Growth-Related
Capital Improvements &
Development Impact Fees

Douglas County, Georgia

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Prepared by

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GROWTH-RELATED CAPITAL IMPROVEMENTS

In order to implement impact fees, local governments in Georgia must include a Capital Improvements Element (CIE) in their Comprehensive Plan. The information discussed in this section will help Douglas County meet its CIE requirements. The growth-related capital improvements discussed below are based on the infrastructure standards and cost factors documented in the impact fee section of this report. As part of its annual budget process, Douglas County will provide more detailed information on specific projects consistent with this planning-level summary of growth-related capital improvements.

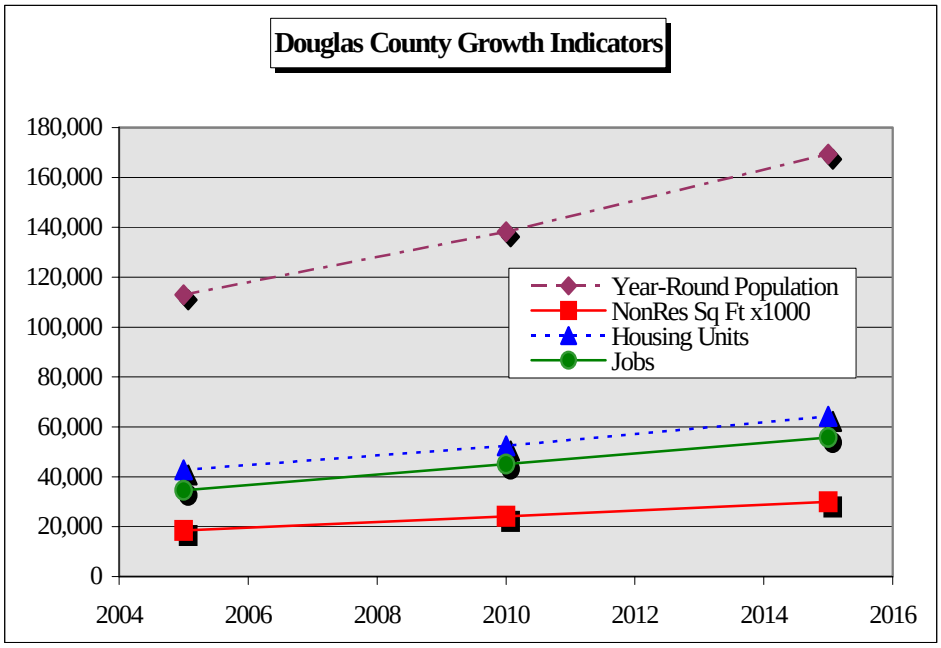
Demand for Infrastructure

TischlerBise calculated the demand for infrastructure using existing standards or obtained capital improvement projects from Douglas County staff. Because infrastructure standards were derived using inventories of existing infrastructure in Douglas County, there are no existing deficiencies and no surplus capacity in system improvements. Detailed inventories of existing infrastructure are provided in the impact fee section of this report.

Growth indicators for the impact fee study are summarized in Figure 1. The projected increase in jobs, at 2,125 per year, is essentially equal to the increase in housing units, at 2,154 units per year. Converting jobs to nonresidential floor area indicates a projected average increase of 1,139,000 square feet per year. These projections were used to calculate the need for capital improvements and to estimate the likely revenue generated by impact fees. For a detailed discussion of demographic data and development projections, please see Appendix A at the back of this report.

Figure 1 – Summary of Growth Indicators

Douglas County, Georgia				Average Annual 2005-2015	
	2005	2010	2015	Increase	Growth Rate
Year-Round Population	112,900	138,286	169,381	5,648	5.0%
Housing Units	42,728	52,409	64,266	2,154	5.0%
Jobs	34,514	45,139	55,764	2,125	6.2%
NonRes Sq Ft x1000	18,520	24,200	29,910	1,139	6.2%



For each type of infrastructure addressed in Douglas County's impact fee study, TischlerBise identified an appropriate demand indicator, such as year-round population or vehicle trips to nonresidential development. Projected demand units over the next five years are listed in Figure 2. Countywide demand units are listed within the boxed area at the top of the table. Data at the bottom of the table, labeled "remainder of the county" exclude data for the City of Douglasville.

Figure 2 – Projected Demand Units

Douglas County, Georgia		Year =>	1	2	3	4	5
		2005	2006	2007	2008	2009	2010
	DEMAND PROJECTIONS (cumulative)						
P	Population	112,900	117,574	122,441	127,510	132,789	138,286
J	Jobs	34,514	36,639	38,764	40,889	43,014	45,139
PJ	Pop & Jobs	147,414	154,213	161,205	168,399	175,803	183,425
TVT	Total Veh Trips	458,932	482,482	506,558	530,924	555,884	581,114
RT	***Residential Units:***	42,728	44,511	46,367	48,300	50,313	52,409
R1	Detached	35,464	36,944	38,484	40,089	41,760	43,500
R2	Attached	7,264	7,567	7,882	8,211	8,553	8,910
RVT	Res Veh Trips	232,357	242,051	252,145	262,656	273,603	285,003
NRT	***NRes Floor Area:***	18,520	19,660	20,790	21,930	23,070	24,200
NR1	Goods KSF	8,230	8,740	9,240	9,750	10,260	10,760
NR2	Services KSF	8,690	9,220	9,760	10,290	10,830	11,360
NR3	Edu KSF	1,300	1,380	1,450	1,530	1,610	1,690
NR4	Gov KSF	300	320	340	360	370	390
NRVT	NRes Veh Trips	226,575	240,431	254,413	268,268	282,281	296,111
DB5	Remainder of Co. Persons	85,705	88,953	92,394	96,037	99,890	103,961
DB6	Remainder of Co. Jobs	19,070	20,368	21,666	22,965	24,263	25,561
DB7	Remainder of Co. Detached	27,151	28,180	29,270	30,424	31,645	32,934
DB8	Remainder of Co. Attached	5,561	5,772	5,995	6,231	6,481	6,746
DB9	Remainder of Co. Goods	4,547	4,856	5,166	5,475	5,785	6,094
DB10	Remainder of Co. Services	4,800	5,126	5,453	5,780	6,106	6,433
DB11	Remainder of Co. Edu	715	764	813	861	910	959
DB12	Remainder of Co. Gov	166	177	188	200	211	222
DB13	Remainder of Co. NRVT	125,123	133,640	142,158	150,676	159,194	167,712

Proposed Means to Meet the Demand for Infrastructure Capacity

The demand for infrastructure is a function of the projected demand units shown above and the infrastructure standards summarized in Figure 3. For each type of public facility addressed in this report, a relationship is established between infrastructure units and demand units. For example, Douglas County currently has 4.3 acres of active parks per 1,000 county residents living outside of Douglasville. The cost of various infrastructure items have been summarized as cost factors per demand unit. For example, for both land and improvements, active parks cost $85,000 per acre as shown in the first row of the table below.

Figure 3 – Summary of Infrastructure Standards

Impact Fee	*Amount*	*Infrastructure Units*	*Per Demand Unit*	*Capital Cost*
Parks	4.3	acres of active parks	1,000 residents	$85,000
Parks	14.3	acres of open space	1,000 residents	$15,000
Library	0.87	acres of library site	10,000 residents	$50,000
Library	0.32	square feet of library building	person	$195
Library	1.51	collection materials	person	$34
Fire Stations	0.42	square feet of fire station	person	$178
Fire Stations	0.19	square feet of fire station	job	$178
Fire Stations	0.15	equipment	1,000 residents	$391,000
Fire Stations	0.07	equipment	1,000 jobs	$391,000
Major Roads	1.37	lane miles	10,000 Vehicle Miles of Travel	$1,430,000
Major Roads		signalized intersections	10,000 Vehicle Miles of Travel	$1,115,000
Sheriff	0.14	square feet of buildings	person	$125
Sheriff	0.01	square feet of buildings	vehicle trip to nonresidential dev	$125
Jail	0.83	square feet of jail	person	$225
Jail	0.10	square feet of jail	vehicle trip to nonresidential dev	$225

Figure 4 provides a summary of growth-related capital improvements over the next five years. Data on cumulative facilities are shown at the top of the table and annual increases are shown in the bottom half of the table. Due to the demand from both residential and nonresidential development, some infrastructure types are shown using two rows. For example, lines C1 and C2 indicate the need for Sheriff building floor area (measured in square feet). Adding the two rows together indicates a total of 13,192 square feet of buildings in 2005. To maintain the current infrastructure standard, Sheriff buildings needs to be expanded by approximately 3,000 square feet by the year 2010.

The County's actual expenditure pattern will likely be more "lumpy" than the annual increments shown below. For example, instead of purchasing and improving 14-17 acres of active parkland each year, Douglas County may wait several years then purchase a larger site. The cumulative growth-related demand for infrastructure is shown in the column on the right side of the table below.

Figure 4 – Summary of Growth-Related Capital Improvements

Douglas County, Georgia		*Year =>*	*1*	*2*	*3*	*4*	*5*	
		2005	*2006*	*2007*	*2008*	*2009*	*2010*	
Cumulative Facilities Needed								
C1	Sheriff Bldg Sq Ft - Res	11,609	12,049	12,515	13,008	13,530	14,082	
C2	Sheriff Bldg Sq Ft - Nonres	1,583	1,691	1,799	1,906	2,014	2,122	
C5	Jail Sq Ft - Res	93,280	97,142	101,163	105,351	109,713	114,255	
C6	Jail Sq Ft - Nonres	12,720	13,498	14,283	15,061	15,847	16,624	
C7	Active Park Acres	367	380.9	395.6	411.2	427.7	445.2	
C8	Open Space Acres	1,222	1,268	1,317	1,369	1,424	1,482	
C11	Library Acres	9.8	10.2	10.6	11.0	11.5	12.0	
C12	Library Square Feet	36,000	37,490	39,042	40,659	42,342	44,095	
C13	Library Materials	170,338	177,390	184,734	192,381	200,346	208,640	
C14	Fire Apparatus - Res	22	23	24	25	26	27	
C15	Fire Apparatus- Nonres	3	3	3	4	4	4	
C16	Fire Station SqFt - Res	49,922	51,989	54,141	56,383	58,717	61,148	
C17	Fire Station SqFt - Nonres	6,808	7,227	7,646	8,065	8,484	8,903	
Additional Facilities Needed								Cumulative Total
C1	Sheriff Bldg Sq Ft - Res		440	466	493	522	552	2,473
C2	Sheriff Bldg Sq Ft - Nonres		108	108	107	108	108	539
C5	Jail Sq Ft - Res		3,862	4,021	4,188	4,362	4,542	20,975
C6	Jail Sq Ft - Nonres		778	785	778	786	777	3,904
C7	Active Park Acres		13.9	14.7	15.6	16.5	17.5	78.2
C8	Open Space Acres		46	49	52	55	58	260
C11	Library Acres		0.4	0.4	0.4	0.5	0.5	2.2
C12	Library Square Feet		1,490	1,552	1,617	1,683	1,753	8,095
C13	Library Materials		7,052	7,344	7,647	7,965	8,294	38,302
C14	Fire Apparatus - Res		1	1	1	1	1	5
C15	Fire Apparatus- Nonres		0	0	1	0	0	1
C16	Fire Station SqFt - Res		2,067	2,152	2,242	2,334	2,431	11,226
C17	Fire Station SqFt - Nonres		419	419	419	419	419	2,095
C22	Arterial Road Lane Miles		5.21	5.41	5.61	5.82	6.04	28.09
C23	Signalized Intersections		1.00	0.00	1.00	1.00	0.00	3.00

Figure 5 applies the cost factors for each type of infrastructure to yield growth-related capital costs over the next five years. Pay-as-you-go capital expenditures needed to accommodate new development over the next five years have a cumulative cost of approximately $64 million dollars.

Figure 5 – Summary of Growth-Related Capital Costs

Douglas County, Georgia		*Year =>*	*1*	*2*	*3*	*4*	*5*	*Cumulative*
		2005	*2006*	*2007*	*2008*	*2009*	*2010*	*Total*
Pay-As-You-Go Expenditures								
	1000 's of dollars							
C1	Sheriff Bldg Sq Ft - Res		$55	$58	$62	$65	$69	$309
C2	Sheriff Bldg Sq Ft - Nonres		$14	$14	$13	$14	$14	$67
C5	Jail Sq Ft - Res		$869	$905	$942	$981	$1,022	$4,719
C6	Jail Sq Ft - Nonres		$175	$177	$175	$177	$175	$878
C7	Active Park Acres		$1,182	$1,250	$1,326	$1,403	$1,488	$6,647
C8	Open Space Acres		$690	$735	$780	$825	$870	$3,900
C11	Library Acres		$20	$20	$20	$25	$25	$110
C12	Library Square Feet		$291	$303	$315	$328	$342	$1,579
C13	Library Materials		$240	$250	$260	$271	$282	$1,302
C14	Fire Apparatus - Res		$391	$391	$391	$391	$391	$1,955
C15	Fire Apparatus- Nonres		$0	$0	$391	$0	$0	$391
C16	Fire Station SqFt - Res		$368	$383	$399	$415	$433	$1,998
C17	Fire Station SqFt - Nonres		$75	$75	$75	$75	$75	$373
C22	Arterial Road Lane Miles		$6,773	$7,033	$7,293	$7,566	$7,852	$36,517
C23	Signalized Intersections		$1,115	$0	$1,115	$1,115	$0	$3,345
Total Pay-As-You-Go:			$12,256	$11,592	$13,557	$13,651	$13,036	$64,091

Funding Sources for Growth-Related Capital Improvements

Potential impact fee revenues are summarized in Figure 6, assuming implementation of the maximum supportable fee amounts. Because each type of impact fee must be accounted for separately, TischlerBise provided cash flow summaries in the impact fee analysis for each type of infrastructure. Over the next five years, impact fees are expected to generate approximately $62.6 million dollars for funding growth-related system improvements. Average annual impact fee revenue is projected to be approximately $12.5 million dollars per year.

If impact fees are imposed at the maximum supportable level, new development will pay the total cost of growth-related infrastructure.

Figure 6 – Projected Impact Fee Revenue

years =>	1	2	3	4	5	Cumulative	Average	Impact Fee
(Current $ in thousands)	2006	2007	2008	2009	2010	Total	Annual	Funding Pct.
GROWTH-RELATED REVENUES								
Sheriff Impact Fees	$65	$68	$71	$75	$79	$358	$72	95%
Park Impact Fees	$1,827	$1,935	$2,049	$2,167	$2,290	$10,267	$2,053	97%
Library Impact Fees	$553	$575	$599	$624	$650	$3,001	$600	100%
Fire Impact Fees	$730	$756	$782	$811	$838	$3,916	$783	83%
Jail Impact Fees	$1,003	$1,036	$1,062	$1,099	$1,127	$5,327	$1,065	95%
Road Impact Fees	$7,382	$7,658	$7,946	$8,245	$8,556	$39,787	$7,957	100%
TOTAL IMPACT FEES	$11,558	$12,029	$12,509	$13,020	$13,538	$62,655	$12,531	98%

IMPACT FEE SUMMARY

In contrast to development exactions, which are typically referred to as project-level improvements, impact fees fund growth-related infrastructure that will benefit multiple development projects, or even the entire jurisdiction. Impact fees are one-time payments that must be used solely to fund system improvements needed to accommodate new development. As documented in this report, Douglas County has complied with all case law requirements and the Georgia Development Impact Fee Act.

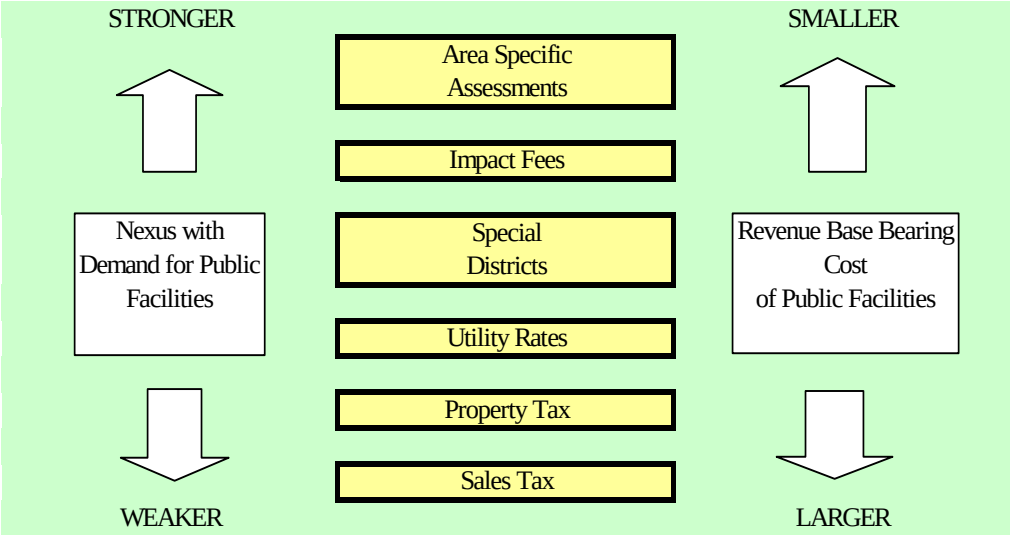
Impact fees are proportionate and reasonably related to the capital improvement demands of new development. Specific costs have been identified using local data and current dollars. With input from County staff, TischlerBise determined demand indicators for each type of infrastructure and calculated proportionate share factors to allocate costs by type of development. The formulas used to calculate the impact fees are diagramed in a flow chart for each type of infrastructure. This report documents the specific factors used to derive the impact fees. Impact fee methodologies also identify the extent to which new development is entitled to various types of credits to avoid potential double payment of growth-related capital costs.

Why Impact Fees?

Infrastructure funding alternatives force decision-makers to wrestle with a dynamic tension between two competing desires. As shown on the left side of Figure 7, various funding options have a strong-to-weak connection between the source of funds and the demand for public facilities. It is unfortunate that the funding options with the closest nexus to the demand for public facilities also have the smallest revenue base to bear the cost of the public facilities (see the right side of the diagram). For example, only new development pays impact fees. In contrast, the property tax base grows larger each year. Unless tax rates are reduced, the property tax base would continue to increase over time, but the increase in new development is relatively constant from year to year.

In the Douglas County, elected officials are considering a policy decision to change the funding source for certain types of infrastructure. If the County implements impact fees, it represents a policy decision to shift infrastructure funding from broad-based revenues, like property and sales taxes, to revenues that have a stronger nexus between the fee payers and the demand for public facilities. As a dedicated revenue source, impact fees could provide significant funding for growth-related system improvements in Douglas County.

Figure 7 – Infrastructure Funding Alternatives

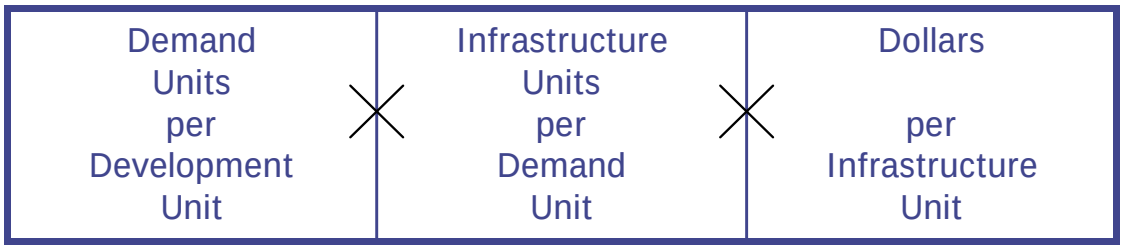


Source: Paul Tischler, Dwayne Guthrie and Nadejda Mishkovsky. 1999. Introduction to Infrastructure Financing. IQ Service Report, Vol. 31, No. 3. Washington, DC: International County/County Management Association.

Basic Understanding of Impact Fee Methods

The basic steps in a generic impact fee formula are illustrated below (see Figure 8). The first step (see the left box) is to determine an appropriate demand indicator, for the particular type of infrastructure. The demand indicator measures the number of demand units for each unit of development. For example, an appropriate indicator of the demand for parks is population growth and the increase in population can be estimated from the average number of persons per housing unit. The second step in the generic impact fee formula is shown in the middle box below. Infrastructure units per demand unit are typically called Level-Of-Service (LOS) standards. In keeping with the park example, a common LOS standard is park acreage per thousand people. The third step in the generic impact fee formula, as illustrated in the right box, is the cost of various infrastructure units. To complete the park example, this part of the formula establishes the cost per acre for land acquisition and park improvements.

Figure 8 – Generic Impact Fee Formula



When applied to specific types of infrastructure, the generic impact-fee formula is customized using three common impact fee methods that focus on different timeframes. The first method is

the cost recovery method. To the extent that new development is served by previously constructed improvements, Douglas County may seek reimbursement for the previously incurred public facility costs. This method is used for facilities that have adequate capacity to accommodate new development, at least for the next five years. The rationale for the cost recovery approach is that new development is paying for its share of the useful life or remaining capacity of an existing facility that was constructed in anticipation of additional development. The second basic approach used to calculate impact fees is the incremental expansion cost method. This method documents current infrastructure standards for each type of public facility in both quantitative and qualitative measures. Douglas County will use impact fee revenue to incrementally expand or provide additional facilities as needed to accommodate new development. A third impact fee approach is the plan-based method. This method is best suited for public facilities that have commonly accepted engineering/planning standards or specific capital improvement plans. Figure 9 summarizes the method(s) used to derive the impact fee for each type of public facility. Also, the left column indicates if the fee will be imposed countywide or only in the unincorporated area.

Figure 9 – Proposed Fee Methods and Cost Components

Type of Fee	Cost Recovery (past)	Incremental Expansion (present)	Plan-Based (future)	Cost Allocation
Unincorporated Parks	Not Applicable	Active Parks and Open Space	Not Applicable	100% Residential
Unincorporated Roads	Not Applicable	Arterial Roads and Traffic Signals	Not Applicable	Vehicle Miles of Travel
Unincorporated Sheriff	Not Applicable	Buildings	Not applicable	Functional Population
Countywide Jails	Not Applicable	Buildings	Not Applicable	Functional Population
Countywide Fire Stations	Not Applicable	Stations and Apparatus	Not Applicable	Functional Population
Countywide Libraries	Not Applicable	Land, Building and Collection Materials	Not Applicable	100% Residential

Douglas County Impact Fee Schedule

Figures 10A and 10B provides a schedule of maximum supportable impact fees for new development in Douglas County. For residential development, impacted fees will be imposed per housing unit. For nonresidential development, impact fees are based on the square feet of floor area or unique demand indicators, such as the number of rooms in a hotel. The fee schedule for nonresidential development is designed to provide a reasonable impact fee determination for common types of development. For unique development types, the County may allow or require an independent impact fee assessment, consistent with requirements to be specified in the County's impact fee ordinance.

Figure 10A – Maximum Supportable County Impact Fees – Paid by New Development Excluding Douglasville

ITE Code		*Parks*	*Libraries*	*Arterial Roads*	*Sheriff*	*Jails*	*Fire/ Rescue*	*TOTAL*
Residential		*Per Housing Unit*						
210	Detached	$1,564	$329	$3,943	$47	$421	$369	$6,673
221	Attached	$1,031	$217	$2,715	$31	$277	$243	$4,514
Nonresidential		*Per Square Foot of Floor Area*						
820	Commercial / Shop Ctr 50,000 SF or less			$8.95	$0.04	$0.61	$0.16	$9.76
820	Commercial / Shop Ctr 50,001-100,000 SF			$7.47	$0.03	$0.51	$0.14	$8.15
820	Commercial / Shop Ctr 100,001-200,000 SF			$6.40	$0.03	$0.43	$0.13	$6.99
820	Commercial / Shop Ctr 200,001-400,000 SF			$5.44	$0.02	$0.37	$0.11	$5.94
710	General Office 10,000 SF or less			$4.64	$0.01	$0.25	$0.26	$5.16
710	General Office 10,001-50,000 SF			$3.20	$0.01	$0.17	$0.23	$3.61
710	General Office 50,001-200,000 SF			$2.32	$0.00	$0.13	$0.20	$2.65
720	Medical-Dental Office			$7.40	$0.02	$0.41	$0.23	$8.06
610	Hospital			$3.59	$0.01	$0.20	$0.19	$3.99
770	Business Park			$2.61	$0.01	$0.14	$0.18	$2.94
110	Light Industrial			$1.42	$0.00	$0.07	$0.13	$1.62
150	Warehousing			$1.01	$0.00	$0.05	$0.07	$1.13
151	Mini-Warehouse			$0.51	$0.00	$0.02	$0.00	$0.53
Other Nonresidential		*Per Demand Indicator*						
320	Lodging (per room)			$1,153	$4	$64	$26	$1,247
520	Elementary School (per student)			$264	$1	$14	$4	$283
530	Secondary School (per student)			$350	$1	$19	$5	$375
565	Day Care (per student)			$917	$3	$51	$9	$980
620	Nursing Home (bed)			$485	$1	$27	$21	$534

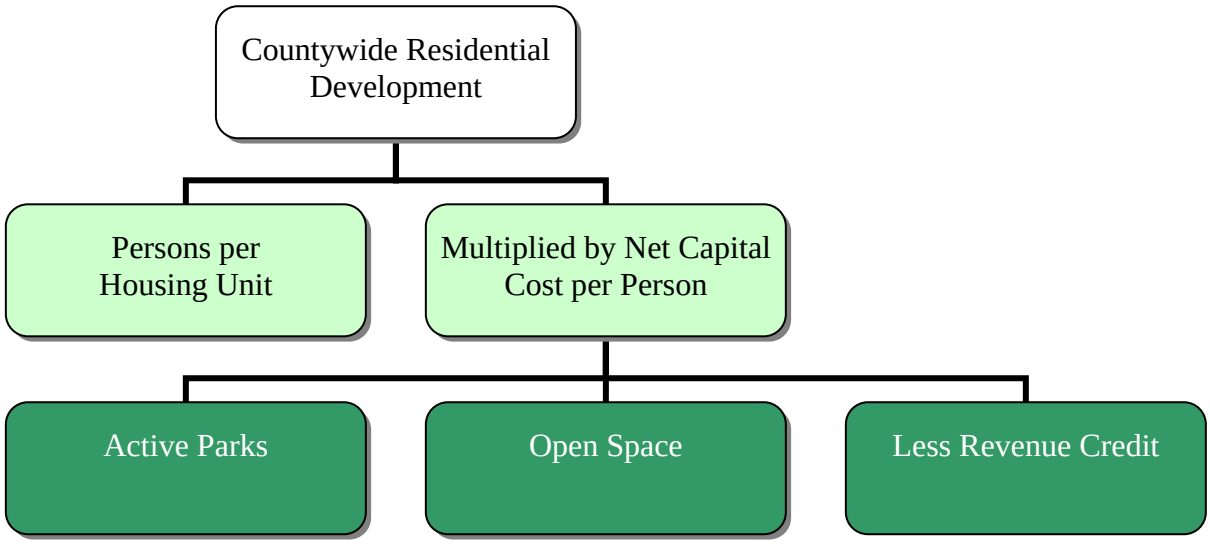
Figure 10B – Maximum Supportable County Impact Fees – Paid by New Development in Douglasville

	Libraries	*Jails*	*Fire/ Rescue*	*TOTAL*
Residential	Per Housing Unit			
210 Detached	$329	$421	$369	$1,119
221 Attached	$217	$277	$243	$737
Nonresidential	Per Square Foot of Floor Area			
820 Commercial / Shop Ctr 50,000 SF or Less		$0.61	$0.16	$0.77
820 Commercial / Shop Ctr 50,001-100,000 SF		$0.51	$0.14	$0.65
820 Commercial / Shop Ctr 100,001-200,000 SF		$0.43	$0.13	$0.56
820 Commercial / Shop Ctr 200,001-400,000 SF		$0.37	$0.11	$0.48
710 General Office 10,000 SF or less		$0.25	$0.26	$0.51
710 General Office 10,001-50,000 SF		$0.17	$0.23	$0.40
710 General Office 50,001-100,000 SF		$0.13	$0.20	$0.33
720 Medical-Dental Office		$0.41	$0.23	$0.64
610 Hospital		$0.20	$0.19	$0.39
770 Business Park		$0.14	$0.18	$0.32
110 Light Industrial		$0.07	$0.13	$0.20
150 Warehousing		$0.05	$0.07	$0.12
151 Mini-Warehouse		$0.02	$0.00	$0.02
Other Nonresidential	Per Demand Indicator			
320 Lodging (per room)		$64	$26	$90
520 Elementary School (per student)		$14	$4	$18
530 Secondary School (per student)		$19	$5	$24
565 Day Care (per student)		$51	$9	$60
620 Nursing Home (bed)		$27	$21	$48

UNINCORPORATED PARKS

The park impact fee is based on per capita standards derived from current inventories of infrastructure and current year-round population in unincorporated Douglas County. As indicated in the park impact fee methodology chart (see Figure 11), cost components were allocated 100% to residential development. The diagram is intended to read like an outline, with lower levels providing a more detailed breakdown of the impact fee components. The park impact fee is derived from the product of persons per housing unit multiplied by the net capital cost per person.

Figure 11 – Park Impact Fee Methodology Chart



Active Parks

As shown in Figure 12, the inventory of active park improvements represents an investment with a current cost of approximately $31 million dollars. Active parks cost an average of $85,000 per acre, or $362 per person. With 367 acres of land for active parks, the current standard is 4.3 acres per 1,000 residents of the unincorporated area. The park impact fee includes the cost of land for active parks, estimated to be $30,000 per acre. Infrastructure standards are derived using the estimated year-round population in 2005 for the entire county less residents of Douglasville.

Figure 12 - Incremental Expansion Cost of Active Parks

Park	Comp Plan Acreage	Softball/ Baseball	Soccer/ Football	Athletic Courts	Picnic Shelter	Playground Equipment	Community Building	Restrooms/ Concession	Miscellaneous Improvements*	TOTAL
Mt. Carmel	10	5	1	2		1	1	4	$100,000	$2,787,000
Beulah	15	5			1		1	4	$150,000	$2,752,500
Deer Lick	55	3	1	6	3	2	1	7	$550,000	$4,610,000
Winston	8	3		4		1	1	2	$80,000	$1,705,500
Bill Arp	9	6	2	4	1	1	1	4	$90,000	$3,260,000
Wilson	11	4		1	2	1	1	2	$110,000	$2,069,000
Boundry Waters	244	8							$2,440,000	$12,148,000
Post Road	15	2	1				1	2	$150,000	$1,701,500
TOTAL	367	36	5	17	7	6	7	25	Per Acre Cost	$31,033,500
Unit Price	$30,000	$298,500	$154,500	$25,000	$10,000	$40,000	$50,000	$150,000	$10,000	

Remainder of County Population in 2005	85,705
Acres of Park Land per 1,000 Persons	**4.3**
Average Cost Per Acre	$85,000
Active Parks Cost Per Person	**$362**

** These costs include items such as parking lots, security lighting, landscaping and irrigation. Boundry Waters improvements in process.*

Source: Douglas County Parks and Recreation Department.

Open Space

Public open space is predominantly natural land and has relatively few improvements compared to active parks. As shown in Figure 13, the current standard for open space is 14.3 acres per 1,000 residents. The cost factor for open space ($15,000 per acre) may be used for a variety of expenditures including acquisition of additional land or conservation easements. The County may also use impact fee revenue for improvements that enhance public access to open space, such as parking areas and trails.

Figure 13 – Incremental Expansion Cost of Open Space

Demand Units

Countywide Population in 2005	85,705

Acreage

Clinton	200
Boundary Waters	220
Dog River Park	802
TOTAL	1,222
Acres per 1,000 Population in 2005	14.3

Cost

Average Cost Per Acre*	$15,000
Open Space Cost Per Capita	**$217**

* Cost per acre is based on anticipated expenditures for open space. Impact fees may be used for the purchase of land, development rights, conservation easements, access improvements or trails.

Revenue Credit

A credit for future revenue is only necessary if there is potential double payment for park system improvements needed to accommodate new development. The Douglas County is receiving SPLOST revenues to fund park system improvements. TischlerBise reviewed the SPLOST capital budget. Based on the review, TischlerBise has determined that there are capacity improvements funded by SPLOST proceeds. A list of the capacity improvements are shown in the top half of Figure 14.

The park capacity improvement expenditures represent 7.6 percent of the total SPLOST budget, as shown in Figure 14. TischlerBise obtained the 2006 SPLOST revenue estimate from the County Budget. Then, TischlerBise calculated 7.6 percent of the 2006 revenue estimate of $11,862,158 which amounts to $896,481, as shown in Figure 14. For the purposes of the credit calculation, TischlerBise assumed that the revenue projection for 2007 would remain constant.

Figure 14 – SPLOST Credit for Parks

Improvements	Budget
Baseball Complex	1,815,772
Soccer Complex	635,520
Tennis Center	998,674
Track	635,520
Skateboard Complex	315,000
Dog River Park	441,372
Mt. Carmel	200,000
Beulah	226,000
Deer Lick	700,000
Winston	437,000
Bill Arp	450,000
Wilson	90,000
Equipment	410,000
Post Road	500,000
Total	7,854,858
Total SPLOST Budget	$103,934,793
Percentage of SPLOST Recreation Impact Fee Related	7.6%
2006 SPLOST Revenue Estimate	$11,862,158
Percentage of SPLOST Revenue to Fund Expenditures	$896,481

The last year of SPLOST revenue collection is 2007. The credit calculation is shown in Figure 15. The SPLOST revenue is divided by the total population to arrive at a credit per person, as shown in Figure 15.

TischlerBise strongly recommends that the impact fees be recalibrated at the termination of the SPLOST.

Figure 15 – SPLOST Credit for Parks

FY	*Future SPLOST*	*Persons*	*Future SPLOST Per Person*
2006	$896,481	88,953	$10.08
2007	$896,481	92,394	$9.70
Total	$1,792,962		$19.78
		Discount Rate	5.00%
		Present Value	$18.40

Park Fee Calculations

Infrastructure standards used to calculate park impact fees are shown in the boxed area of Figure 16. The park impact fee is the product of persons per housing unit multiplied by the net capital cost per person. For example, the park impact fee for a detached house is 2.79 x $561, or $1,564 per housing unit.

Figure 16 - Park Impact Fee Schedule

	Standards:
Persons Per Housing Unit	
Detached Residential	2.79
Attached Residential	1.84
Infrastructure Standards	
Active Parks Cost per Person	$362
Open Space Cost per Person	$217
SPLOST Revenue Credit	($18)
Policy on Impact Fee Funding	100%
Net Capital Cost per Person	$561

Park Impact Fee Schedule - Unincorporated Area

	Per Housing Unit
Detached	$1,564
Attached	$1,031

Funding Plan for Growth-Related Park Improvements

A summary of growth related improvements for parks is shown in Figure 17. The need for park improvements is derived from the infrastructure standards and the projected increase in population over the next five years. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the impact fee revenue and capital costs. See Appendix A for discussion of the development projections that drive the cash flow analysis.

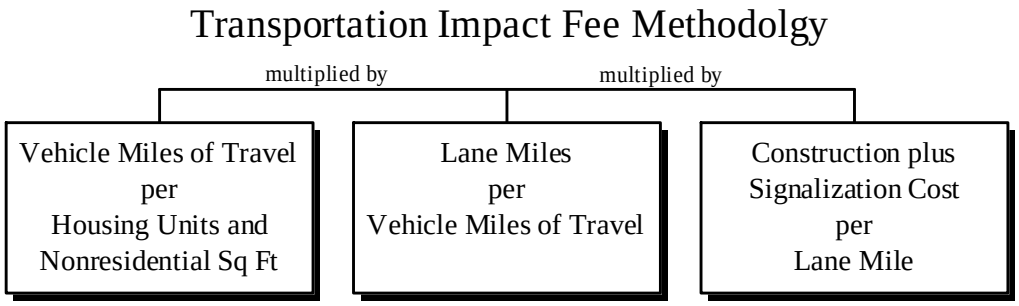
Douglas County expects to receive $2 million dollars annually in park impact fee revenue, if fee are implemented at the maximum supportable level. To accommodate new residential development over the next five years, Douglas County will spend approximately $6.6 million on active parks. This expenditure represents a need for approximately 78.2 additional acres of improved active parks. To maintain the current infrastructure standard for open space over the next five years will require an additional 260 acres, at a projected cost of $3.9 million.

Figure 17 – Projected Cash Flow for Parks

years =>	1	2	3	4	5	Cumulative	Average
(Current $ in thousands)	2006	2007	2008	2009	2010	Total	Annual
GROWTH-RELATED REVENUES							
Park Impact Fees	$1,827	$1,935	$2,049	$2,167	$2,290	$10,267	$2,053
GROWTH-RELATED CAPITAL COSTS							
Active Parks	$1,182	$1,250	$1,326	$1,403	$1,488	$6,647	$1,329
Open Space	$690	$735	$780	$825	$870	$3,900	$780
Total Cost for Parks	$1,872	$1,985	$2,106	$2,228	$2,358	$10,547	$2,109
Net Cash Flow for Parks						*Current $ in thousands*	
Annual Surplus (or Deficit)	($45)	($49)	($57)	($61)	($68)	($280)	($56)
Cumulative Surplus (or Deficit)	($45)	($94)	($152)	($212)	($280)		

UNINCORPORATED ROADS

The general steps in the road impact fee methodology are diagrammed below. A Vehicle Mile of Travel (VMT) is simply a measurement unit equal to one vehicle traveling one mile. In the aggregate, VMT is the product of vehicle trips multiplied by the average trip length. A Lane Mile is a rectangular area of pavement, one lane wide and one mile long.



For all local and collector streets, Douglas County will require developer dedication of Rights-Of-Way (ROW) and full improvements. Local and collector streets and intersection improvements involving local or collector streets, such as traffic signals and/or turn lanes, are considered to be project-level improvements that are not eligible for impact fee reimbursements or credits. Impact fees will fund system improvements that expand the capacity of arterial roads that are not part of the State highway system.

Trip Generation

Douglas County road impact fees are based on average weekday vehicle trip ends. Trip generation rates are from the reference book Trip Generation published by the Institute of Transportation Engineers (ITE, 2003). A vehicle trip end represents a vehicle either entering or exiting a development (as if a traffic counter were placed across a driveway). To calculate road impact fees, trip generation rates are adjusted to avoid double counting each trip at both the origin and destination points. Therefore, the basic trip adjustment factor is 50%. As discussed further below, the impact fee methodology includes additional adjustments to make the fees proportionate the infrastructure demand for particular types of development.

Adjustment for Journey-To-Work Commuting

Residential development has a larger trip adjustment factor of 60% to account for commuters leaving Douglas County for work. According to the Nationwide Personal Transportation Study (see Table 28, Federal Highway Administration, 1999) home-based work trips are typically 32% of production trips (i.e., all out-bound trips, which are 50% of all trip ends). Also, Census 2000 data from Table P26 in Summary File 3 indicates that 63% of Douglas County workers travel outside the County for work. In combination, these factors (0.32 x 0.50 x 0.63 = 0.10) support the higher allocation of trips to residential development.

Adjustment for Pass-By Trips

Data contained in Trip Generation Handbook (ITE, 2004) indicate an inverse relationship between commercial building size and pass-by trips. Therefore, appropriate trip adjustment factors have been calculated according to commercial building size (see Figure 18). For commercial developments, the trip adjustment factor is less than 50% because retail development and some services (like banks) attract vehicles as they pass by on arterial roads. For example, when someone stops at a convenience store on the way home from work, the convenience store is not the primary destination. For a small commercial building of 10,000 square feet of floor area, the ITE data indicates that on average 52% of the vehicles that enter are passing by on their way to some other primary destination. The remaining 48% of attraction trips have the commercial building as their primary destination. Because attraction trips are half of all trips, the trip adjustment factor is 48% multiplied by 50%, or approximately 24% of the trip ends for a commercial development of 10,000 square feet.

Figure 18 – Commercial Trip Rates and Adjustment Factors

Floor Area in thousands (KSF)	***Shopping Centers*** (ITE 820 Weekday*)		***Shopping Centers*** (ITE 820 PM-Peak Hour*)		Commercial Pass-by Trips**	Commercial Trip Adj Factor***
	Trip Ends	Rate/KSF	Trip Ends	Rate/KSF		
10	1,520	152.03	137	13.70	52%	24%
25	2,758	110.32	251	10.03	45%	28%
50	4,328	86.56	396	7.92	39%	31%
100	6,791	67.91	626	6.26	34%	33%
200	10,656	53.28	989	4.95	29%	36%
400	16,722	41.80	1,563	3.91	23%	39%
800	26,239	32.80	2,470	3.09	18%	41%

* Trip Generation, ITE, 2003.
** Based on data published by ITE in Trip Generation Handbook (2004), the best trendline correlation between pass-by trips and floor area is a logarithmic curve with the equation ((-7.6967*LN(KSF)) + 69.448).
*** To convert trip ends to vehicle trips, the standard adjustment factor is 50%. Due to pass-by trips, commercial trip adjustment factors are lower, as derived from the following formula (0.50*(1-passby pct)).

Vehicle Miles of Travel

Vehicle Miles of Travel (VMT) is the product of the number of vehicle trips multiplied by the average trip length. The average trip length in Douglas County is calibrated using data on current lane-miles of arterial roads and a lane capacity standard (discussed below). Because Douglas County is partially rural, the large geographic area requires an extensive network of arterial roads. Many of these arterial roads have surplus capacity but there are some arterials where future expenditures will be necessary to maintain the current level of service.

The list of arterial roads provide by the staff indicated a total of 191 centerline miles, or 382 lane miles (assuming two travel lanes). Based on the map of existing volume to capacity ratios (contained in the Comprehensive Plan) the consultant and staff concluded that approximately

30% of the roads are at a LOS that should not be further deteriorated by new development. This "critical network" of 114.6 lane miles (382 X 0.30) was used to calibrate the average trip length and thus the road impact fees.

The infrastructure standard for impact fees in Douglas County is defined as lane-miles of arterial roads per 10,000 VMT. Development in unincorporated Douglas County currently generates approximately 836,600 vehicle miles of travel (see Figure 20). With an arterial road network of 114.6 lane miles and 83.66 VMT (expressed in ten thousands), the current infrastructure standard is 1.37 arterial road lane miles per 10,000 VMT.

Lane Capacity

The arterial road impact fees are based on a lane capacity standard of 7,300 vehicles per lane, obtained from the Georgia Regional Transportation Authority. The lane capacity standard is from Table 5 of the Development of Regional Impact Technical Guidelines, which provides generalized annual average daily volumes for major city/county roads. For non-state roadways, a two-lane undivided roadway operating at LOS "D" has an estimated capacity of 14,600 vehicles per day, or 7,300 vehicles per lane.

Average Trip Length on County Arterial Roads

Determining average trip length for the purpose of impact fees requires consideration of the functional classification of roads and the community's criteria for system improvements, as discussed above. A typical vehicle trip, such as a person leaving their home and traveling to work, generally begins on a local street that connects to a collector street, which connects to an arterial road and eventually to a state or interstate highway. This progression of travel up and down the functional classification chain limits the average trip length question to the following, "What is the average vehicle trip length on impact fee system improvements (i.e., arterial roads in Douglas County)?"

With 114.6 lane miles of arterial roads and a lane capacity standard of 7,300 vehicles per lane, the arterial network can accommodate approximately 836,600 vehicle miles of travel (i.e., 7,300 vehicles per lane traveling the entire 114.6 miles). To derive the average utilization (i.e., average trip length expressed in miles) of the arterial system, divide vehicle miles of travel by the vehicle trips associated with development in unincorporated Douglas County in 2005. As explained further below, existing development in unincorporated Douglas County is currently generating an estimated 303,011 vehicle trips on an average weekday. Dividing 836,600vehicle miles of travel by 303,011 average weekday vehicle trips yields an average trip length of approximately 2.76 miles. However, to be consistent with the methodology used in the impact fee calculations, TischlerBise further refined the average trip length determination through a series of iterations using spreadsheet software. This refinement is necessary because the calibration of average trip length includes the same adjustment factors used in the impact fee calculations (i.e., residential commuting adjustment, commercial pass-by adjustment and average trip length adjustment by type of land use). With these additional refinements, TischlerBise determined the average trip length on arterial roads to be 2.77 miles, as shown in Figure 19.

Trip Length Adjustment by Type of Land Use

The road impact fee methodology includes a percentage adjustment to account for trip length variation by type of land use. As documented in Table 5 of the National Personal Transportation Survey (NPTS) published by the Federal Highway Administration in 1999, vehicle trips from residential development are approximately 127% of the average trip length. The residential trip length adjustment factor includes data on home-based work trips, social and recreational purposes. Conversely, shopping trips associated with commercial development are roughly 62% of the average trip length while other nonresidential development typically accounts for trips that are 76% of the average trip length.

Cost Factor for Transportation Improvements

Based on recent capital projects in Douglas County, staff estimated an average cost of $1.3 million per lane mile. The County's cost for traffic signals averages $1,115,000 per intersection. In Douglas County, the arterial network currently has 14 signalized intersections.

Infrastructure Demand from Development within Douglas County

The relationship between development units in unincorporated Douglas County and the projected demand for infrastructure is documented in the following two tables. Figure 19 summarizes the input variables used to determine the need for arterial road improvements. The variables at the top of the table (without shading) are ITE trip rates and adjustment factors. The variables in the middle of the table (with blue shading) are Census and NPTS data (see the residential commuting adjustment and the average trip length adjustments by type of land use). The variables at the bottom of the table (with yellow and green shading) are local data that have already been discussed above.

Figure 19 – Input Variables for Arterial-Street Needs Analysis

INPUT VARIABLES	
Detached Weekday VTE per Unit	9.57
Attached Weekday VTE per Unit	6.59
Goods Production VTE/KSF	4.96
Services Weekday VTE/KSF	67.91
Edu Weekday VTE/KSF	14.49
Gov Weekday VTE/KSF	13.34
Services Trip Adj Factor	33%
All Other Nonres Trip Adj	50%
Residential Trip Adj Factor	60%
Residential Trip Length	127%
Commercial Trip Length	62%
Other Nonres Trip Length	76%
First Projection Year	2006
Capacity Per Lane	7,300
Avg Miles/Trip	2.77
Cost per Lane-Mile	$1,300,000
Current Signalized Interesections	14
Cost per Signalized Intersection	$1,115,000

Development projections are multiplied by the input variables from the previous table to yield average weekday travel demand on arterial roads in Douglas County. Demographic data shown at the top of Figure 20 are discussed further in Appendix A. Trip generation rates and trip adjustment factors convert projected development into average weekday vehicle trips, shown with grey shading. For example, in the year 2005 the 27,151 detached housing units are expected to produce 155,900 weekday trips, which is about 51% of the total 303,011 vehicle trips.

To keep pace with new development in unincorporated Douglas County over the next five years, the County will need approximately 28 lane miles of arterial roads plus three signalized intersections, at a total cost of approximately $36.5 million.

Figure 20 – Growth-Related Need for Arterials

Year =>	Base	1	2	3	4	5	Cumulative
Douglas County, GA	2005	2006	2007	2008	2009	2010	Increase
DEMAND DATA							
DETACHED UNITS	27,151	28,180	29,270	30,424	31,645	32,934	
ATTACHED UNITS	5,561	5,772	5,995	6,231	6,481	6,746	
GOODS KSF	4,547	4,856	5,166	5,475	5,785	6,094	
SERVICES KSF	4,800	5,126	5,453	5,780	6,106	6,433	
EDU KSF	715	764	813	861	910	959	
GOV KSF	166	177	188	200	211	222	
DETACHED TRIPS	155,900	161,808	168,068	174,695	181,703	189,109	
ATTACHED TRIPS	21,988	22,822	23,704	24,639	25,628	26,672	
GOODS TRIPS	11,275	12,043	12,811	13,578	14,346	15,113	
SERVICES TRIPS	107,559	114,880	122,203	129,525	136,847	144,170	
EDU TRIPS	5,182	5,535	5,887	6,240	6,593	6,946	
GOV TRIPS	1,106	1,182	1,257	1,332	1,408	1,483	
TOTAL TRIPS	303,011	318,269	333,930	350,010	366,525	383,493	
ARTERIAL VMT	836,582	874,645	914,123	955,073	997,555	1,041,632	
ARTERIAL LN MI	114.60	119.81	125.22	130.83	136.65	142.69	
ANL ARTERIAL LN MI		5.21	5.41	5.61	5.82	6.04	28.09
ANL ARTERIAL COST		$6,773,000	$7,033,000	$7,293,000	$7,566,000	$7,852,000	$36,517,000
LN MI PER 10,000 VMT	1.37	1.37	1.37	1.37	1.37	1.37	
SIG INTERSECTIONS	14	15	15	16	17	17	
ANL SIG INTERSECT		1	0	1	1	0	3
ANL SIGNAL COST		$115,000	$0	$115,000	$115,000	$0	$345,000

Credit Evaluation

A credit for future revenue is only necessary if there is potential double payment for transportation system improvements needed to accommodate new development. Douglas County is receiving SPLOST revenues to fund transportation system improvements. TischlerBise reviewed the SPLOST capital budget. Based on the review, TischlerBise has determined that there are capacity improvements funded by SPLOST proceeds. A list of the capacity improvements are shown in the top half of Figure 21.

The road capacity improvement expenditures represent 3.4 percent of the total SPLOST budget, as shown in Figure 21. TischlerBise obtained the 2006 SPLOST revenue estimate of $11,862,158 from the County Budget. Then, TischlerBise calculated 3.4 percent of the 2006 revenue estimate which amounts to $399,530, as shown in Figure 21. For the purposes of the credit calculation, TischlerBise assumed that the revenue projection for 2007 would remain constant.

Figure 21 – SPLOST Funded Projects

SPLOST Road and Intersection Projects - Impact Fee Related	
Widening Chapel Hill- Stewart Mill Road	1,928,000
Intersection Improvements	
Central Church @ Kings Hwy	482,182
Bright Star @ Douglas Blvd	395,945
Mt Vernon @ Skyview Drive	74,163
Mann Road @ US 78	92,727
Central Church@Yancey	47,291
Chapel Hill @ W. Chapel Hill	480,327
Total	$3,500,635
Total SPLOST Budget	$103,934,793
Percentage of SPLOST Road and Intersections Impact Fee Related	3.4%
2006 SPLOST Revenue Estimate	$11,862,158
Percentage of SPLOST Revenue to Fund Expenditures	$399,530

Once TischlerBise calculated the amount of the SPLOST revenue that should be credited to avoid double payments, the credit is divided by the total number of trips to arrive at a per trip revenue credit, as shown in Figure 22.

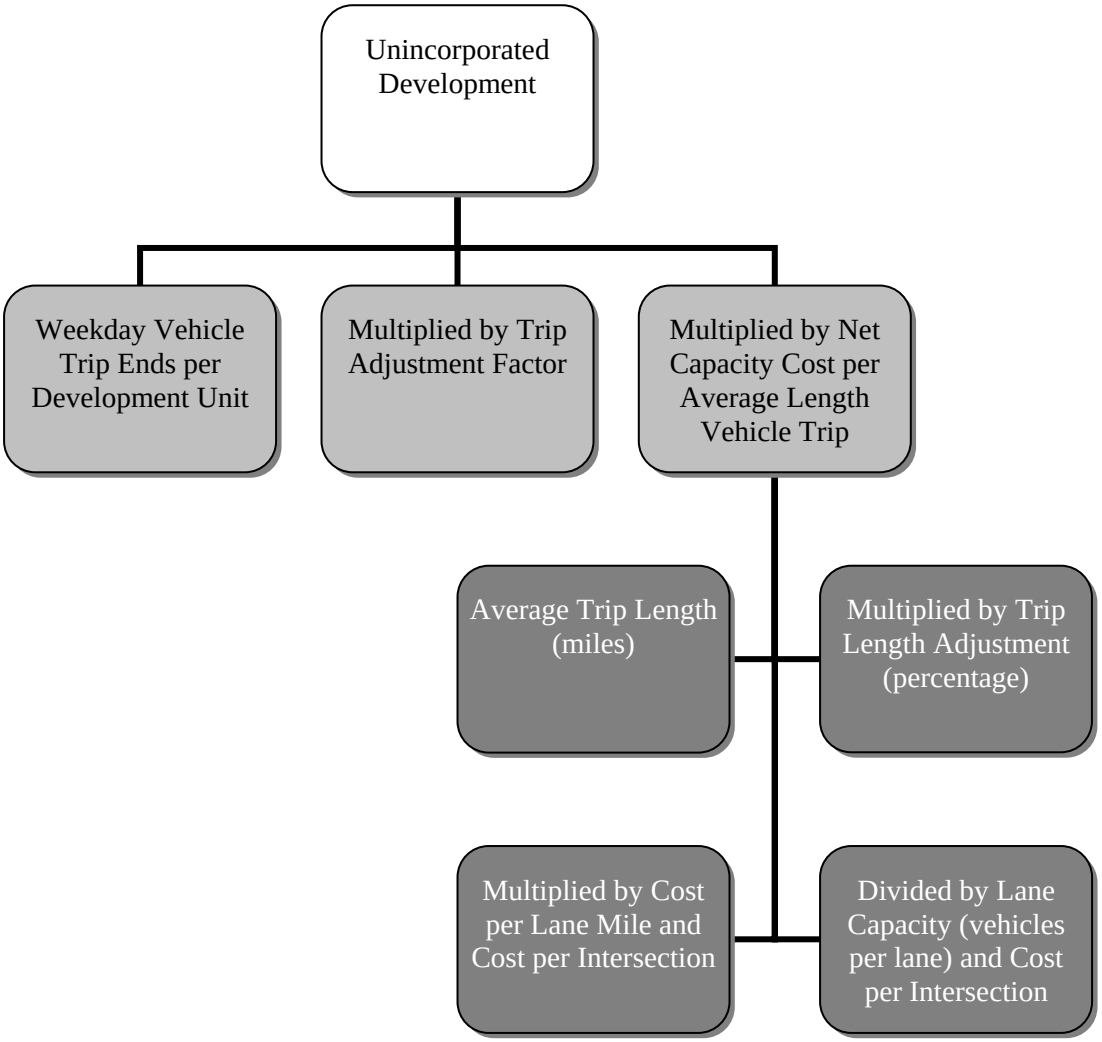
Figure 22 – SPLOST Funded Projects

FY	*SPLOST Revenue*	*Total Trips*	*Revenue Credit*
2006	$399,530	318,269	$1.26
2007	$399,530	333,930	$1.20
Total	$799,060	652,200	$2.45
		Discount Rate	5.00%
		Present Value	**$2.28**

Calculation of Road Impact Fees

As shown in Figure 23, the road impact fee is derived from trip generation rates, trip adjustment factors and the net capacity cost per average length vehicle trip. The cost per average length vehicle trip is a function of the average trip length, trip length adjustment by type of development, cost per lane mile and lane capacity.

Figure 23 - Transportation Impact Fee Formula



Road Impact Fee Inputs

Factors used to derive the arterial road impact fees are shown in Figure 24. Impact fees for nonresidential development are typically based on floor area. However, the impact fees for few types of nonresidential development have unique demand indicators. For example, impact fees for lodging are based on the number of rooms and fees for day care facilities are based on the number of students. The fee categories listed below should cover common development types. For unique development types not represented by any of the categories listed, Douglas County may allow or require, trip generation estimates to be provided by a licensed professional traffic engineer or certified planner.

Capital cost for the average length vehicle trip on arterial roads is derived from level-of-service components shown near the bottom of Figure 24. For example, the capacity cost for the average length residential trip is 2.77 miles, multiplied by 1.27, multiplied by $1.43 million, divided by 7,300, or $687 per trip.

Figure 24 – Arterial-Road Impact Fee Standards

ITE Code		Residential	Commercial / Shopping Ctrs	Other Nonresidential
Weekday Vehicle Trip Ends				
	Residential (per Housing Unit)			
210	Detached Residential	9.57		
221	Attached Residential	6.59		
	Nonresidential (per 1,000 Square Feet of Floor Area)			
820	Commercial / Shop Ctr 50,000 SF or less		86.56	
820	Commercial / Shop Ctr 50,001-100,000 SF		67.91	
820	Commercial / Shop Ctr 100,001-200,000 SF		53.28	
820	Commercial / Shop Ctr 200,001-400,000 SF		41.80	
710	General Office 10,000 SF or less			22.66
710	General Office 10,001-50,000 SF			15.65
710	General Office 50,001-200,000 SF			11.37
720	Medical-Dental Office			36.13
610	Hospital			17.57
770	Business Park			12.76
110	Light Industrial			6.97
150	Warehousing			4.96
151	Mini-Warehouse			2.50
	Other Nonresidential (per development unit)			
320	Lodging (per room)			5.63
520	Elementary School (per student)			1.29
530	Secondary School (per student)			1.71
565	Day Care (per student)			4.48
620	Nursing Home (per bed)			2.37
Trip Adjustment Factors		60%		50%
820	Commercial / Shop Ctr 50,000 SF or less		31%	
820	Commercial / Shop Ctr 50,001-100,000 SF		33%	
820	Commercial / Shop Ctr 100,001-200,000 SF		36%	
820	Commercial / Shop Ctr 200,001-400,000 SF		39%	
Level Of Service				
	Average Trip Length (miles)	2.77	2.77	2.77
	Average Trip Length Adjustment	127%	62%	76%
	Arterial Cost per Lane Mile	$1,300,000	$1,300,000	$1,300,000
	Signalization Cost per Lane Mile	$130,000	$130,000	$130,000
	Lane Capacity (vehicles per lane)	7,300	7,300	7,300
	Capacity Cost for Avg Length Trip	$689	$336	$412
	SPLOST Revenue Credit	($2)	($2)	($2)
	Percent of Impact Fee Funding	100%	100%	100%
	Net Capital Cost Per Trip	$687	$334	$410

Road Impact Fees by Type of Development

The input variables discussed above were used to derive the road impact fees shown in Figure 25. For example, the development impact fee for a detached house is the product of the trip generation rate (9.57), multiplied by the residential commuting pattern adjustment factor (0.60) and the net capital cost per trip ($687), which equates to $3,943 per housing unit.

Figure 25 – Road Impact Fee Schedule

Road Impact Fee Schedule	Residential	Commercial / Shopping Ctrs	Other Nonresidential
Residential (per housing unit)			
210 Detached Residential	$3,943		
221 Attached Residential	$2,715		
Nonresidential Per Square Foot of Floor Area			
820 Commercial / Shop Ctr 50,000 SF or less		$8.95	
820 Commercial / Shop Ctr 50,001-100,000 SF		$7.47	
820 Commercial / Shop Ctr 100,001-200,000 SF		$6.40	
820 Commercial / Shop Ctr 200,001-400,000 SF		$5.44	
710 General Office 10,000 SF or less			$4.64
710 General Office 10,001-50,000 SF			$3.20
710 General Office 50,001-200,000 SF			$2.32
720 Medical-Dental Office			$7.40
610 Hospital			$3.59
770 Business Park			$2.61
110 Light Industrial			$1.42
150 Warehousing			$1.01
151 Mini-Warehouse			$0.51
Other Nonresidential (per development unit)			
320 Lodging (per room)			$1,153
520 Elementary School (per student)			$264
530 Secondary School (per student)			$350
565 Day Care (per student)			$917
620 Nursing Home (per bed)			$485

Funding Plan for Arterial-Road Improvements

The cash flow summary provides an indication of impact fee revenues and expenditures due to new development. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the impact fee revenue and capital costs. See Appendix A for discussion of the development projections that drive the cash flow analysis.

Over the next five years, road impact fees are expected to generate approximately $39.7 million dollars for funding growth-related system improvements (see Figure 26), assuming the maximum supportable impact fees are imposed by Douglas County. Annual system improvements for arterial roads and signalized intersections average $7.9 million per year. In order to accommodate new development, Douglas County will expand the capacity of arterial roads at an average rate of 5.6 lane miles per year.

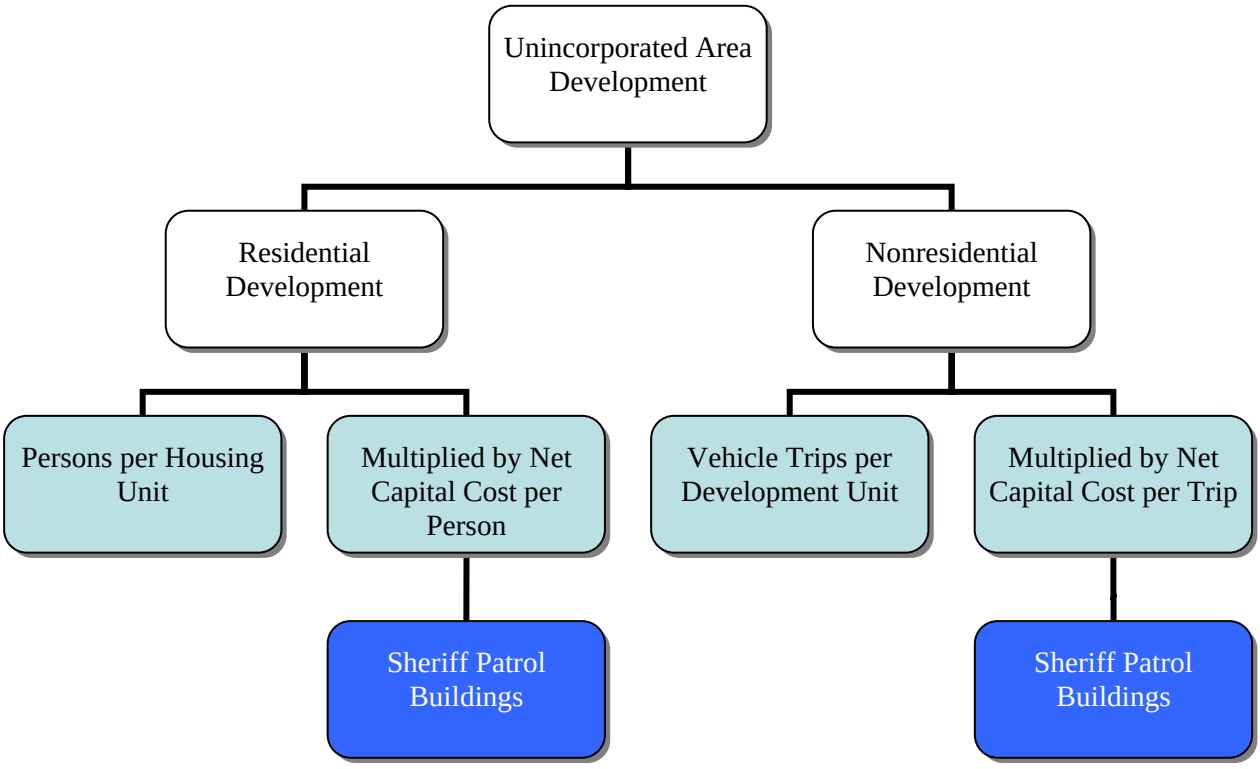
Figure 26 – Projected Cash Flow for Arterial Roads

years =>	1	2	3	4	5	Cumulative	Average
(Current $ in thousands)	2006	2007	2008	2009	2010	Total	Annual
GROWTH-RELATED REVENUES							
Road Impact Fees	$7,382	$7,658	$7,946	$8,245	$8,556	$39,787	$7,957
GROWTH-RELATED CAPITAL COSTS							
Major Road Improvements	$7,888	$7,033	$8,408	$8,681	$7,852	$39,862	$7,972
Net Cash Flow for Arterial Roads						*Current $ in thousands*	
Annual Surplus (or Deficit)	($506)	$625	($462)	($436)	$704	($75)	($15)
Cumulative Surplus (or Deficit)	($506)	$120	($343)	($779)	($75)		

UNINCORPORATED SHERIFF

Sheriff impact fees address the need for building space related to patrol functions that primarily benefit new development in the unincorporated area of Douglas County. As shown in Figure 27, the Sheriff fees use different demand indicators for residential and nonresidential development. Residential impact fees are calculated on a per capita basis and then converted to an appropriate amount by type and size of housing based on the average number of persons per housing unit. To calculate nonresidential impact fees, TischlerBise recommends using vehicle trips as the best demand indicator for the patrol buildings. Trip generation rates are highest for commercial developments, such as shopping centers, and lowest for industrial/warehouse development. Office and institutional trip rates fall between the other two categories. This ranking of trip rates is consistent with the relative demand for law enforcement from nonresidential development. Other possible nonresidential demand indicators, such as employment or floor area, do not accurately reflect the demand for service. If employees per thousand square feet were used as the demand indicator, law enforcement impact fees would be too high for office and institutional development. If floor area were used as the demand indicator, the Sheriff fees would be too high for industrial development. Also, sworn officers respond to traffic accidents, which are directly proportionate to trip generation rates.

Figure 27 – Sheriff Impact Fee Methodology Chart



Cost Allocation for Public Safety Infrastructure

Functional population (see Figure 28) was used to allocate capital costs to residential and nonresidential development for all public safety impact fees (Sheriff, jail and fire stations). For residential development, the proportionate share factor is based on estimated person hours of non-working residents, plus the non-working hours of resident workers. Based on year 2000 census data, approximately 50% of residents worked in 2000 and 50% did not work. For resident workers, two-thirds of a day (i.e., 16 hours) was allocated to residential demand. Time spent at work (i.e., 8 hours) was allocated to nonresidential development. In 2000, the U.S. Census Bureau estimated that 16,924 county residents also worked in Douglas County. Total jobs located in Douglas County are from the Census Transportation Planning Package (year 2000 place of work data). Based on estimated person hours, the cost allocation for residential development is 88% while nonresidential development accounts for 12% of the demand for public safety infrastructure.

Figure 28 – Functional Population

	Demand Units in 2000		*Demand Hours/Day*	*Person Hours*
Residential				
Estimated Residents	92,174			
Residents Not Working	45,998		24	1,103,952
Workers Living in County*	46,176			
Residents Working in County*		16,924	16	270,784
Residents Working Outside County*		29,252	16	468,032
			Residential Subtotal	1,842,768
				88%
Nonresidential				
Jobs Located in County**	32,405			
Residents Working in County*		16,924	8	135,392
Non-Resident Workers in 2000		15,481	8	123,848
			Nonresidential Subtotal	259,240
				12%
** Table P26 from SF3, Census 2000.*			TOTAL	2,102,008

*** 2000 Census Transportation Planning Package, Part 2 (Place of Work), Table 10.*

Sheriff Patrol-Buildings Standards and Cost Factors

Figure 29 provides data on the buildings currently used for patrol functions. A construction cost of $125 per square foot is based on the County's estimated cost to expand the Sheriff patrol buildings.

Figure 29 – Sheriff Infrastructure Standards

Site	*Square Feet*
Sheriff Patrol Facility & Shop	13,192

Cost per Sq Ft of New Building => $125

	Proportionate Share	2005 Unincorporated Area Demand Units		Cost per Demand Unit
Residential	88%	85,705	persons	$16.93
Nonresidential	12%	125,123	nonres veh trips	$1.58

0.14 sq ft per person

0.01 sq ft per nonres veh trip

Credit Evaluation

Douglas County does not have any outstanding debt for buildings used for patrol functions. If impact fees pay the growth-related cost of building expansion, a revenue credit is not applicable.

Sheriff Impact Fee Calculations

Standards used to derive the Sheriff impact fees are shown in the boxed area at the top of Figure 30. A "trip end" represents a vehicle either entering or exiting a development (as if a traffic counter were placed across a driveway). Trip generation rates and adjustment factors are discussed above in the road impact fee section.

Figure 30 – Sheriff Fee Input Variables

		Standards:	
Persons Per Housing Unit			
210	Detached Residential	2.79	
221	Attached Residential	1.84	
Weekday Vehicle Trip Ends			
	Nonresidential (per 1,000 Square Feet of Floor Area)		
820	Commercial / Shop Ctr 50,000 SF or less		86.56
820	Commercial / Shop Ctr 50,001-100,000 SF		67.91
820	Commercial / Shop Ctr 100,001-200,000 SF		53.28
820	Commercial / Shop Ctr 200,001-400,000 SF		41.80
710	General Office 10,000 SF or less		22.66
710	General Office 10,001-50,000 SF		15.65
710	General Office 50,001-200,000 SF		11.37
720	Medical-Dental Office		36.13
610	Hospital		17.57
770	Business Park		12.76
110	Light Industrial		6.97
150	Warehousing		4.96
151	Mini-Warehouse		2.50
	Other Nonresidential (per development unit)		
320	Lodging (per room)		5.63
520	Elementary School (per student)		1.29
530	Secondary School (per student)		1.71
565	Day Care (per student)		4.48
620	Nursing Home (per bed)		2.37
Trip Adjustment Factors			
820	Commercial / Shop Ctr 50,000 SF or less		31%
820	Commercial / Shop Ctr 50,001-100,000 SF		33%
820	Commercial / Shop Ctr 100,001-200,000 SF		36%
820	Commercial / Shop Ctr 200,001-400,000 SF		39%
	All Other Nonresidential		50%
Level of Service		Per Person	Per Trip
	Sheriff Buildings Cost	$16.93	$1.58
	Revenue Credit (not applicable)		
	Percent Impact Fee Funding	100%	100%
	Net Capital Cost	$16.93	$1.58

Sheriff Impact Fees by Type of Development

Figure 31 indicates patrol-building impact fees at the maximum supportable level. Fees for the majority of nonresidential development categories are given per square foot of floor area. The impact fee is the product of the trip generation rate multiplied by the trip adjustment factor and the net capital cost per trip for patrol buildings. For example, the impact fee for a small commercial building, like a restaurant, is 86.56 divided by 1,000 multiplied by 0.31 multiplied by $1.58, which yields a fee of $0.04 per square foot of floor area. If the restaurant had 3,000 square feet of floor area, the total Sheriff fee would be $120.

Figure 31 – Sheriff Impact Fee Schedule

Residential		Per Housing Unit	
	Detached Residential	$47	
	Attached Residential	$31	
Nonresidential			Per Sq Ft
820	Commercial / Shop Ctr 50,000 SF or less		$0.04
820	Commercial / Shop Ctr 50,001-100,000 SF		$0.03
820	Commercial / Shop Ctr 100,001-200,000 SF		$0.03
820	Commercial / Shop Ctr 200,001-400,000 SF		$0.02
710	General Office 10,000 SF or less		$0.01
710	General Office 10,001-50,000 SF		$0.01
710	General Office 50,001-200,000 SF		$0.00
720	Medical-Dental Office		$0.02
610	Hospital		$0.01
770	Business Park		$0.01
110	Light Industrial		$0.00
150	Warehousing		$0.00
151	Mini-Warehouse		$0.00
Other Nonresidential		Per Demand Indicator	
320	Lodging (per room)		$4
520	Elementary School (per student)		$1
530	Secondary School (per student)		$1
565	Day Care (per student)		$3
620	Nursing Home (per bed)		$1

Funding Plan for Sheriff Infrastructure

As shown in Figure 32, impact fees for patrol buildings are expected to generate approximately $72,000 per year in revenue. This revenue projection is based on the demographic data described in Appendix A and the maximum supportable fees. Growth-related capital costs average approximately $75,000 per year. To accommodate new development over the next five years, Douglas County will need to expand the Sheriff's patrol buildings by approximately 3,000 square feet.

The cash flow summary provides an indication of the impact fee revenue and expenditures necessary to meet the demand for patrol buildings. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the impact fee revenue and capital costs. See Appendix A for discussion of the development projections that drive the cash flow analysis.

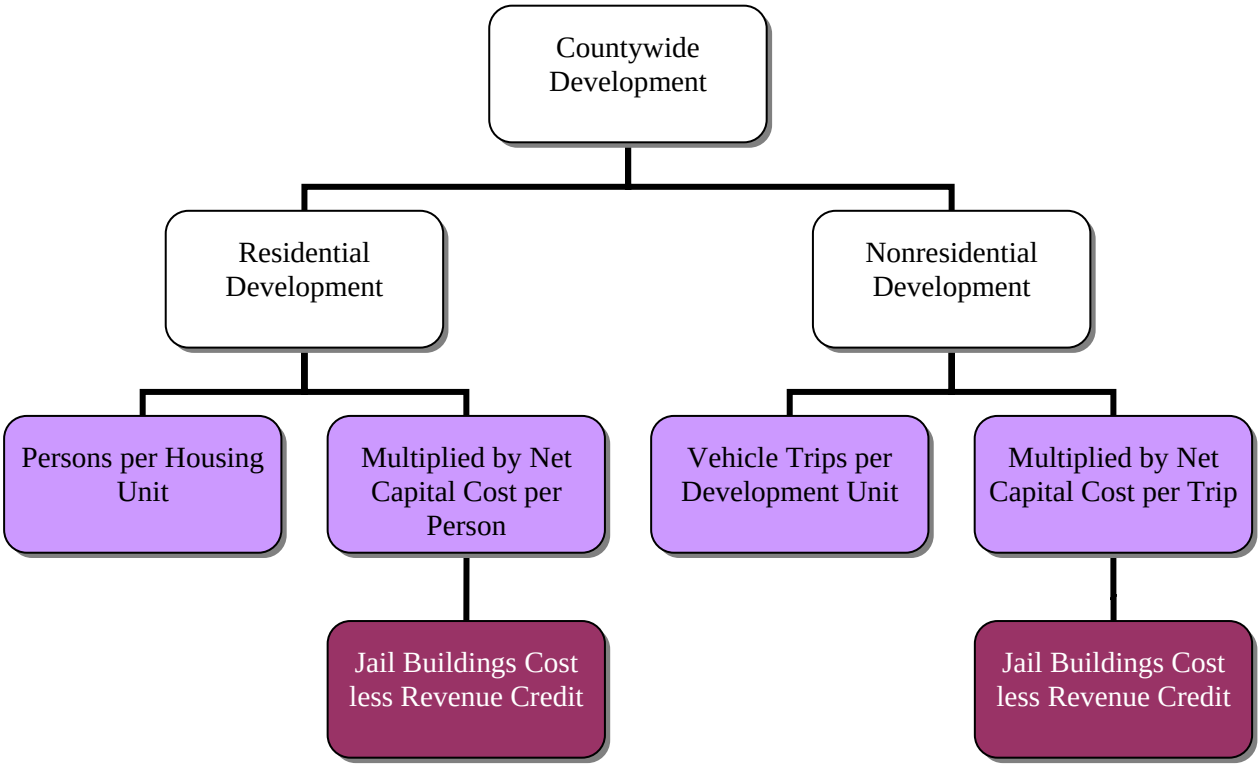
Figure 32 – Projected Cash Flow for Sheriff Buildings

years =>	1	2	3	4	5	Cumulative	Average
(Current $ in thousands)	2006	2007	2008	2009	2010	Total	Annual
GROWTH-RELATED REVENUES							
Sheriff Impact Fees	$65	$68	$71	$75	$79	$358	$72
GROWTH-RELATED CAPITAL COSTS							
Sheriff Buildings	$69	$72	$75	$79	$83	$377	$75
NET CASH FLOW - Sheriff						*Current $ in thousands*	
Annual Surplus (or Deficit)	($4)	($4)	($4)	($4)	($4)	($19)	($4)
Cumulative Surplus (or Deficit)	($4)	($8)	($11)	($15)	($19)		

COUNTYWIDE JAILS

Impact fees for jail expansion use the same methodology as the Sheriff fees, except jails have a countywide service area. As shown in Figure 33, residential impact fees are calculated on a per capita basis. Fees for nonresidential development are determined using capital cost factors per vehicle trip to nonresidential buildings. Capital costs are based on the current inventory of jail space in Douglas County.

Figure 33 – Jail Impact Fee Methodology Chart



Cost Allocation for Jails

Functional population was used to allocate capital costs to residential and nonresidential development. Based on estimated person hours, the cost allocation for residential development is 88% while nonresidential development accounts for 12% of the demand for public safety infrastructure.

Jail Infrastructure Standards and Cost Factors

Figure 34 lists the capital cost of jail infrastructure. Douglas County jails currently have 106,000 square feet of floor area. Impact fees for jail expansion use a cost factor of $225 per square foot.

Figure 34 – Incremental Expansion Cost of Jails

Incremental Expansion Cost of Jail

Site	*Square Feet*
Jail Facilities	106,000
TOTAL	106,000

Cost per Sq Ft for New Jail => $225

	Proportionate Share	2005 Countywide Demand Units	Cost per Demand Unit
Residential	88%	112,900 persons	$185.89
Nonresidential	12%	125,122 nonres veh trips	$22.87
		0.83 sq ft per person	
		0.10 sq ft per nonres veh trip	

Credit Evaluation for Jails

Douglas County used bond financing to construct the Jail Annex which opened in 2004. As shown in Figure 35, a revenue credit avoids potential double payment for the remaining principal payments on this bond. Annual principal payments are based on the same methodology as the cost allocation. A present value adjustment accounts for the time value of the future revenue stream.

Figure 35 – Principal Payment Credit for Jails

		Countywide		*Principal Payments*	
FY	*Principal Payments*	*Persons 88%*	*Trips* 12%*	*Per Person*	*Per Trip**
2006	$700,000	117,574	240,431	$5.24	$0.35
2007	$705,000	122,441	254,413	$5.07	$0.33
2008	$720,000	127,510	268,268	$4.97	$0.32
2009	$796,000	132,789	282,281	$5.28	$0.34
2010	$796,000	138,286	296,111	$5.07	$0.32
2011	$796,000	144,011	309,966	$4.86	$0.31
2012	$796,000	149,973	324,046	$4.67	$0.29
2013	$796,000	156,182	337,876	$4.49	$0.28
Total	$6,105,000			$39.64	$2.55
			Discount Rate	3.02%	3.02%
			Present Value	**$34.85**	**$2.25**

* *Vehicle trips to nonresidential development.*

Jail Impact Fee Calculations

For jail expansion, the demand indicator for residential development is population growth. For nonresidential development, the demand indicator is average weekday vehicle trips to nonresidential buildings. Standards used to derive jail impact fees are shown in Figure 36.

Figure 36 – Jail Impact Fee Input Variables

		Standards:	
Persons Per Housing Unit			
210	Detached Residential	2.79	
221	Attached Residential	1.84	
Weekday Vehicle Trip Ends			
	Nonresidential (per 1,000 Square Feet of Floor Area)		
820	Commercial / Shop Ctr 50,000 SF or less		86.56
820	Commercial / Shop Ctr 50,001-100,000 SF		67.91
820	Commercial / Shop Ctr 100,001-200,000 SF		53.28
820	Commercial / Shop Ctr 200,001-400,000 SF		41.80
710	General Office 10,000 SF or less		22.66
710	General Office 10,001-50,000 SF		15.65
710	General Office 50,001-200,000 SF		11.37
720	Medical-Dental Office		36.13
610	Hospital		17.57
770	Business Park		12.76
110	Light Industrial		6.97
150	Warehousing		4.96
151	Mini-Warehouse		2.50
	Other Nonresidential (per development unit)		
320	Lodging (per room)		5.63
520	Elementary School (per student)		1.29
530	Secondary School (per student)		1.71
565	Day Care (per student)		4.48
620	Nursing Home (per bed)		2.37
Trip Adjustment Factors			
820	Commercial / Shop Ctr 50,000 SF or less		31%
820	Commercial / Shop Ctr 50,001-100,000 SF		33%
820	Commercial / Shop Ctr 100,001-200,000 SF		36%
820	Commercial / Shop Ctr 200,001-400,000 SF		39%
	All Other Nonresidential		50%
Level of Service		Per Person	Per Trip
	Jail Expansion Cost	$185.89	$22.87
	Principal Payments Credit	($34.85)	($2.25)
	Policy on Impact Fee Funding	100%	100%
	Net Capital Cost	$151.04	$22.87

Jail Impact Fees by Type of Development

Figure 37 provides the schedule of impact fees for jail infrastructure at the maximum supportable level. For residential development, the impact fee is derived by multiplying the number of persons per housing unit by the net capital cost per person. For most types of nonresidential development, the impact fee schedule is based on the floor area of the proposed development. For example, the jail impact fee for a commercial building of 3,000 square feet is $0.61 per square foot of floor area, or a total amount of $1,830.

Figure 37 – Jail Impact Fee Schedule

Jail Impact Fee Schedule - Countywide

Residential	Per Housing Unit	
210	Detached Residential	$421
221	Attached Residential	$277
Nonresidential		Per Sq Ft
820	Commercial / Shop Ctr 50,000 SF or less	$0.61
820	Commercial / Shop Ctr 50,001-100,000 SF	$0.51
820	Commercial / Shop Ctr 100,001-200,000 SF	$0.43
820	Commercial / Shop Ctr 200,001-400,000 SF	$0.37
710	General Office 10,000 SF or less	$0.25
710	General Office 10,001-50,000 SF	$0.17
710	General Office 50,001-200,000 SF	$0.13
720	Medical-Dental Office	$0.41
610	Hospital	$0.20
770	Business Park	$0.14
110	Light Industrial	$0.07
150	Warehousing	$0.05
151	Mini-Warehouse	$0.02
Other Nonresidential		Per Demand Indicator
320	Lodging (per room)	$64
520	Elementary School (per student)	$14
530	Secondary School (per student)	$19
565	Day Care (per student)	$51
620	Nursing Home (per bed)	$27

Funding Plan for Jail Expansion

At the maximum supportable level, jail impact fees should average $1 million dollars per year (see Figure 38). To accommodate projected development in Douglas County over the next five years, the County will need to expand the jail by approximately 24,879 square feet. The projected cost of the jail expansion is $5.59 million dollars. Annual costs exceed the projected impact fee revenues due to the principal payment credit for the Jail Annex.

The cash flow summary provides an indication of the impact fee revenue and expenditures necessary to meet the demand for fire and rescue infrastructure. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the impact fee revenue and capital costs. See Appendix A for discussion of the development projections that drive the cash flow analysis.

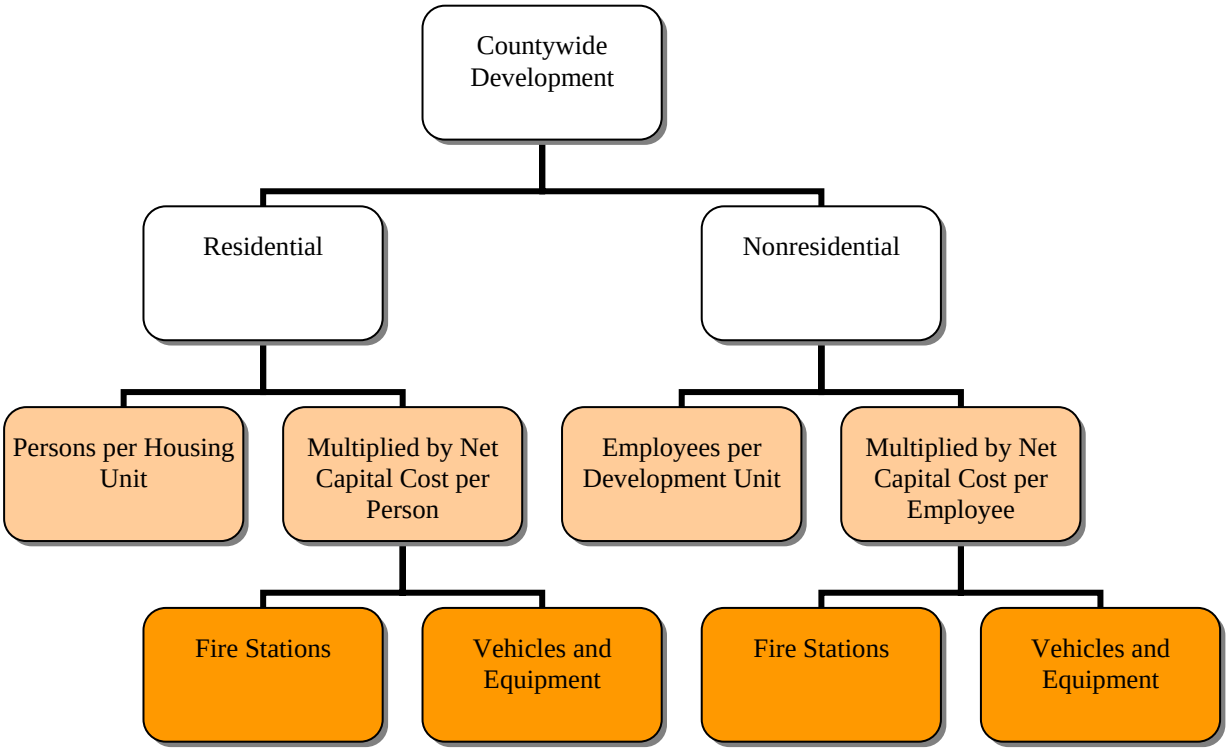
Figure 38 – Projected Cash Flow for Jail Expansion

years =>	1	2	3	4	5	Cumulative	Average
(Current $ in thousands)	2006	2007	2008	2009	2010	Total	Annual
GROWTH-RELATED REVENUES							
Jail Impact Fees	$1,003	$1,036	$1,062	$1,099	$1,127	$5,327	$1,065
GROWTH-RELATED CAPITAL COSTS							
Jail Expansion	$1,044	$1,081	$1,117	$1,158	$1,197	$5,598	$1,120
Net Cash Flow for Jail						*Current $ in thousands*	
Annual Surplus (or Deficit)	($41)	($45)	($55)	($59)	($70)	($271)	($54)
Cumulative Surplus (or Deficit)	($41)	($86)	($141)	($201)	($271)		

COUNTYWIDE FIRE STATIONS

Since emergency medical calls are more frequent than fire calls, the best demand indicator for the fire station impact fee is the number of residents and jobs in Douglas County. As shown in Figure 39, residential impact fees are calculated on a per capita basis. Fees for nonresidential development are determined using capital cost factors per employee. Capital costs are based on the current inventory of fire apparatus and square feet of fire stations.

Figure 39 – Fire Stations Impact Fee Methodology Chart



Cost Allocation for Fire/Rescue Infrastructure

Functional population was used to allocate capital costs to residential and nonresidential development. Based on estimated person hours, the cost allocation for residential development is 88% while nonresidential development accounts for 12% of the demand for public safety infrastructure.

Fire/Rescue Infrastructure Standards and Cost Factors

Figure 40 lists the capital cost of infrastructure for fire and emergency medical services. Unit costs include all necessary add-ons to make the apparatus ready for service, such as lights, radios and safety equipment. The fleet of fire apparatus, limited to vehicles having a useful life of at least ten years, has a current cost exceeding $7 million.

Douglas County is currently using 53,782 square feet of fire station buildings. Impact fees are based on a cost factor of $178 per square foot for future fire stations.

Figure 40 – Infrastructure Standards for Fire/Rescue

Incremental Expansion Cost of Major Equipment

Type	*Count*	*Unit Cost*	*Total Cost*
Pumper	13	$330,000	$4,290,000
Support Vehicles	2	$150,000	$300,000
Rescue	1	$365,000	$365,000
Ladder Truck	3	$825,000	$2,475,000
TOTAL	19		$7,430,000
Weighted Average Cost =>		$391,000	

	Proportionate Share	2005 Countywide Demand Units	Cost per Demand Unit
Residential	88%	112,900 persons	$57.91
Nonresidential	12%	34,514 jobs	$25.83

0.15 equipment per 1,000 persons
0.07 equipment per 1,000 jobs

Incremental Expansion Cost of Fire Stations

Site	*Square Feet*
Station 1	7,981
Station 2	7,447
Station 3	3,659
Station 4	4,480
Station 5	4,598
Station 6	5,221
Station 7	7,716
Station 10	8,600
Station 11	4,080
TOTAL	53,782

Average Cost per Sq Ft for New Station => $178

	Proportionate Share	2005 Countywide Demand Units	Cost per Demand Unit
Residential	88%	112,900 persons	$74.61
Nonresidential	12%	34,514 jobs	$33.28

0.42 sq ft per person
0.19 sq ft per job

Source: Douglas County Fire Department and Douglas County Comprehensive Plan.

Credit Evaluation for Fire/Rescue Infrastructure

Douglas County does not have any outstanding debt for fire stations or apparatus. At the maximum supportable level, impact fees will pay the growth-related cost of fire/rescue infrastructure. Therefore, a revenue credit for the fire/rescue impact fee is not applicable.

Fire/Rescue Impact Fee Calculations

For fire and rescue infrastructure, the demand unit for residential development is a person. For nonresidential development, the demand unit is an employee. Standards used to derive fire impact fees are shown in Figure 41. Documentation on the number of employees per nonresidential development unit may be found in Appendix A.

Figure 41 – Fire/Rescue Fee Input Variables

ITE Code		*Standards:*	
Persons Per Housing Unit			
210	Detached Residential	2.79	
221	Attached Residential	1.84	
Employees per 1,000 Sq Ft			
820	Commercial / Shop Ctr 50,000 SF or less		2.86
820	Commercial / Shop Ctr 50,001-100,000 SF		2.50
820	Commercial / Shop Ctr 100,001-200,000 SF		2.22
820	Commercial / Shop Ctr 200,001-400,000 SF		2.00
710	General Office 10,000 SF or less		4.48
710	General Office 10,001-50,000 SF		3.91
710	General Office 50,001-200,000 SF		3.49
720	Medical-Dental Office		4.05
610	Hospital		3.38
770	Business Park		3.16
110	Light Industrial		2.31
150	Warehousing		1.28
151	Mini-Warehouse		0.04
Employees per Development Unit			
320	Lodging (per room)		0.44
520	Elementary School (per student)		0.08
530	Secondary School (per student)		0.09
565	Day Care (per student)		0.16
620	Nursing Home (per bed)		0.36
Level of Service		Per Person	Per Employee
	Major Equipment	$57.91	$25.83
	Fire Stations	$74.61	$33.28
	Percent Impact Fee Funding	100%	100%
	Net Capital Cost	$132.52	$59.11

Fire/Rescue Impact Fees by Type of Development

Figure 42 provides the schedule of impact fees for fire and rescue infrastructure at the maximum supportable level. For residential development, the impact fee is derived by multiplying the number of persons per housing unit by the net capital cost per person. For most types of nonresidential development, the impact fee schedule is based on the floor area of the proposed development. For example, the fire impact fee for a commercial building of 3,000 square feet is $0.16 per square foot of floor area, or a total amount of $480.

Figure 42 – Fire/Rescue Impact Fee Schedule

Residential per Housing Unit			
210	Detached Residential	$369	
221	Attached Residential	$243	
Nonresidential per Square Foot of Floor Area			
820	Commercial / Shop Ctr 50,000 SF or less		$0.16
820	Commercial / Shop Ctr 50,001-100,000 SF		$0.14
820	Commercial / Shop Ctr 100,001-200,000 SF		$0.13
820	Commercial / Shop Ctr 200,001-400,000 SF		$0.11
710	General Office 10,000 SF or less		$0.26
710	General Office 10,001-50,000 SF		$0.23
710	General Office 50,001-200,000 SF		$0.20
720	Medical-Dental Office		$0.23
610	Hospital		$0.19
770	Business Park		$0.18
110	Light Industrial		$0.13
150	Warehousing		$0.07
151	Mini-Warehouse		$0.00
Other Nonresidential per Development Unit			
320	Lodging (per room)		$26
520	Elementary School (per student)		$4
530	Secondary School (per student)		$5
565	Day Care (per student)		$9
620	Nursing Home (bed)		$21

Funding Plan for Fire/Rescue Improvements

Fire impact fees should average $783,000 per year if imposed at the maximum supportable level (see Figure 43). To accommodate projected development in Douglas County over the next five years, the County will need to expand the fire apparatus fleet by six units, at a cost of approximately $2.3 million dollars. The County's growth-related demand for fire stations is an additional 13,300 square feet over the next five years. The projected cost of the fire station expansion is $2.37 million.

The cash flow summary provides an indication of the impact fee revenue and expenditures necessary to meet the demand for fire and rescue infrastructure. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the impact fee revenue and capital costs. See Appendix A for discussion of the development projections that drive the cash flow analysis.

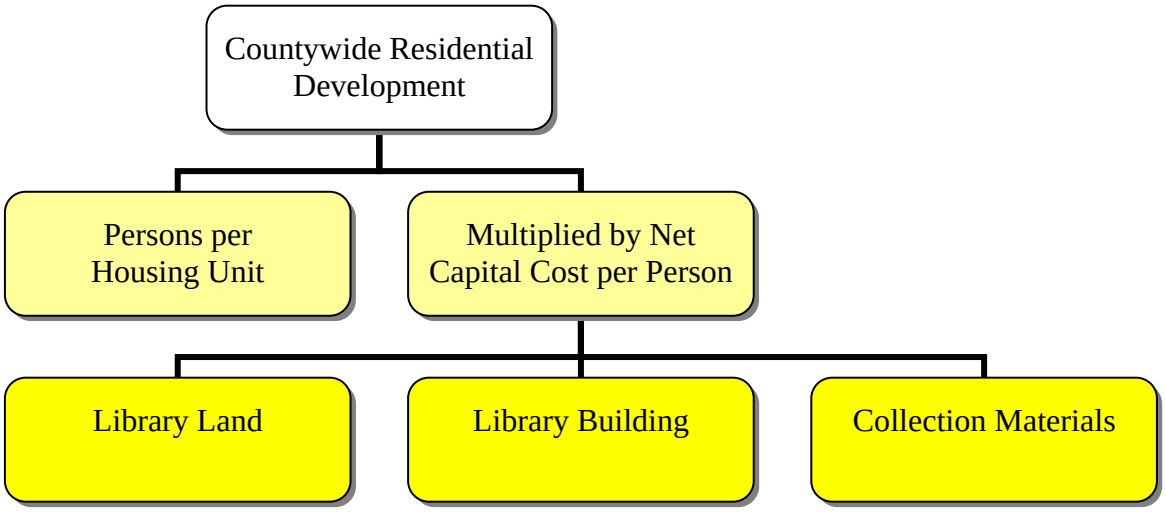
Figure 43 – Projected Cash Flow for Fire Stations

years =>	1	2	3	4	5	Cumulative	Average
(Current $ in thousands)	2006	2007	2008	2009	2010	Total	Annual
GROWTH-RELATED REVENUES							
Fire Impact Fees	$730	$756	$782	$811	$838	$3,916	$783
GROWTH-RELATED CAPITAL COSTS							
Fire Apparatus	$391	$391	$782	$391	$391	$2,346	$469
Fire Stations	$443	$458	$474	$490	$507	$2,371	$474
Total Cost for Fire	$834	$849	$1,256	$881	$898	$4,717	$943
Net Cash Flow for Fire Stations						*Current $ in thousands*	
Annual Surplus (or Deficit)	($104)	($93)	($474)	($70)	($60)	($801)	($160)
Cumulative Surplus (or Deficit)	($104)	($197)	($671)	($741)	($801)		

COUNTYWIDE LIBRARIES

Library impact fees are based on the incremental expansion cost approach, using existing level of service standards. The methodology chart shown in Figure 44 indicates all capital costs are allocated to residential development. Per capita standards are multiplied by average persons per housing unit to yield the impact fee. To accommodate new residential development, Douglas County will need additional land for expansion of library buildings, plus collection materials.

Figure 44 – Library Impact Fee Methodology Chart



Library Infrastructure Standards and Costs

Figure 45 documents current library infrastructure standards in Douglas County. The current standard for library land is 0.87 acres per 10,000 residents. The land cost for a library site is estimated to be $50,000 per acre.

For library buildings, the infrastructure standard in 2005 is 0.32 square feet of library building per person. The capital cost estimate of $195 per square foot of floor area was provided by County staff. This cost estimate includes design fees, furniture (e.g., tables, chairs, shelving) and computer equipment.

There are 170,388 collection materials in Douglas County libraries, which equates to an infrastructure standard of 1.51 items per resident. According to library staff, library materials average $34 per item.

Figure 45 - Library Infrastructure Standards

Land	*Acres*	*Cost per Acre*
Douglas County Public Library	7.03	
Lithia Springs Public Library	2.75	
TOTAL	9.78	$70,000

Residential Share	2005 Demand Units		Cost per Demand Unit
100%	112,900	Population	$6
Acres Per 10,000 Persons	0.87		

Buildings	*Sq Ft*	*Cost per Sq Ft**
Douglas County Public Library	21,000	
Lithia Springs Public Library	15,000	
TOTAL	36,000	$195

Residential Share	2005 Demand Units		Cost per Demand Unit
100%	112,900	Population	$62
Square Feet per Person	0.32		

Collection Materials	*Units*	*Unit Price*
Douglas County Public Library	97,787	
Lithia Springs Public Library	72,551	
TOTAL	170,338	$34

Residential Share	2005 Demand Units		Cost per Demand Unit
100%	112,900	Population	$52
Materials Per Person	1.51		

** Building cost includes furniture, computer equipment and design.*

Source: Douglas County Library Director.

Credit Evaluation

Douglas County does not have any outstanding debt for library infrastructure. At the maximum supportable level, impact fees will pay the growth-related cost of library expansion. Therefore, a revenue credit for the library impact fee is not applicable.

Library Impact Fee Calculations

Development impact fees for libraries are shown in Figure 46, assuming implementation of the maximum supportable fee amount. Impact fee standards are listed in the box at the top of the table. The impact fee is equal to the average number of persons per housing unit, multiplied by the net capital cost per person. For example, the fee for a detached house is 2.79 x $118, or $329 per housing unit.

Figure 46 - Library Impact Fee

	Standards:
Persons Per Housing Unit	
Detached Residential	2.79
Attached Residential	1.84
Infrastructure Standards	
Land Cost	$4
Building Cost	$62
Collection Cost	$52
Percent Impact Fee Funding	100%
Net Capital Cost	$118

Library Impact Fee Schedule - Countywide

	Per Housing Unit
Detached	$329
Attached	$217

Funding Plan for Growth-Related Library Improvements

Figure 47 indicates projected library impact fee revenue and capital costs. Impact fee revenue from new housing is projected to yield approximately $600,000 in average annual revenue, if the maximum supportable impact fees are imposed. Projected growth-related capital costs average $598,000 per year for library land, building space and collection materials. To accommodate the projected increase in population over the next five years will require 2.2 acres of land for library expansion, 8,100 square feet of library building and 38,302 additional items in the library collection. Maintaining the current infrastructure standards will require a cumulative capital cost of approximately $3 million over the next five years.

The cash flow summary provides an indication of the impact fee revenue and expenditures necessary to meet the demand for library facilities due to new development within Douglas County. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the impact fee revenue and capital costs. See Appendix A for discussion of the development projections that drive the cash flow analysis.

Figure 47 – Projected Cash Flow for Library Expansion

years =>	1	2	3	4	5	Cumulative	Average
(Current $ in thousands)	2006	2007	2008	2009	2010	Total	Annual
GROWTH-RELATED REVENUES							
Library Impact Fees	$553	$575	$599	$624	$650	$3,001	$600
GROWTH-RELATED CAPITAL COSTS							
Library Acres	$20	$20	$20	$25	$25	$110	$22
Library Square Feet	$291	$303	$315	$328	$342	$1,579	$316
Library Materials	$240	$250	$260	$271	$282	$1,302	$260
Total Cost for Library	$550	$572	$595	$624	$649	$2,991	$598
Net Cash Flow for Library						*Current $ in thousands*	
Annual Surplus (or Deficit)	$2	$3	$4	($0)	$1	$10	$2
Cumulative Surplus (or Deficit)	$2	$5	$9	$9	$10		

IMPLEMENTATION AND ADMINISTRATION

The impact fee ordinance will require fee revenue to be deposited in a separate interest bearing account. Fees should be spent within five years of when they are collected, with the expenditures limited to growth-related system improvements.

Development impact fees should be periodically evaluated and updated to reflect recent data. One approach is to adjust for inflation using the Engineering News Record (ENR) Construction Cost Index published by the McGraw-Hill Companies. This index could be annually applied to the adopted impact fee schedule. If cost estimates or demand indicators change significantly, the County should redo the fee calculations.

Credits and Reimbursements

A general requirement that is common to impact fee methodologies is the evaluation of credits. A revenue credit may be necessary to avoid potential double payment situations arising from one-time impact fees plus on-going payment of other revenues that may also fund growth-related capital improvements. The determination of credits is dependent upon the impact fee methodology used in the cost analysis. There are three basic approaches used to calculate impact fees and each is linked to different credit methodology.

The first major type of impact fee method is a cost recovery approach. This method is used for facilities that have adequate capacity to accommodate new development for at least a five-year time frame. The rationale for the cost recovery is that new development is paying for its share of the useful life or remaining capacity of the existing facility. When using a cost recovery method, it is important to determine whether new development has already contributed toward the cost of existing public facilities (i.e., a past revenue credit). Outstanding principal and interest payments are typically subtracted from the value of the asset that was oversized for new development.

A second basic approach used to calculate impact fees is the incremental expansion cost method. This method documents current factors and is best suited for public facilities that will be expanded incrementally in the future. Because new development will provide front-end funding of infrastructure, there is a potential for double payment of capital costs due to future principal payments on existing debt for public facilities. A credit is not necessary for interest payments if interest costs were not included in the impact fees.

A third basic approach used to calculate impact fees is the plan-based method. This method is based on future capital improvements needed to accommodate new development. The plan-based method may be used for public facilities that have commonly accepted service delivery factors to determine the need for future projects, or the jurisdiction plans to significantly increase the current factors and it has a financially feasible strategy to cover the cost of existing deficiencies. If a plan-based approach is used to derive impact fees, the credit evaluations should focus on future bonds and revenues that will fund planned capital improvements.

Specific policies and procedures related to site-specific credits or developer reimbursements will be addressed in the ordinance that establishes the impact fees. Project-level improvements

(required as part of the development approval process) are not eligible for credits against impact fees. If a developer constructs a system improvement included in the fee calculations, it will be necessary to either reimburse the developer or provide a credit against the fees in the area benefiting from the system improvement. The latter option is more difficult to administer because it creates unique fees for specific geographic areas. Based on TischlerBise's experience, it is better for the County to establish a reimbursement agreement with the developer that constructs a system improvement. The reimbursement agreement should be limited to a payback period of no more than ten years and the County should not pay interest on the outstanding balance. The developer must provide sufficient documentation of the actual cost incurred for the system improvement. The County should only agree to pay the lesser of the actual construction cost or the estimated cost used in the impact fee analysis. If the County pays more than the cost used in the fee analysis, there will be insufficient fee revenue. Reimbursement agreements should only obligate the County to reimburse developers annually according to actual fee collections from the benefiting area.

Site specific credits or developer reimbursements for one type of system improvement does not negate payment of impact fee for other system improvements. The supporting documentation for each type of impact fee illustrates the types of infrastructure considered to be system improvements. For example, the park impact fee provides standards for larger active parks, but does not address the need for smaller neighborhood-scale park improvements. Therefore, neighborhood-scale park improvements are not eligible for credits against impact fees.

Service Areas and Benefit Districts

To ensure a substantial benefit to new development paying impact fees, Douglas County has evaluated collection and expenditure zones for infrastructure that may have distinct service or benefit areas. A countywide collection and expenditure district is appropriate for all countywide services (jail, fire and library). A collection and expenditure district excluding the City of Douglasville is appropriate for all other categories except roads. Douglas County should consider two benefit districts (east and west) to account for road impact fee revenues and expenditures.

Nonresidential Development Categories

The nonresidential development categories in the impact fee schedule will apply to a majority of new construction anticipated within Douglas County. Nonresidential development categories (summarized below) are based on land use classifications from the book Trip Generation (ITE, 2003).

Shopping Center (820) – A shopping center is an integrated group of commercial establishments that is planned, developed, owned and managed as a unit. A shopping center provides on-site parking facilities sufficient to serve its own parking demands. Shopping centers may contain non-merchandizing facilities, such as office buildings, movie theaters, restaurants, post offices, banks, health clubs and recreational facilities. In addition to the integrated unit of shops in one building or enclosed around a mall, many shopping centers include out-parcels. For smaller

centers without an enclosed mall or peripheral buildings, the Gross Leaseable Area (GLA) may be the same as the Gross Floor Area (GFA) of the building.

General Office (710) – A general office building houses multiple tenants including, but not limited to, professional services, insurance companies, investment brokers and tenant services such as banking, restaurants and service retail facilities. In the impact fees study, this category is used as a proxy for institutional uses that may have more specific land use codes.

Business Park (770) – A business park is a group of flex-type buildings served by a common roadway system. The tenant space includes a variety of uses with an average mix of 20-30% office/commercial and 70-80% industrial/warehousing.

Light Industrial (110) – Light industrial facilities usually employ fewer than 500 persons and have an emphasis on activities other than manufacturing. Typical light industrial activities include, but are not limited to printing plants, material-testing laboratories and assembling of data processing equipment.

Warehousing (150) – Warehouses are primarily devoted to the storage of materials.

Even though churches are a common type of development, they do not have a specific impact fee category due to a lack of sufficient data. The Institute of Transportation Engineers does not publish trip rates per church employee and the weekday trip generation rate per 1,000 square feet of floor area is not based on enough studies to be statistically valid. For churches and any other atypical development, staff must establish a consistent administrative process to reasonably treat similar developments in a similar way. When presented with a development type that does not match one of the development categories in the published fee schedule, staff should first look in the ITE manual to see if there is land use category with valid trip rates that match the proposed development. The second option is to determine the published category that is most like the proposed development. Churches without daycare or schools are basically an office area (used throughout the week) with a large auditorium and class space (used periodically during the week). Some jurisdictions make a policy decision to impose impact fees on churches based on the fee schedule for warehouses or mini-warehouses. The rationale for this policy is the finding that churches are large buildings that generate little weekday traffic and only have a few full time employees. A third option is to impose impact fees on churches by breaking down the building floor area into its primary use. For example, a church with 25,000 square feet of floor area may have 2,000 square feet of office space used by employees throughout the week. At a minimum, impact fees could be imposed on the office floor area, based on the published rate per square foot for a small office. An additional impact fee amount could be imposed for the remainder of the building based on the rate for a warehouse or mini-warehouse. The key consideration for these administrative decisions is to be reasonable and consistent. If an applicant thinks the administrative decision is not reasonable, it is appealed to the elected officials for their consideration.

APPENDIX A – DEMOGRAPHIC DATA

MEMORANDUM

TO: Michael Cason, County Manager
Douglas County, Georgia

FROM: TischlerBise

DATE: February 18, 2006

SUBJECT: Demographic Data and Development Projections

In this memo, TischlerBise documents the demographic data and development projections used in the impact fee study for Douglas County, Georgia. Although long-range projections are necessary for planning capital improvements, a shorter time frame of five to six years is critical for the impact fees analysis. Infrastructure standards will be calibrated using 2005 data and the first projection year for the cash flow model will be 2006. In Douglas County, the fiscal year ends on December 31st.

Persons per Housing Unit

As shown in Figure A1, Douglas County had 34,825 housing units in 2000. The weighted-average household size in 2000 for all housing types was 2.78 persons per household. According to the U.S. Census Bureau, a household is a housing unit that is occupied by year-round residents. Because an impact fee will be collected from all housing units when building permits are issued, TischlerBise recommends using persons per housing unit in the impact fee calculations. In 2000, Douglas County had a weighted average of 2.62 persons per housing unit. The 2000 census indicated 5.8% of residential units were vacant or used as seasonal housing.

To provide an indication of the demand units and impact fees for average size housing units, the impact fee report indicates typical fees for both detached and attached housing. Detached housing units are normally larger than attached housing units averaging 2.79 persons per housing unit. Attached housing units are normally smaller, averaging 1.84 persons per housing unit.

Figure A1 – Population by Units in Structure - 2000

Douglas County, Georgia

Units in Structure	***Renter & Owner*** Persons	Hsehlds	PPH	*Housing Units*	*Persons Per Housing Unit*	*Vacancy Rate*
1-Detached	73,280	25,063	2.92	26,017	2.82	3.7%
Mobile Homes	6,914	2,430	2.85	2,756	2.51	11.8%
1-Attached (Townhouse)	1,707	639	2.67	700	2.44	8.7%
Two (Duplex)	1,646	687	2.40	833	1.98	17.5%
3 or 4	1,440	719	2.00	786	1.83	8.5%
5 to 9	2,531	1,295	1.95	1,524	1.66	15.0%
10 to 19	2,094	1,058	1.98	1,163	1.80	9.0%
20 to 49	841	464	1.81	532	1.58	12.8%
50 or more	859	439	1.96	510	1.68	13.9%
Other	10	4	2.50	4	2.50	0.0%
Total SF3 Sample Data	91,322	32,798	2.78	34,825		5.8%
SF1 100-Percent Data	91,325	32,822	2.78	34,825	**2.62**	5.8%

Recommend Residential Categories	Persons	Hsehlds	PPH	*Housing Units*	*Persons Per Housing Unit*	Hsg Mix
Detached Units	80,194	27,493	2.92	28,773	**2.79**	83%
Attached Units	11,128	5,305	2.10	6,052	**1.84**	17%
Group Quarters	849					
Sample Difference	3	24				
TOTAL	92,174	32,822		34,825		

Source: U.S. Census Bureau, 2000 data.

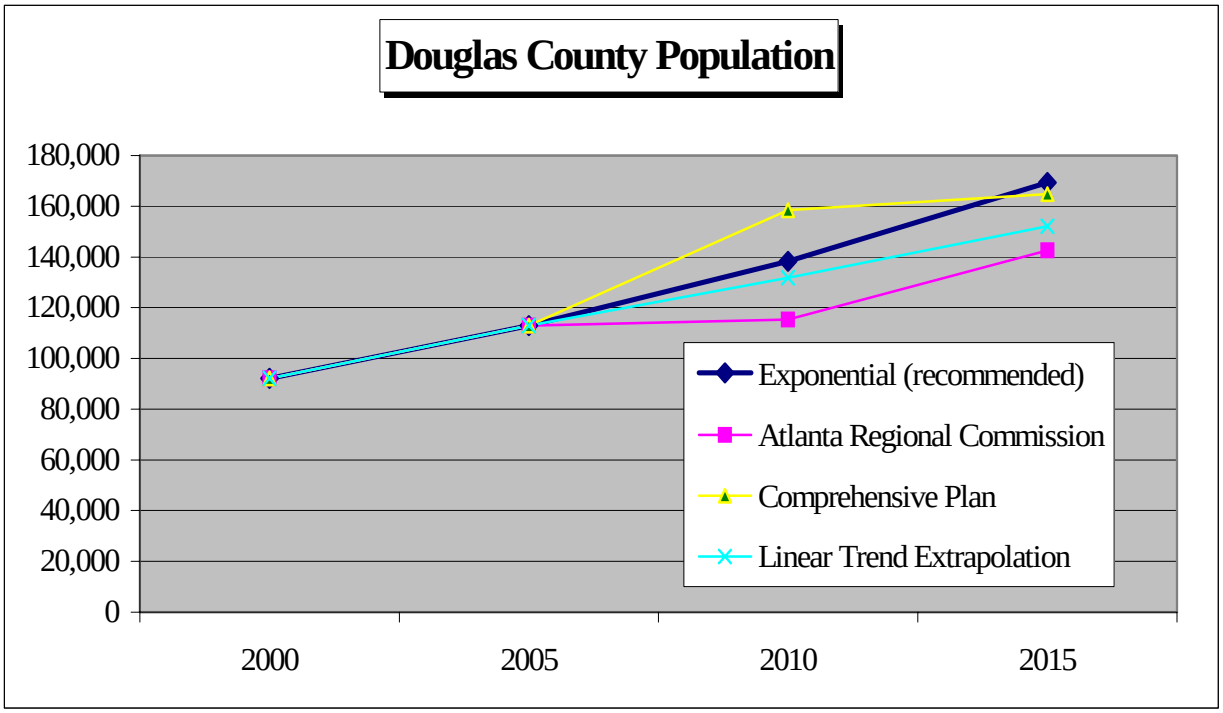
Population Projections

Figure A2 provides alternative projections of population growth in Douglas County. The most conservative projection is from the Atlanta Regional Commission (February 2003). The recommended alternative is the exponential projection, using the actual compound growth rate from 2000 to 2005 (4.14%). The recommended alternative is slightly above the Comprehensive Plan projection for the year 2015.

Figure A2 – Alternative Population Projections

Douglas County, Georgia

Method	2000 Census	2005 Estimate	2006 Projection Years => 1	2007 2	2008 3	2009 4	2010 5	2015 10	*Avg Anl Increase 2005-2015*
Exponential (recommended)	92,174	112,900	117,574	122,441	127,510	132,789	138,286	169,381	5,648
Atlanta Regional Commission	92,174	112,900	115,213	117,526	119,839	122,152	115,313	142,655	2,976
Comprehensive Plan	92,175	112,900	122,008	131,116	140,225	149,333	158,441	164,834	5,193
Linear Trend Extrapolation	92,175	112,900	115,567	119,624	123,680	127,737	131,793	152,075	3,918



Employees per Square Foot of Nonresidential Development

In addition to data on residential development, the calculation of impact fees requires data on nonresidential development in Douglas County. The impact fee study converts projected jobs to nonresidential floor area using square feet per employee multipliers. TischlerBise uses the term "jobs" to refer to employment by place of work (i.e., located within Douglas County). The square feet per employee multipliers shown below were derived from national data published by the Institute of Transportation Engineers (ITE) and the Urban Land Institute (ULI). Impact fee methodologies may also use the number of employees per thousand square feet (KSF) to differentiate fees by type of nonresidential development. In Figure A3, gray shading indicates four nonresidential development prototypes that will be used by TischlerBise to calculate vehicle trips and estimate potential impact fee revenue as part of the impact fee cash flow analysis. The prototype development for goods-producing jobs is a warehouse. The prototype for commercial service jobs is a shopping center with 100,000 square feet of floor area. The prototype for

government jobs is an office building (100,000 square feet). The prototype for education is an elementary school.

Figure A3 – Employee and Building Area Ratios

ITE Code	*Land Use / Size*	*Demand Unit*	*Wkdy Trip Ends Per Dmd Unit**	*Wkdy Trip Ends Per Employee**	*Emp Per Dmd Unit***	*Sq Ft Per Emp*
Commercial / Shopping Center						
820	10K gross leasable area	1,000 Sq Ft	152.03	na	3.33	300
821	25K gross leasable area	1,000 Sq Ft	110.32	na	3.33	300
820	50K gross leasable area	1,000 Sq Ft	86.56	na	2.86	350
820	100K gross leasable area	1,000 Sq Ft	67.91	na	2.50	400
820	200K gross leasable area	1,000 Sq Ft	53.28	na	2.22	450
820	400K gross leasable area	1,000 Sq Ft	41.80	na	2.00	500
General Office						
710	10K gross floor area	1,000 Sq Ft	22.66	5.06	4.48	223
710	25K gross floor area	1,000 Sq Ft	18.35	4.43	4.15	241
710	50K gross floor area	1,000 Sq Ft	15.65	4.00	3.91	256
710	100K gross floor area	1,000 Sq Ft	13.34	3.61	3.69	271
710	200K gross floor area	1,000 Sq Ft	11.37	3.26	3.49	287
Industrial						
770	Business Park***	1,000 Sq Ft	12.76	4.04	3.16	317
151	Mini-Warehouse	1,000 Sq Ft	2.50	56.28	0.04	22,512
150	Warehousing	1,000 Sq Ft	4.96	3.89	1.28	784
140	Manufacturing	1,000 Sq Ft	3.82	2.13	1.79	558
110	Light Industrial	1,000 Sq Ft	6.97	3.02	2.31	433
Other Nonresidential						
720	Medical-Dental Office	1,000 Sq Ft	36.13	8.91	4.05	247
620	Nursing Home	bed	2.37	6.55	0.36	na
610	Hospital	1,000 Sq Ft	17.57	5.20	3.38	296
565	Day Care	student	4.48	28.13	0.16	na
530	High School	student	1.71	19.74	0.09	na
520	Elementary School	student	1.29	15.71	0.08	na
520	Elementary School	1,000 Sq Ft	14.49	15.71	0.92	1,084
320	Lodging	room	5.63	12.81	0.44	na

* Trip Generation, Institute of Transportation Engineers, 2003.

** Employees per demand unit calculated from trip rates, except for Shopping Center data, which are derived from Development Handbook and Dollars and Cents of Shopping Centers, published by the Urban Land Institute.

*** According to ITE, a Business Park is a group of flex-type buildings served by a common roadway system. The tenant space includes a variety of uses with an average mix of 20-30% office/commercial and 70-80% industrial/warehousing.

Jobs by Type of Nonresidential Development

Figure A4 indicates 2005 estimates of jobs and nonresidential floor area located in Douglas County. Converting jobs to floor area yields an estimate of approximately 18.5 million square feet of nonresidential development within Douglas County. Estimated jobs and floor area are used to calibrate current infrastructure standards. Nonresidential floor area is also used to estimate vehicle trips to nonresidential development within Douglas County.

Figure A4 – Jobs and Floor Area Estimates

	Countywide Jobs			Square Feet	2005 Est
	2000 (1)		2005 (2)	Per Employee	Floor Area
Goods Producing					
Manufacturing	3,470				
Construction	3,720				
Wholesale/Transp	2,510				
Ag/Mining	155				
Subtotal	9,855	30.41%	10,496	784	8,229,049
Commercial Services					
Retail Trade	5,980				
All Other Services	14,408				
Subtotal	20,388	62.92%	21,715	400	8,685,835
Public Sector					
Education	1,122	3.46%	1,195	1,084	1,295,386
Government	1,040	3.21%	1,108	271	300,179
Subtotal	2,162				
GRAND TOTAL	32,405	100.00%	34,514		18,510,449

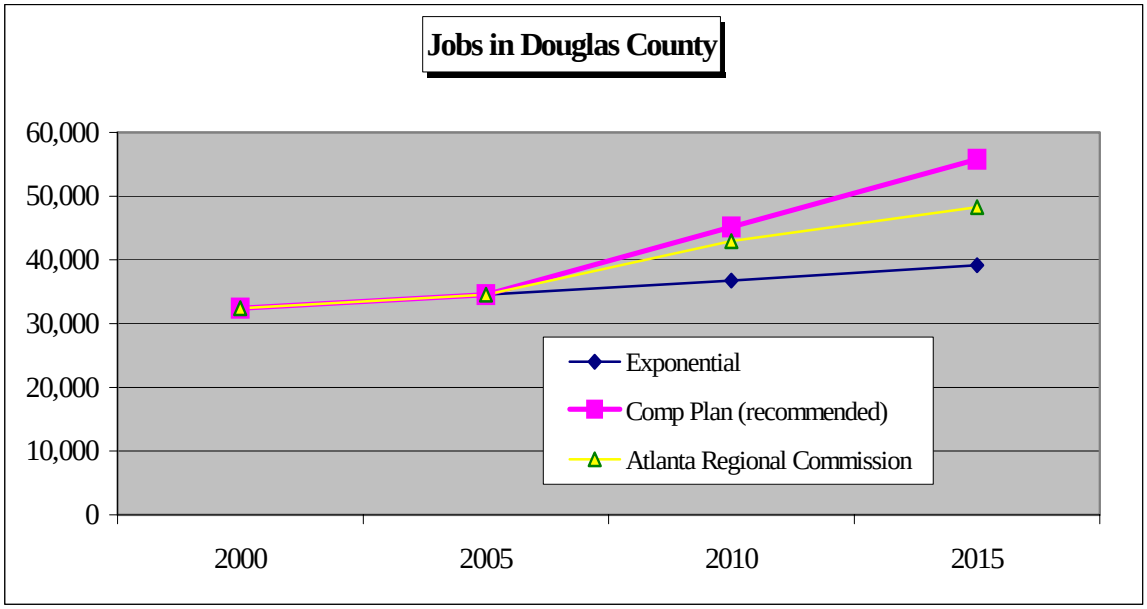
(1) Workers with jobs in Douglas County, Georgia
CTPP Part 2 data from U.S. Census Bureau, 2000.
(2) U.S. Department of Labor, Bureau of Statistics, projected 2005 from 2001-2004 data.

Employment Projections

Alternative job forecasts for Douglas County are shown in Figure A5. Actual job growth over the past five years has been relatively flat, as indicated by the exponential trend projection. The second highest alternative is base on the 2030 projections published by the Atlanta Regional Commission. The most optimistic job projection is based on the Comprehensive Plan, which expects Douglas County to add 44,600 jobs from 2000 to 2025.

Figure A5 – Job Projections

	Base Year								*Avg Anl*
	2000	2005	2006	2007	2008	2009	2010	2015	*Increase*
	Census		Projection Years (x) =>						*2005-2015*
Method			1	2	3	4	5	10	
Exponential	32,405	34,514	34,951	35,395	35,844	36,299	36,759	39,151	464
Comp Plan (recommended)	32,405	34,514	36,639	38,764	40,889	43,014	45,139	55,764	2,125
Atlanta Regional Commission	32,405	34,514	36,200	37,550	38,629	39,493	42,947	48,294	1,378



Detailed Development Projections

The demographic data shown in Figure A6 will be used as key inputs to the impact fee study. Population and job projections are the key factors that determine the other demographic data. For both population and jobs, TischlerBise indicates countywide population and jobs, the population and jobs expected within the County of Douglasville and the balance of population and jobs in the remainder of the County. The "remainder" is primarily the unincorporated area, but also includes the areas of Villa Rica and Austell within Douglas County. The relative proportions of key growth indicators are shown graphically in Figure A7.

Cumulative demographic data are shown at the top and projected annual increases by type of development are shown at the bottom of the table. Housing units are expected to increase at a slightly lower rate than jobs, as indicated by a slight increase in the jobs-to-housing ratio from 0.81 in 2005 to 0.87 by the year 2015.

Over the next ten years, nonresidential floor area in the good-producing sector is projected to experience an average increase of 507,000 square feet per year. Commercial service buildings (e.g. shopping centers or office buildings) are expected to increase an average of 534,000 square feet per year. Even though education and government buildings will not generate impact fee revenue, these buildings are expected to increase by 79,000 and 19,000 square feet per year,

respectively. For all types of nonresidential development, the projected increase averages approximately 1.14 million square feet of floor area each year.

Figure A6 – Annual Demographic Data

Douglas County, Georgia	2000	2005	2006	2007	2008	2009	2010	2015
Cumulative		*Base Yr*	*1*	*2*	*3*	*4*	*5*	*10*
Yr-Rd Pop in Households	91,325	112,051	116,725	121,592	126,661	131,940	137,437	168,532
Yr-Rd Pop in Group Quarters*	849	849	849	849	849	849	849	849
Total Countywide Population	92,174	112,900	117,574	122,441	127,510	132,789	138,286	169,381
Douglasville Population	20,065	27,195	28,621	30,047	31,473	32,899	34,325	41,455
Remainder of County Pop	72,109	85,705	88,953	92,394	96,037	99,890	103,961	127,926
Persons Per Hsg Unit	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62
Housing Units	34,825	42,728	44,511	46,367	48,300	50,313	52,409	64,266
Jobs to Housing Ratio	0.93	0.81	0.82	0.84	0.85	0.85	0.86	0.87
Countywide Jobs	32,405	34,514	36,639	38,764	40,889	43,014	45,139	55,764
Douglasville Jobs	14,500	15,444	16,271	17,097	17,924	18,751	19,578	23,712
Remainder of County Jobs	17,905	19,070	20,368	21,666	22,965	24,263	25,561	32,052
Nonres Sq Ft (x 1,000)								
Goods Producing		8,230	8,740	9,240	9,750	10,260	10,760	13,300
Commercial Services		8,690	9,220	9,760	10,290	10,830	11,360	14,030
Education		1,300	1,380	1,450	1,530	1,610	1,690	2,090
Government		300	320	340	360	370	390	490
Total		18,520	19,660	20,790	21,930	23,070	24,200	29,910
Avg Sq Ft Per Job		537	537	536	536	536	536	536

Annual Increase	05-06	06-07	07-08	08-09	09-10	***2005-2015 Avg Anl***
Year-Round Population	4,674	4,867	5,069	5,279	5,497	5,648
Jobs	2,125	2,125	2,125	2,125	2,125	2,125
Housing Units	1,782	1,856	1,933	2,013	2,096	2,154
Goods Producing KSF**	510	500	510	510	500	507
Commercial Services KSF**	530	540	530	540	530	534
Education KSF**	80	70	80	80	80	79
Government KSF**	20	20	20	10	20	19

* The 2000 group quarters population is assumed to remain constant through 2015.

** KSF = square feet of floor area in thousands.

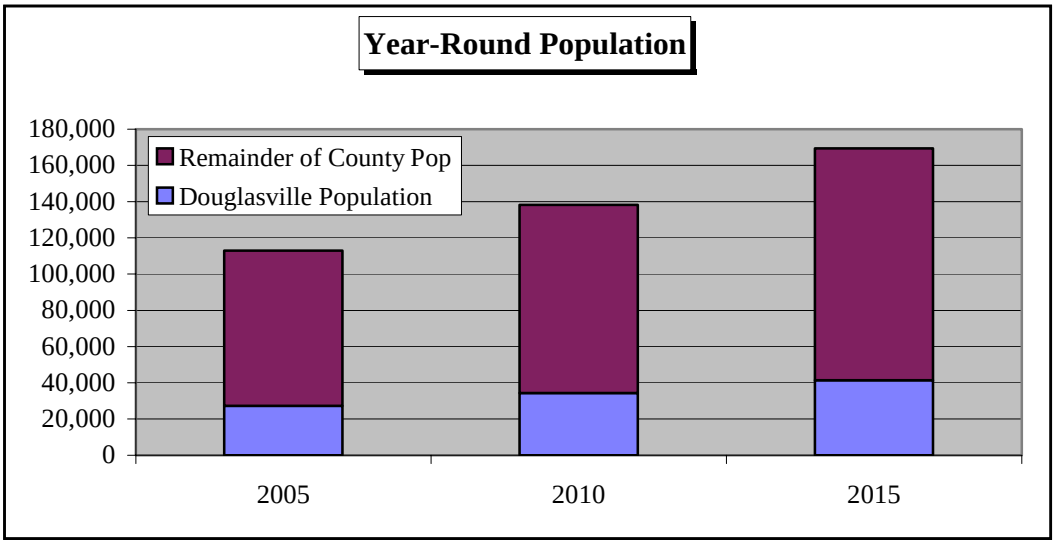
Summary of Growth Indicators

The demographic data summarized in Figure A7 will be used to estimate impact fee revenue and the anticipated need for growth-related infrastructure. However, impact fees methodologies are designed to minimize the importance of accurate development projections in the determination of the proportionate-share fee amounts. If actual development is slower than projected, impact fees revenues will also decline, but so will the need for growth-related infrastructure. In contrast, if development is faster than anticipated, the County will receive an increase in impact

fee revenue, but will also need to accelerate the capital improvements program to keep pace with the actual rate of development.

Figure A7 – Development Projections and Growth Rates

	2005	2010	2015	2005 to 2015 Average Annual Increase	2005 to 2015 Average Annual Growth Rate
Douglasville Population	27,195	34,325	41,455	1,426	5.2%
Remainder of County Pop	85,705	103,961	127,926	4,222	4.9%



	2005	2010	2015	2005 to 2015 Average Annual Increase	2005 to 2015 Average Annual Growth Rate
Douglasville Jobs	15,444	19,578	23,712	827	5.4%
Remainder of Co. Jobs	19,070	25,561	32,052	1,298	6.8%