	861	1,000 s.f.	28.75	4.44	6.48
Pharmacy with Drive-Through Window	881	1,000 s.f.	109.16	69.17	1.58
Furniture Store	890	1,000 s.f.	6.30	10.93	0.58
Beverage Container Recycling Depot ^D	895	1,000 s.f.	12.36	13.82	0.89
Liquor Store ^B	899	1,000 s.f.	17.12	5.98	2.86
Industrial					
Intermodal Truck Terminal ^B	030	1,000 s.f.	1.89	0.72	2.63
General Light Industrial	110	1,000 s.f.	4.96	3.05	1.63
Industrial Park	130	1,000 s.f.	3.37	2.91	1.16
Manufacturing	140	1,000 s.f.	3.93	2.47	1.59
Warehousing	150	1,000 s.f.	1.74	5.05	0.34
Utility	170	1,000 s.f.	13.24	4.11	3.22
Specialty Trade Contractor	180	1,000 s.f.	10.22	3.71	2.75
Services					
Walk-In Bank ^B	911	1,000 s.f.	26.40	6.18	4.27
Drive-In Bank	912	1,000 s.f.	100.03	31.79	3.15
Copy, Print, and Express Ship Store ^B	920	1,000 s.f.	12.30	6.63	1.86
Quality Restaurant ^B	931	1,000 s.f.	8.28	1.79	4.63
High-Turnover Restaurant	932	1,000 s.f.	112.18	21.26	5.28
Fast-Food Restaurant without Drive-Through Window	933	1,000 s.f.	346.23	66.88	5.18
Fast-Food Restaurant with Drive-Through Window	934	1,000 s.f.	470.95	45.49	10.35
Fast-Food Restaurant with Drive-Through Window and No Indoor Seating	935	1,000 s.f.	459.20	34.38	13.36
Quick Lubrication Vehicle Shop	941	1,000 s.f.	69.57	16.00	4.35
Automobile Care Center ^B	942	1,000 s.f.	3.51	1.43	2.45
Automobile Parts and Service Center	943	1,000 s.f.	16.28	10.84	1.50
Gasoline/Service Station	944	1,000 s.f.	1202.83	275.78	4.36
Gasoline/Service Station with Convenience Market	945	1,000 s.f.	1440.02	243.86	5.91
Super Convenience Market/Gas Station	960	1,000 s.f.	837.58	230.91	3.63

Notes:

^{A=} Trip rates in the ITE Trip Generation Manual, 10th Edition, Volume 2, Data were reported for the "Daily Weekday Period", "General Urban/Suburban Setting", unless otherwise noted in the table.

^{B=} Information for the "PM Peak Hour of the Generator" condition in the ITE Trip Generation Manual, 10th Edition, Volume 2, Data was used as best available data for calculating the employee space ratio.

^{C=} Information for the "Friday, PM Peak Hour of the Generator" condition in the ITE Trip Generation Manual, 10th Edition, Volume 2, Data was used as best available data for calculating the employee space ratio.

^{D=} Information for the "Saturday, Peak Hour of the Generator" condition in the ITE Trip Generation Manual, 10th Edition, Volume 2, Data was used as best available data for calculating the employee space ratio.

^{E=} Information for the "Peak Hour of Adjacent Street Traffic, One Hour Between 4pm and 6pm" condition in the ITE Trip Generation Manual, 10th Edition, Volume 2, Data was used as best available data for calculating the employee space ratio.

^{F=} Information for the "AM Peak Hour of the Generator" condition in the ITE Trip Generation Manual, 10th Edition, Volume 2, Data was used as best available data for calculating the employee space ratio.



Appendix

Appendix A — State Enabling Legislation

Appendix B — US Census Data & ITE Employee Space Ratio Calculations

Appendix C — Parks & Recreation Inventory & Analysis Tables

Appendix D — Fire Protection Inventory & Analysis Tables

Appendix E — Municipal Facilities & Services Inventory & Analysis Tables

Table C.1a – Parkland Replacement Values

Park	Location	Estimated Land Value ^A	Acres	Estimated Land Value per Acre
Archives Park	429 Laurens Street	\$230,000	1.13	\$203,540
Armory Square Park	1041 DeKalb Street	\$168,600	5.11	\$32,994
Boykin Park	1615 Campbell Street	\$55,000	5.40	\$10,185
<i>Broad & Bull Four Corners</i>	Broad & Bull Street Inters	\$170,500	5.18	\$32,915
Broad Street Park	1001 Broad Street	\$250,000	0.30	\$833,333
Burndale Park	1134 Fairlawn Drive	\$51,000	0.87	\$58,621
City Arena Park	502 Bull Street	\$25,000	1.00	\$25,000
City Hall Park	921 Fair Street	\$240,264	1.70	\$141,331
Edgewood Park	803 Elmore Street	\$0	0.83	\$0
Groom Park	20 Five Bridges Road	\$27,700	3.06	\$9,052
Hampton Park	309 East DeKalb Street	\$1,140,000	5.57	\$204,668
Kendall Lake Park	2011 Lakeshore Drive	\$1,246,994	57.89	\$21,541
Kendall Park	1500 Park Circle	\$154,800	10.32	\$15,000
Kirkwood Common Park	210 Kirkwood Lane	\$1,082,000	14.39	\$75,191
Kirkwood Park	192 Stowers Street	\$34,000	6.56	\$5,183
Monument Square Park	1300 Monument Square	\$847,200	4.89	\$173,252
Powder Magazine park	818A Market Street	\$500	0.02	\$25,000
Rectory Square Park	310 Rectory Square	\$570,000	5.51	\$103,448
Scott Park	222 Battleship Road	\$458,600	33.92	\$13,520
Tennis Center of Camden	823 Campbell Street	\$362,500	8.44	\$42,950
Town Green	1015 Market Street	\$109,500	0.4	\$273,750
Environmental Park	174 Bramblewood Plantat	\$49,626	26	\$1,909
City Maintenance Complex ^B	1000 Lyttleton St	\$72,462		
	Totals	\$7,273,784	198.49	\$104,654

Notes:

^A = Land values were estimated based on data provided by the Kershaw County Assessor, 2022 except for Kendall Lake Park which appeared to have an missing/erroneous value. Land values for Kendall Lake Park were estimated by finding the average appraised land value within an area of 500 feet of the park. Groom Park is owned by Kershaw County, according to the County Assessor and so the replacement value is null.

^B = Value adjusted based on the percentage use

Table C.2 – Recreation Building Replacement Values

Building Type	Location	Size (sq. ft.) ^A	Building Valuation	Site Development Costs ^B	Professional Services Allowance (10%) ^C	Total Replacement Valuation
Kendall Club House	2011 Lakeshore Drive	804	\$118,060	\$17,709	\$13,577	\$149,346
Tennis Complex Building w/ decorative fencing ar	823 Campbell St	1853	556,500	\$83,475	\$63,998	\$703,973
Tennis Complex Maintenance Shed	823 Campbell St	256	34,574	\$5,186	\$3,976	\$43,736
City Arena	74 Fourth Street	21100	\$422,800	\$63,420	\$48,622	\$534,842
Building # 9 City Lot Electrical Building	1000 Lyttleton St	1,400	\$5,789	\$868	\$666	\$7,323
Building #13 City Lot Warehouse	1000 Lyttleton St	6,935	\$158,865	\$23,830	\$18,270	\$200,965
Building #14 City Lot Streets & Storm Shed	1000 Lyttleton St	3,500	\$88,500	\$13,275	\$10,178	\$111,953
Building #24 Fuel Island Pumps and Tanks	1000 Lyttleton St	570	\$3,479	\$522	\$400	\$4,401
Building #25 City lot parks and traffic shed	1000 Lyttleton St	3,625	\$127,200	\$19,080	\$14,628	\$160,908
Notes:		Total	\$1,515,767	\$227,365	\$174,315	\$1,917,447

^A = Size and Building Valuation statistics were captured from information published in the South Carolina Municipal Insurance and Risk Financing Fund for the City of Camden, Property Schedule, 2022. Information provided by the City of Camden.

^B = Site development costs assumed 15% of the building valuation for estimating associated costs.

^C = Professional services allowance (10%) assumed as part of "system improvements costs" summarized in Section 6-1-920(22) of the South Carolina Development Impact Fee

Table C.3 – Recreation Amenities Replacement Values

Parking Location / Facility Type	Valuation
Kendall Lake Park	
Volleyball Courts with Perimeter Fencing ^A	\$12,395
Site Development Costs ^D	\$1,859
Professional Services Allowance (10%) ^C	\$1,425
Tennis Center of Camden @ 1000 York St	
12 pickle ball courts and two tennis courts ^A	\$343,800
Site Development Costs ^D	\$51,570
Professional Services Allowance (10%) ^C	\$39,537
Kirkwood Park	
Concession Stand ^A	\$29,597
Basketball Courts (2) ^A	\$86,760
Small Playground Structure (small) ^B	\$4,911
Swing (tripod, metal) ^B	\$1,451
Picnic Tables (2) ^B	\$2,434
Benches (3) ^B	\$1,863
Trash (3) ^B	\$1,707
Site Development Costs ^D	\$19,308
Professional Services Allowance (10%) ^C	\$14,803
Scott Park	
Tennis Courts (4) ^A	\$220,400
Rest Rooms ^A	\$26,028
Sand Volleyball Courts (lighted) ^E	\$12,395
Picnic Shelter ^B	\$11,303
Picnic Tables (2) ^B	\$2,434
Site Development Costs ^D	\$40,884
Professional Services Allowance (10%) ^C	\$31,344
Boykin Park	
Basketball Court (1) ^A	\$86,760
Large Playground Structure ^B	\$30,879
Small Playground Structure ^B	\$4,911
Swing (tripod, metal) ^B	\$1,451
Picnic Tables (4) ^B	\$4,868
Benches (2) ^B	\$1,242
Trash Receptacle (4) ^B	\$2,276
Site Development Costs ^D	\$19,858
Professional Services Allowance (10%) ^C	\$15,224
City Arena Park	
Basketball Court (1) ^A	\$86,760

Large Playground Structure ^B	\$30,879
Swing (tripod, metal) ^B	\$1,451
Picnic Tables (2) ^B	\$2,434
Benches (2) ^B	\$1,242
Trash (2) ^B	\$1,138
Site Development Costs ^D	\$18,586
Professional Services Allowance (10%) ^C	\$14,249

Edgewood Park

Basketball Court (1) ^A	\$86,760
Small Playground Structure ^B	\$4,911
Swing (tripod, metal) ^B	\$1,451
Benches (2) ^B	\$1,242
Trash Receptacle (2) ^B	\$1,138
Site Development Costs ^D	\$14,325
Professional Services Allowance (10%) ^C	\$10,983

Rectory Square Park

Gazebo ^A	\$21,934
Tennis Courts (2) ^E	\$110,200
Large Playground Structure ^B	\$30,879
Swings (tripod, metal - 2) ^B	\$2,902
Picnic Tables (4) ^B	\$4,868
Benches (8) ^B	\$4,968
Trash Receptacle (8) ^B	\$4,552
Site Development Costs ^D	\$27,045
Professional Services Allowance (10%) ^C	\$20,735

Tennis Complex @ 823 Cambell St

Stadium Tennis Courts (2), Regular Tennis Courts (16), Pickle Ball Courts (12), Fencing & Shelter Structures ^A	\$828,100
Site Development Costs ^D	\$124,215
Professional Services Allowance (10%) ^C	\$95,232

Hampton Park

Large Playground Structure ^B	\$30,879
Historic Granite Fountain ^B	\$11,299
Benches (4) ^B	\$2,484
Swing (tripod, metal) ^B	\$1,451
Picnic Tables (4) ^B	\$4,868
Trash Receptacle (5) ^B	\$2,845
Site Development Costs ^D	\$8,074
Professional Services Allowance (10%) ^C	\$6,190

Environmental Park

Complete park development, including canoe/kayak launch, observation area, 0.9 mile trail, parking area and landscape work.	\$1,400,000
Site Development Costs ^F	\$0
Professional Services Allowance (10%) ^F	\$0
Amenity Valuation	\$3,571,499
Site Development Costs^D	\$325,725
Professional Services Allowance (10%)^C	\$249,722
Total	\$4,146,947

Notes:

^A = Replacement value statistics were captured from information published in the South Carolina Municipal Insurance and Risk Financing Fund for the City of Camden, Property Schedule, 2022. The most current valuation was used for each listed asset.

^B = Park amenity costs were derived from information based on retail costs for equivalent infrastructure.

^C = Professional services allowance (10%) assumed as part of the "system improvements costs" summarized in Section 6-1-920(22) of the South Carolina Development Impact Code Act

^D = Data was not available from historical files / special studies for this park location. Site development costs were estimated to be 15% of the value reported for recreation amenities. This estimate is consistent with industry standards for pre-planning new parks and recreation facilities.

^E = Replacement value statistics were captured from information published in the South Carolina Municipal Insurance and Risk Financing Fund for the City of Camden, Property Schedule, 2022 at a different park unit. The infrastructure was found to be similar enough to use the valuation from the other park site in this case.

^F = Site Development and Professional Services Allowance are included in the overall park development cost

Table C.4 – Trail System Replacement Values

Parks with Walking Trails ^C	Paved Trail (Yes or No)	Miles of Trail	Width of Trail (Feet)	Construction Cost	Site Development Costs ^D	Professional Services (10%) ^E	Total Replacement Cost
Scott Park 1-Mile Running Track ^A	Yes	1.0	12	\$410,482	\$61,572	\$41,048	\$513,102
Scott Park 1/4 Mile Running Track ^B	No	0.25	12	\$88,101	\$13,215	\$8,810	\$110,126
Sweetgum Trail ^A	Yes	0.67	10	\$275,023	\$41,253	\$27,502	\$343,778
Kendall Park Trail ^B	No	0.50	12	\$176,201	\$26,430	\$17,620	\$220,251
Total				\$949,806	\$142,471	\$94,980	\$1,187,257

Notes:

^A = Construction cost used an average cost per mile statistic for a 12' shared use asphalt path from the Florida Department of Transportation (2022)

^B = Construction cost used an average cost per mile statistic for a 12' shared use asphalt path from the Florida Department of Transportation (2022) but subtracting the asphalt element while maintaining the clearing, grubbing, turf, grading and contingency.

^C = Environmental park 0.9 mile trail accounted for under the Recreation Amenities section.

^D = Professional services allowance (10%) assumed as part of the "system improvements costs" summarized in Section 6-1-920(22) of the South Carolina Development Impact Fee Act.

^E = Data was not available from historical files / special studies for this park location. Site development costs were estimated to be 15% of the value reported for recreation amenities. This estimate is consistent with industry standards for pre-planning new parks and recreation facilities.

Table C.5 – Inventory of Other Funding Sources for Parks & Recreation Facilities in Camden, SC

Awarding Agency	Revenue Source	Award Amount	Start Date	Project	
SC Parks, Recreation & Tourism ^A	One-Time Grant	\$3,526.00	2013	City Arena Park Renovation - Phase I	
SC Parks, Recreation & Tourism ^A	One-Time Grant	\$20,000.00	2014	City Arena Park Renovation - Phase II	
SC Parks, Recreation & Tourism ^A	One-Time Grant	\$1,910.80	2014	Edgewood Park Renovations	
SC Parks, Recreation & Tourism ^A	One-Time Grant	\$24,999.96	2016	Sweet Gum Trail, Phase I	
SC Parks, Recreation & Tourism ^A	One-Time Grant	\$60,816.00	2019	Camden Powder Magazine Park - Phase I	
SC Parks, Recreation & Tourism ^A	One-Time Grant	\$24,599.99	2019	Camden Powder Magazine Park - Phase II	
SC Parks, Recreation & Tourism ^A	One-Time Grant	\$41,540.85	2020	Scott Park Equipment	
SC Parks, Recreation & Tourism ^A	One-Time Grant	\$39,540.16	2021	Kirkwood Park Playground	
SC Parks, Recreation & Tourism ^A	One-Time Grant	\$42,800.00	2021	Rectory Square Playground	
SC Parks, Recreation & Tourism ^A	One-Time Grant	\$48,500.00	2021	Scott Park Playground	
SC Parks, Recreation & Tourism ^A	One-Time Grant	\$48,060.00	2023	Hampton Park Playground	
SC Department of Natural Resources	One-Time Grant	\$100,000.00	2020	Environmental Park canoe and kayak launch	
Land & Water Conservation Fund	One-Time Grant	\$500,000.00	2020	Environmental Park	
Groom Family Donation ^B	One-Time Grant	\$27,700.00	Date Unknown	Groom Park	
				Award Total	\$983,994
				10-Year Average	\$98,399
				10-Year Forecast	\$983,994

Notes:

^A = One-time grants provided under the South Carolina Parks & Recreation Development Fund are reimbursable matching grants, whereby the State pays 80% of the total cost and the City pays 20% of the total cost. Dollar amounts reported in this table represent the State's financial commitment (outside funding source) to the project.

^B = Represent parks and recreation amenities that were donated to the City of Camden

Table C.6 – Percentage Use, Parks & Recreation Facilities in Camden, SC

City Maintenance Complex

Total Area - Parks Use 4,701.25

Function	Total Area	% of Usage ^A	Total Area Used	Notes
Building # 9 City Lot Electrical Building	1,400.00	5%	70.00	
Building #13 City Lot Warehouse	6,935.00	15%	1,040.25	
Building #14 City Lot Streets & Storm Shed	3,500.00	50%	1,750.00	
Building #24 Fuel Island Pumps and Tanks	570.00	5%	28.50	Square footage estimated using aerial photography
Building #25 City lot parks and traffic shed	3,625.00	50%	1,812.50	
Building #26 Jet Machine Water Offices	7,200.00	0%	-	
Building #27 City Lot, Shed 3, Electric Shed	2,550.00	0%	-	
Building #130 Public Works Offices & Storage	1,200.00	0%	-	
Building #131 Public Works Storage	1,200.00	0%	-	
Total	28,180.00		4,701.25	16.7%

Notes:

^A = Percentage of usage provided by Planning & Development Director, personal communication, then divided by half to reflect a 50% split between parks and streets



Appendix

Appendix A — State Enabling Legislation

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Appendix C — Parks & Recreation Inventory & Analysis Tables

Appendix D — Fire Protection Inventory & Analysis Tables

Appendix E — Municipal Facilities & Services Inventory & Analysis Tables

Table D.1 – Fire Protection Facilities Replacement Land Values

Facility Type	Location	Estimated Land Value	Acres	Land Value per Acre
Station No. 1 ^A	1000 Lyttleton St	\$205,074	2.30	\$89,163
Station No. 2 ^B	2007 Liberty Road	\$44,840	1.21	\$37,058
Fire Department Training Center	401 Fair Street	\$26,618	1.30	\$20,475
Totals		\$276,531	4.81	

Notes:

^A = Land values for station 1 was estimated based on data provided by the Kershaw County Assessor, 2022. The total area of the City property at 1000 Lyttleton St is 7.2 acres with an assessed land value of \$1,019,000 . Divided up by use, 1.7 ac are City Hall Park, 2.3 are City Hall, 3.2 are the Public Works Maintenance Area. The value is then derived proportionally. The tax assessor record for Station No. 2 appeared to have an erroneous value. Land values for Station No 2 were estimated by finding the average appraised land value within an area of 500 feet of the park.

^B = The tax assessor record for Station No. 2 appeared to have an erroneous value. Land values for Station No 2 were estimated by finding the average appraised land value within an area of 500 feet of the park.

^C = Land values was estimated based on data provided by the Kershaw County Assessor, 2022. Total property size is 10.94 acres but only 1.3 acres is used by CFD. The remainder appears to be vacant or used by the City's utilities for storage

Table D.2 – Fire Protection Facilities Replacement Values

Facility Type	Location	Size (sq. ft.) ^A	Building Valuation ^A	Site Development Costs	Professional Services Allowance (10%) ^B	Total Replacement Valuation
Fire Station #1	1000 Lyttleton St	28,386	\$2,095,961	\$314,394	\$241,036	\$2,651,391
Fire Station #2	2007 Liberty Road	5,630	\$1,060,100	\$159,015	\$121,912	\$1,341,027
Fire Department Training Center	401 Fair Street	2,000	\$77,304	\$11,596	\$8,890	\$97,790
		Total	\$3,233,365	\$485,005	\$371,838	\$4,090,208

Notes:

^A = Size and Building Valuation statistics were captured from information published in the South Carolina Municipal Insurance and Risk Financing Fund for the City of Camden, Property Schedule, 2022. Information provided by the City of Camden.

^B = Professional services allowance (10%) assumed as part of "system improvements costs" summarized in Section 6-1-920(22) of the South Carolina Development Impact Fee Act.

Table D.3 – Fire Protection Equipment Replacement Values

Equipment	Make / Model / Year	No. in Service	Unit Cost ^A	Additional Equipment ^A	Replacement Cost
Fire Vehicle, #90	Mack Fire Truck R611FC	1	\$100,798	0	\$100,798
Fire Vehicle, #93	Pierce Fire Truck	1	\$854,938	0	\$854,938
Fire Vehicle, #94	Pierce Fire Pumper Truck	1	\$254,387	0	\$254,387
Fire Vehicle, #95	Pierce Pumper	1	\$290,000	0	\$290,000
Fire Vehicle, #151	Pierce Saber Pumper	1	\$489,013	0	\$489,013
Fire Vehicle, #194	Ford F550	1	\$250,000	0	\$250,000
Fire Vehicle, #250	Pierce Pumper	1	\$950,000	\$5,000	\$955,000
		Total	\$3,189,136	\$5,000	\$3,194,136

Notes:

^A = Replacement value statistics were captured from information published in the South Carolina Municipal Insurance and Risk Financing Fund for the City of Camden, Vehicle and Equipment Schedule, 2022. Information provided by the City of Camden.

Table D.4 – Inventory of Other Available Funding Sources for Fire Protection in Camden

Revenue Source	Item	Year	Award Amount
Project Improvement Fund	Pumper Fire Truck	2017	\$250,000
Project Improvement Fund	Pierce Pumper	2021	\$955,000
		Award Total	\$1,205,000
		10-Year Average	\$120,500
Notes:		10-Year Forecast	\$1,205,000

^A = Replacement value statistics were captured from information published in the South Carolina Municipal Insurance and Risk Financing Fund for the City of Camden, Vehicle and Equipment Schedule, 2022. Information found in FY 2021-22 budget, Project Improvement Fund.



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Appendix C — Parks & Recreation Inventory & Analysis Tables

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Appendix E — Municipal Facilities & Services Inventory & Analysis Tables

Table E.1 – Municipal Facilities Replacement Land Values

Facility Type	Location	Estimated Land Value ^A	Acres	Estimated Land Value per Acre
City Hall (Municipal NOC) ^A	1000 Lyttleton St	\$19,531	2.30	\$8,492
Public Works Maintenance Area	1000 Lyttleton St	\$113,222	3.20	\$35,382
Police Station	816 W Dekalb	\$185,000	0.55	\$336,364
		Totals	6.05	

Notes:

^A = Land values were estimated based on data provided by the Kershaw County Assessor, 2022. The total area of the City property at 1000 Lyttleton St is 7.2 acres with an assessed land value of \$1,019,000 . Divided up by use, 1.7 ac are City Hall Park, 2.3 are City Hall, 3.2 are the Public Works Maintenance Area. The value is then derived proportionally by use. See Municipal Services Usage.

Table E.2 – Municipal Facilities Building & Structure Replacement Values

Building Type	Location	Size (sq. ft.) ^A	Building Valuation ^A	Site Development Costs ^B	Professional Services Allowance (10%) ^C	Total Replacement Valuation
City Hall (Municipal NOC)	1000 Lyttleton Street	28,386	\$306,726	\$46,009	\$35,274	\$388,009
Police Station	816 W Dekalb Street	8,602	\$1,455,800	\$218,370	\$167,417	\$1,841,587
Building # 9 City Lot Electrical Building	1000 Lyttleton St	1,400	\$5,789	\$868	\$666	\$7,323
Building #13 City Lot Warehouse	1000 Lyttleton St	6,935	\$158,865	\$23,830	\$18,270	\$200,965
Building #14 City Lot Streets & Storm Shed	1000 Lyttleton St	3,500	\$88,500	\$13,275	\$10,178	\$111,953
Building #24 Fuel Island Pumps and Tanks	1000 Lyttleton St	570	\$3,479	\$522	\$400	\$4,401
Building #25 City lot parks and traffic shed	1000 Lyttleton St	3,625	\$127,200	\$19,080	\$14,628	\$160,908
Building #130 Public Works Offices & Storage	818 Lyttleton St	1,200	\$66,852	\$10,028	\$7,688	\$84,568
Building #131 Public Works Storage	818 A Lyttleton St	1,200	\$54,835	\$8,225	\$6,306	\$69,366
		Totals	\$2,268,046	\$340,207	\$260,827	\$2,869,080

Notes:

^A = Size and Building Valuation statistics were captured from information published in the South Carolina Municipal Insurance and Risk Financing Fund for the City of Camden, Property Schedule, 2022. Information provided by the City of Camden.

^B = Site development costs assumed 15% of the building valuation for estimating associated costs.

^C = Professional services allowance (10%) assumed as part of "system improvements costs" summarized in Section 6-1-920(22) of the South Carolina Development Impact Fee Act.

Table E.3 – Municipal Equipment Replacement Values

Equipment	Make / Model / Year	No. in Service	Unit Cost ^A	Additional Equipment	Replacement Cost
Public Works #88	MACK FRONT LOAD GARBAGE TRUCK 200	1	\$154,884		\$154,884
Public Works #97	STERLING GARBAGE PACKER 2007	1	\$117,481		\$117,481
Public Works #128	STERLING ACTERRA 2009	1	156,726		\$156,726
Public Works #184	MACK FRONT LOADER 2016	1	\$239,625		\$239,625
Public Works #195	INTERNATION AL 7300 2017	1	\$133,395		\$133,395
Public Works #213	INTERNATION AL Sanitation Truck 2018	1	\$140,000		\$140,000
Public Works #221	CATERPILLER Global M4 2019	1	\$246,127		\$246,127
Public Works #230	PETERBILT Rear Load Sanitation Truck 2020	1	\$204,584		\$204,584
Public Works #238	INTERNATION AL Rear Load 2019	1	\$180,170		\$180,170
Public Works #243	MACK Commercial Front End Loader 2007	1	\$170,000		\$170,000
Public Works #247	PETERBILT Model 520Packer-Front Loader 20	1	\$280,435		\$280,435
Notes:				Total	\$1,572,992

^A = Replacement value statistics were captured from information published in the South Carolina Municipal Insurance and Risk Financing Fund for the City of Camden, Vehicle and Equipment Schedules, 2022.

Table E.4 – Revenue for Municipal Facilities Camden, SC

Revenue Source	Item	Award Amount	Year
Project Improvement Fund	Front Load Sanitation Truck #184	\$239,625	2016
Project Improvement Fund	International Rear Load Trash Truck #238	\$180,170	2019
Project Improvement Fund	Front Load Sanitation Truck #247	\$280,435	2022
Sanitation Fee Revenue		\$1,219,270	2022
Award Total		\$1,919,500	
10-Year Average		\$191,950	
10-Year Forecast		\$1,919,500	

Notes:

^A = Project improvement fund composed of ad valorem taxes levied on real and personal property. These are restricted funds used to pay for special projects, grant fund matching and capital improvements. From FY 2021-22 budget but reflecting up to 10 years of expenses

^B = 2022 sanitation fee revenue, provided by city staff

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