

FISCAL IMPACT ANALYSIS

PROTOTYPE LAND USE FISCAL IMPACT ANALYSIS

**Prepared for
Anchorage 2020
Anchorage Bowl Comprehensive Plan
Municipality of Anchorage, Alaska**

June 30, 2000

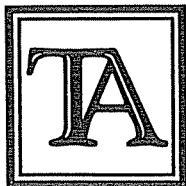
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I. EXECUTIVE SUMMARY

A. Background

The Municipality of Anchorage has contracted with Tischler & Associates, Inc. (TA) to complete two fiscal impact analyses. The first analysis determined that five different growth scenarios generated insufficient revenues to cover the resulting costs for service and facility demands placed on the Municipality from 1999 to 2020 (see "Fiscal Impact Analysis of Five Growth Scenarios").

The second analysis is this prototype fiscal impact analysis. In a prototype analysis, the costs and revenues are determined for various land use prototypes in order to understand the impacts each land use has independently on the Municipal and School District budgets. Whereas the recently completed fiscal impact analysis evaluated the overall fiscal impacts by geographic subarea of all land uses combined to 2020 for five different scenarios, the prototype analysis is a snapshot approach that evaluates the independent fiscal impacts of each land use. Limitations to this approach are the averaging of one-time costs and the conversion of marginal costs to average costs.

Four residential and five nonresidential prototypes have been evaluated as part of this prototype analysis. The residential prototypes and market values of new units are single family-urban/suburban units (\$234,667), single family-rural units (\$317,778), townhouse/condominium (\$168,889) and apartment (\$99,972). The nonresidential prototypes are retail, office, service, hotels and industrial space. These prototypes are described in more detail in Section III of this report.

B. Fiscal Impact Results-Combined Funds

The charts below show the net results by land use prototype for the General Fund and School District combined, assuming costs and revenues as indicated in the previously referenced fiscal impact report. Only three nonresidential prototypes generate net revenues to the combined General Fund and School District. While the other two nonresidential prototypes generate net revenues to the School District, the four residential prototypes generate net deficits to the combined General Fund and School District, although one generates net revenues to the General Fund and one generates net revenues to the School District.

Fiscal Impact Analysis



Capital Facility Analysis



Impact Fee Systems



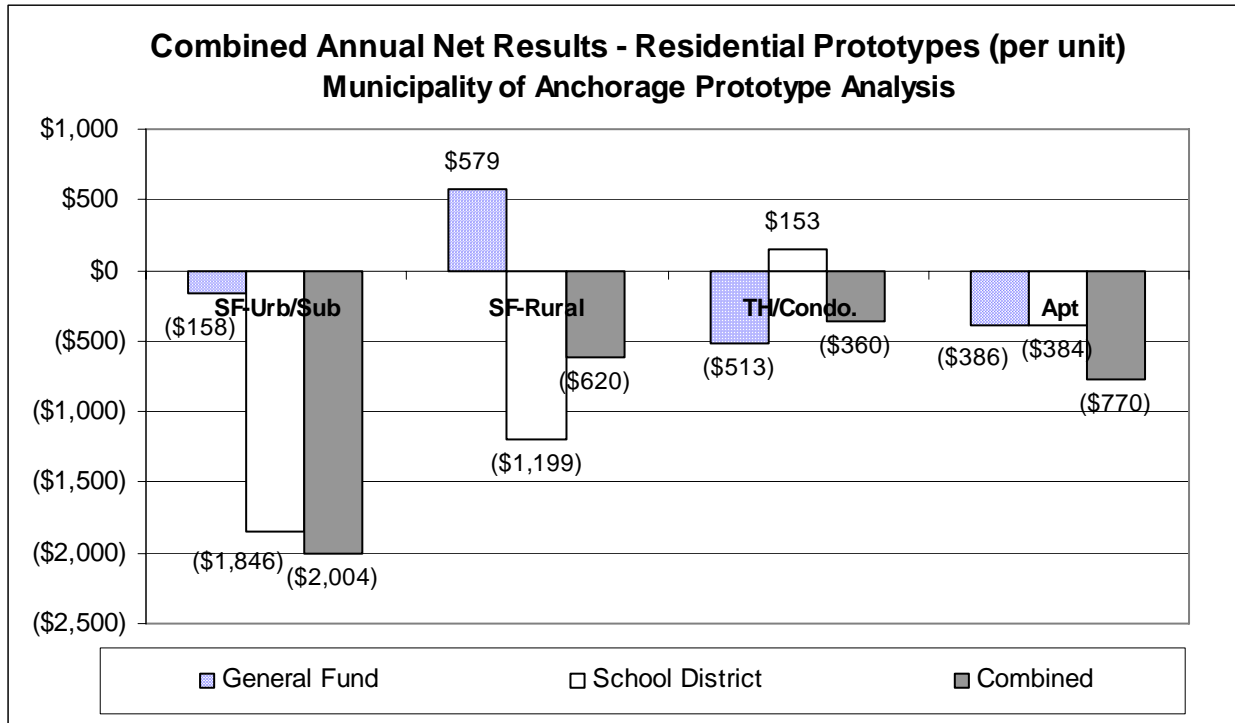
Growth Policy Planning



Economic and Market Analysis

MUNIES, FISCALS & CRIM
Fiscal impact systems tailored
for each community

1. Residential Prototypes

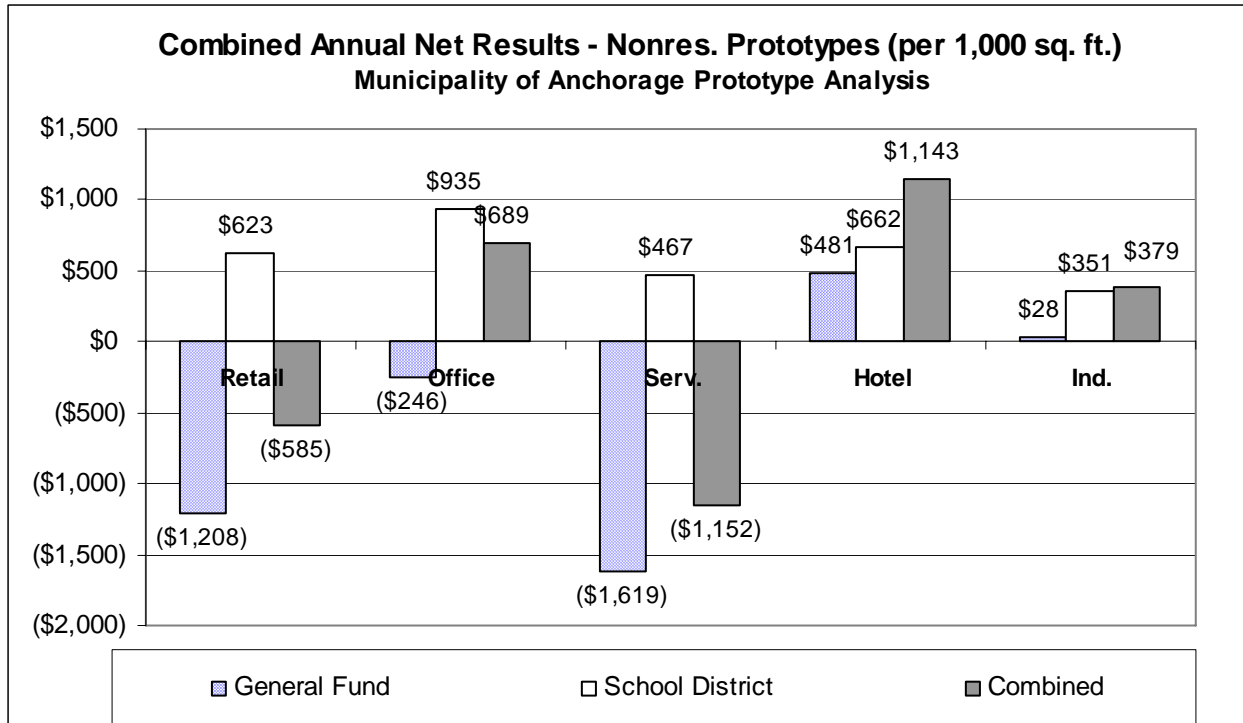


The chart above indicates that all four residential prototypes generate combined *net deficits* to the General Fund and School District, although the single family-rural generates *net revenues* to the General Fund and the townhouse/condominium prototype generates *net revenues* to the School District. The following points summarize the combined residential General Fund and School District findings in order from best to worst:

- The townhouse/condominium prototype generates the best combined result, *net deficits* of \$360 per unit. While *net deficits* of \$513 per unit are generated to the General Fund, modest *net revenues* of \$153 per unit are generated to the School District because of the relatively low School District cost resulting from a smaller pupil yield factor.
- The single family-rural prototype generates a combined *net deficit* of \$620 per unit. Although this prototype generates the second largest *net deficit* to the School District, *net revenues* of \$579 per unit are generated for the General Fund as a result of this prototype’s high market value.
- The apartment prototype generates a combined *net deficit* of \$770 per unit. Because of the same pupil yield factor, this prototype generates the same School District costs as the townhouse/condominium prototype, but generates less in revenues because of a lower market value.
- The single family-urban/suburban prototype generates the largest combined *net deficit* (\$2,004 per unit). This prototype generates the second best General Fund result, *net deficits*

of \$158 per unit, but the poorest School District result. Although it generates the same School District costs as the single family-rural, less revenue is generated because of a lower market value.

2. Nonresidential Prototypes



As the table above indicates, three of the five nonresidential prototypes generate combined *net revenues* to the General Fund and School District. The following points summarize the combined nonresidential General Fund and School District findings:

- Two of the five nonresidential prototypes generate *net revenues* to the General Fund, whereas *all* nonresidential prototypes generate *net revenues* to the School District, as there are no direct costs associated with nonresidential uses.
- The hotel prototype generates the best combined result, *net revenues* of \$1,143 per 1,000 square feet. This is due primarily to having the lowest General Fund costs as a result of the lowest employment density. In addition, this prototype has the second highest market value per 1,000 square feet.
- The office prototype generates the highest revenue due to its higher market value. Although costs for this prototype are relatively low, they are not as low as the hotel prototype. As a result, the office prototype generates the second highest *net revenues*, \$689 per 1,000 square feet.

- The industrial prototype also generates combined *net revenues*, \$379 per 1,000 square feet. Although this prototype has the second lowest costs, it generates the lowest revenue due to having the lowest market value.
- Although the retail prototype generates the second highest revenues, it generates the second highest costs. *Net deficits* of \$585 per 1,000 square feet are the result.
- The service prototype generates the poorest combined result, *net deficits* of \$1,152 per 1,000 square feet, primarily because this prototype generates the greatest costs and the second lowest revenues.

C. Conclusions

The following major points can be concluded from the analysis.

- Market value is the primary determinate for the residential prototype results because of the Municipality's reliance on property tax. This is reflected in the results for the two single family prototypes. For example, the single family-rural prototype generates the highest costs, \$175 more than the single family-urban/suburban prototype. However, because of the property tax revenue associated with having the highest market value (\$317,778), the single family-rural prototype generates net revenues while the single family-urban/suburban prototype, with a market value of \$234,667, generates the largest net deficit.
- In terms of nonresidential development, new hotel space is the best for the Municipality from a fiscal perspective, generating net revenues of \$1,143 per 1,000 square feet. This is because it has the lowest density of employees per 1,000 square feet of space and the second highest market value per 1,000 square feet.
- New office and industrial space also generate *positive* fiscal results. The primary factor in the office results is the revenues associated with having the highest market value, although the office prototype generates a net deficit for the General Fund. The primary factors in the industrial space results are the low costs associated with a low employment density per 1,000 square feet and low trip generation rates.
- Because road maintenance and law enforcement costs are highest at new retail and service development, retail and service space generate a *net deficit*. *It is important to note that if the Municipality were to adopt a local option sales tax, the fiscal result for the retail prototype would improve dramatically.*
- Hotel, office and industrial activities are the only prototype land uses that generate combined net revenues for both the General Fund and School District. Attracting these activities will help to offset the negative fiscal effects of residential development. As shown above, the retail and service categories generate net deficits to the General Fund that exceed the net revenues generated for the School District. These factors are why all five growth scenarios generate net deficits to the General Fund of the Municipality.

- It is important to acknowledge that fiscal issues are only one concern. Environmental, land use, housing affordability, jobs/housing balance, and traffic issues must also be taken into consideration when making any final assessments on what is best for the Municipality.

II. BACKGROUND

The Municipality of Anchorage has contracted with Tischler & Associates, Inc. (TA) to complete two fiscal impact analyses. The first analysis evaluated whether revenues generated by five different growth scenarios between 1999 and 2020 are enough to cover the resulting costs for service and facility demands placed on the Municipality (see "Fiscal Impact Analysis of Five Growth Scenarios"). As the first step in this analysis, TA prepared the "Level of Service, Cost and Revenue Assumptions" (LOS) document, which discusses Municipal services and facilities anticipated to be impacted by new development. The impacts from both residential and nonresidential land are evaluated. All projection methodologies and factors are described in this document. The service level, cost and revenue assumptions are based on TA's on-site interviews with department heads and their representatives, in addition to a detailed evaluation of the FY99 Budget. Other information as it pertains to each service provider was also reviewed for pertinent information.

The analysis in this report is a prototype fiscal impact analysis. In this type of analysis, the costs and revenues are determined for various land use prototypes to understand the impacts each land use has independently on the Municipal and School District budgets. Limitations to this prototype approach are the averaging of one-time costs and the conversion of marginal costs to average costs.

III. LAND USE PROTOTYPES

A. Residential Prototypes

The Municipality of Anchorage Department of Community Planning and Development has condensed the numerous residential zoning districts listed in the municipal zoning code into four residential prototypes that include all new residential land uses. These residential prototypes include two single family prototypes: 1) single family-urban/suburban and 2) single family-rural, as well as two higher density prototypes: 1) townhouse/condominium and 2) apartment. These different prototypes are meant to represent the various types of residential development that could be constructed in the Municipality. For example, single family-rural units that are being constructed in southeast Anchorage and Chugiak-Eagle River have more in common with each other than with single family-urban/suburban development that is occurring elsewhere in Anchorage. A description of the prototypes is provided below:

1. Single-family urban/suburban. This prototype includes two generalized zoning districts: The Urban/Suburban Low Density Single Family Residential District, which includes several residential zoning districts generally described in these terms: “Generally, areas of single family residential use with minimum lot sizes ranging from 6,000 to 20,000 square feet. Homes are typically served by public water and sewer systems. The Urban/Suburban Low Density Two Family Residential Districts are described as: “Generally, areas of two family residential use with minimum lot sizes ranging from 6,000 to 8,400 square feet.”
2. Single-family rural. This prototype includes several rural residential zoning districts described as: “Generally, areas of low density single family residential use on lots more than an acre in size. Homes typically rely on individual on-site water and wastewater disposal systems.”
3. Townhouse/condominium and apartment. These prototypes includes several residential zoning districts classed as Urban/Suburban Medium to High Density Multiple Family and described as: “Generally, areas of medium to high density multiple family residential use. Housing densities are intended to range from 8 to 45 dwelling units per acre.” The townhouse/condominium prototype is meant to represent higher value, owner occupied townhouse and condominium units, whereas the apartment prototype is intended to represent the high density, lower value, renter occupied multiplex and garden style apartment housing.

The average market value per unit, persons per unit and pupil generation rate assumptions are shown in the table below. The average market values are based on information provided by the Department of Community Planning and Development. Information on persons per unit was also provided by the Department of Community Planning and Development, based on 1990 U.S. Census data. Pupil generation factors are based on information provided by the Anchorage School District.

**Residential Land Use Prototypes
Municipality of Anchorage, Alaska**

Prototype	Average Market Value (1)	Persons Per Unit (2)	Pupil Yields (3)
SF-Urban/Suburban	\$234,667	2.98	0.69
SF-Rural	\$317,778	2.98	0.69
Townhouse/Condo.	\$168,889	2.69	0.22
Apartment	\$99,972	1.64	0.22

(1) Provided by the Department of Community Planning and Development; Municipal average

(2) Based on Municipality average from the 1990 Census

(3) Source: Anchorage School District, based on District average

B. Nonresidential Prototypes

Five nonresidential land use prototypes were identified for the fiscal analysis. These nonresidential land use prototypes consist of five groups of land uses as defined by the Department’s 1998 Land Use Coding Categories.

The land use codes were aggregated into prototypes as follows:

1. Retail – codes 2000 through 2160.
2. Office – codes 2200 through 2220.
3. Services – codes 2300 through 2400, except 2370.
4. Hotels – code 2370.
5. Industrial – codes 3000 through 3700

The average market value per square foot and employment density assumptions for the nonresidential prototypes are shown in the table below. The average market values are based on information provided by the Department of Community Planning and Development. Square feet per employee factors are based on trip rates from the Institute of Transportation Engineers and data from the Urban Land Institute.

**Nonresidential Land Use Prototypes
Municipality of Anchorage, Alaska**

Prototype	Market Value Per Sq. Ft. (1)	Square Feet Per Employee (2)
Retail	\$80.00	400
Office	\$120.00	248
Services	\$60.00	300
Hotel	\$85.00	1,608
Industrial	\$45.00	784

(1) Provided by the Department of Community Planning and Development

(2) Calculated from ITE Trip Rates and ULI data

IV. GENERAL METHODOLOGY

A. Annual Costs and Revenues

Annual costs and revenues are determined for each prototype by applying the applicable cost and revenue factors as outlined in the Level of Service document to each prototype. In general, nine different methodologies are used. In some cases, a unique methodology must be used. These methodologies, along with accompanying examples, are described below.

1. *Per Capita*

Many of the factors utilized in the fiscal impact analysis were derived using a per capita approach. This approach is used for Municipal expenditures and revenues that are influenced strictly by population. If a cost or revenue is projected on a per capita basis, the budget is divided by the current population estimate to arrive at the current level of service standard.

For example, the variable portion of the Elections budget totals \$245,400 in FY99. This amount is divided by the current population estimate of 246,800, for a per capita cost of \$0.99.

2. *Per Capita and Employee*

Some factors utilized in the fiscal impact analysis were derived using a per capita and employee approach. This approach is used for Municipal expenditures and revenues that are influenced by population and employment. If a cost or revenue is projected on a per capita and employee basis, it is divided by the current population and employment estimate to arrive at the current level of service standard.

For example, Emission Certificate Fees total \$1,442,740 in FY99. This revenue is derived from vehicle registrations. Therefore as new residents move to the Municipality, it is likely this revenue source will increase because it is assumed that additional residents will result in additional vehicle registrations. However, this revenue source is also derived from the registration of fleet vehicles associated with nonresidential activity. Therefore, a per capita projection methodology will understate revenues generated by new development. For example, if there are two scenarios that assume the same increase in population, but one assumes a significant passenger expansion to the airport, which allows additional rental car companies to enter the market, a per capita approach will project the same amount of Emission Certificate Fees under both scenarios. The per capita and employee approach serves as a proxy for capturing the impact of revenues generated by additional nonresidential activity. Therefore, Emission Certificate Fees (\$1,442,740) is divided by the current population and employment estimate of 369,046, for per capita and employee revenue of \$3.91.

3. *Per Trip*

As detailed Police calls for service information is not available for nonresidential land uses, a per trip approach is used to project the nonresidential portion of variable non-salary Police operating expenses. Trip generation rates were obtained from the reference book, Trip Generation, published by the Institute of Transportation Engineers (6th Edition, 1997). To translate the trip generation factors into associated operating costs per 1,000 square feet of nonresidential space, the trip generation factors are multiplied by the cost per trip in the Municipality of Anchorage.

Nonresidential costs are calculated per 1,000 square feet and are then converted to employees using employment per square feet factors developed by the Urban Land Institute.

4. *Per Housing Unit*

Some factors utilized in the fiscal impact analysis were derived using a per housing unit approach. If a cost or revenue is projected on a per unit basis, it is divided by the current housing unit estimate to arrive at the current level of service standard.

For example, the amount of the Police budget attributable to residential development totals \$4,340,412 in FY99. This amount is divided by the current population estimate of 248,600 to yield a per capita cost, which is then multiplied by the average household size by type of housing unit, to determine the cost per type of housing unit.

5. *Non-Factor Based Calculations*

Property tax revenues do not use the existing FY99 base budget to derive LOS factors. For example, to calculate the annual property tax revenues for a single family unit-urban/suburban, the market value is multiplied times the General Fund millage rate of 10.97 per \$1,000 of assessed value.

6. *Annualized One-Time Operating Revenues and Costs*

For purposes of the average prototype analysis, one-time operating revenues and costs are annualized by dividing the one-time revenue or cost amount by 21 years to obtain an average annual amount for the 1999 to 2020 time period.

For example, several growth-related Public Works Program Revenues are one-time in nature and do not compound annually. This is because these revenues are related to review of new development projects. There is an estimated \$597,030 in one-time revenues that accrue as result of additional population and employment growth in the Municipality. To determine the one-time revenues, the projected increase in population and employment between 1999 and 2000 is used. For example, the projected population and employment increase under the Current Trends scenario between 1999 and 2000 is 5,459. When this is compared to the one-time revenues of \$597,030, the one-time revenue per capita and job is \$109.37.

7. *Annualized Direct Operating Costs*

Some operating costs were direct entered into the fiscal model based on conversations with Municipal staff. For example, discussions with Cultural & Recreational Services staff indicate that the operating cost associated with the opening of an additional Recreation Center is \$250,000. Based on factors described in the LOS Document, two growth-related Recreation Centers are constructed in order to maintain the current level of service in the Municipality, resulting in associated operating costs of \$500,000. To determine factors for the average prototype analysis, these costs are divided by the net increase in population over the 21-year analysis period (102,250), for a cost per capita of \$4.89. This factor is then multiplied times the number of persons per housing type to determine the associated cost per prototype.

8. *Annualized Marginal Operating Costs*

Many of the operating costs used in the fiscal model utilized a true case study-marginal cost approach. This is true for certain Cultural and Recreational Services, Police, Public Works and Property and Facilities Management costs. For example, Public Works street maintenance operating costs are projected to increase as new road frontage is added to the Municipal system as a result of new *residential* development (nonresidential development is typically located on private streets) and as additional capacity adding road projects are constructed (benefiting all development). To determine the average cost factors for the prototype analysis, it is necessary to annualize the marginal cost calculations. For example, street maintenance operating costs consists of two cost factors. The first factor is *non-salary* road maintenance costs, which is \$5.15 per vehicle trip (see LOS document). This is allocated by multiplying the cost per vehicle trip by the trip generation assumptions for each prototype.

The second cost factor is the marginal *salary* costs associated with maintaining streets in the Municipal road system, which totals \$732,507 in the last year of the analysis (2020). These costs are also allocated using a two-step process. The first step is to determine the share of costs attributable to residential road front footage (nonresidential development is typically located on private streets). Of the total road mileage added to the Municipal system over the twenty-year analysis period, 99% is a result of front footage associated with residential development. Therefore, 99% (\$725,181) of the marginal *salary* costs are allocated to the residential prototypes. To allocate these costs to the residential prototypes, the residential cost share (\$725,181) is divided by the net increase in linear feet of residential road frontage over the 21-year analysis period (443,330), for a cost factor of \$1.64. This factor is then multiplied by the road frontage assumption for each residential prototype. The second step involves allocating the remaining 1% (\$7,326) of *salary* costs associated with maintaining new capacity adding road projects. Since the need for these roads is a function of both residential and nonresidential development, this cost is divided by the increase in total trips as a result of the net increase in new development over the 21-year period (262,272). This results in a cost per trip of \$.03. This factor is then multiplied by the trip generation assumptions for each prototype.

9. *Annualized Capital Costs*

Similar to one-time operating revenues and costs, capital costs are also annualized by taking the year 20 expenditures, as the majority of capital expenditures are debt financed over 20 years. For example, Health and Human Services capital expenditures total \$448,793 in year 20. This amount is divided by the marginal growth in population over the 21-year analysis period (102,250), to determine the one-time cost per capita. This result is then used in conjunction with the persons per household factors to calculate the cost per residential unit for each prototype. Similar methodologies are used for Public Transportation and Cultural and Recreational Services.

Capital expenditures for Property and Facilities Management were annualized in the same manner discussed above for Health and Human Services, with the exception being that costs were allocated to both population and employment growth. Therefore, the year 20 capital expenditures of \$2,697,079 were divided by the marginal growth in population and employment over the 21-year analysis period (145,034), to determine the one-time cost per capita and job. This result is then used in conjunction with the persons per household and jobs per 1,000 square

feet factors to calculate the cost per residential unit and per 1,000 square feet of nonresidential space, respectively, for each prototype.

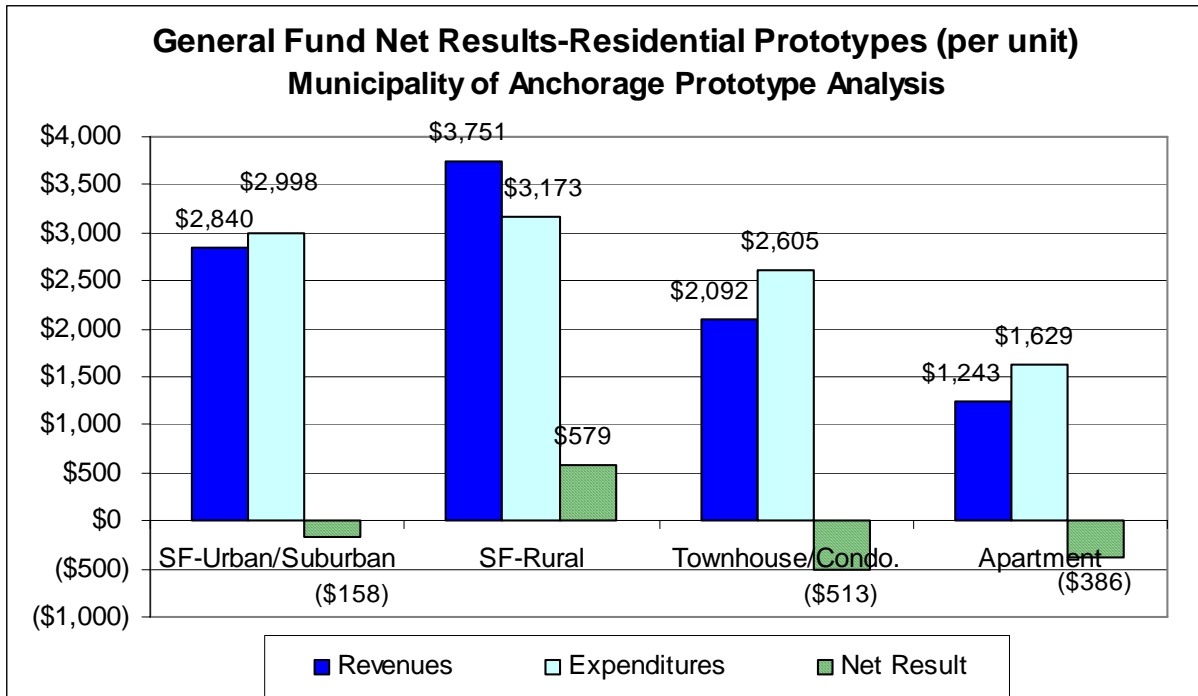
For Fire, costs for new stations and associated apparatus are allocated based on calls for service. According to data provided by the Municipality, approximately 60% of the Fire Department's activities are directed toward residential development. Therefore, it is assumed that 60% of the need for additional Fire stations is a result of residential development. Capital expenditures of \$278,380 in year 20 were multiplied by 60% and then divided by the marginal growth in population over the 21-year analysis period (102,250), to determine the one-time cost per capita. The remaining 40% of total capital costs (\$111,352) was divided by the marginal growth in employment over the 21-year analysis period (42,784), to determine the one-time cost per job. These results are then used in conjunction with the persons per household and jobs per 1,000 square feet factors to calculate the cost per residential unit and per 1,000 square feet of nonresidential space, respectively, for each prototype.

V. FISCAL IMPACT RESULTS-GENERAL FUND

A. Annual Net Results

The charts below show the net results by land use prototype for the General Fund, assuming costs and revenues as indicated in the previously referenced fiscal impact report.

1. Residential Prototypes

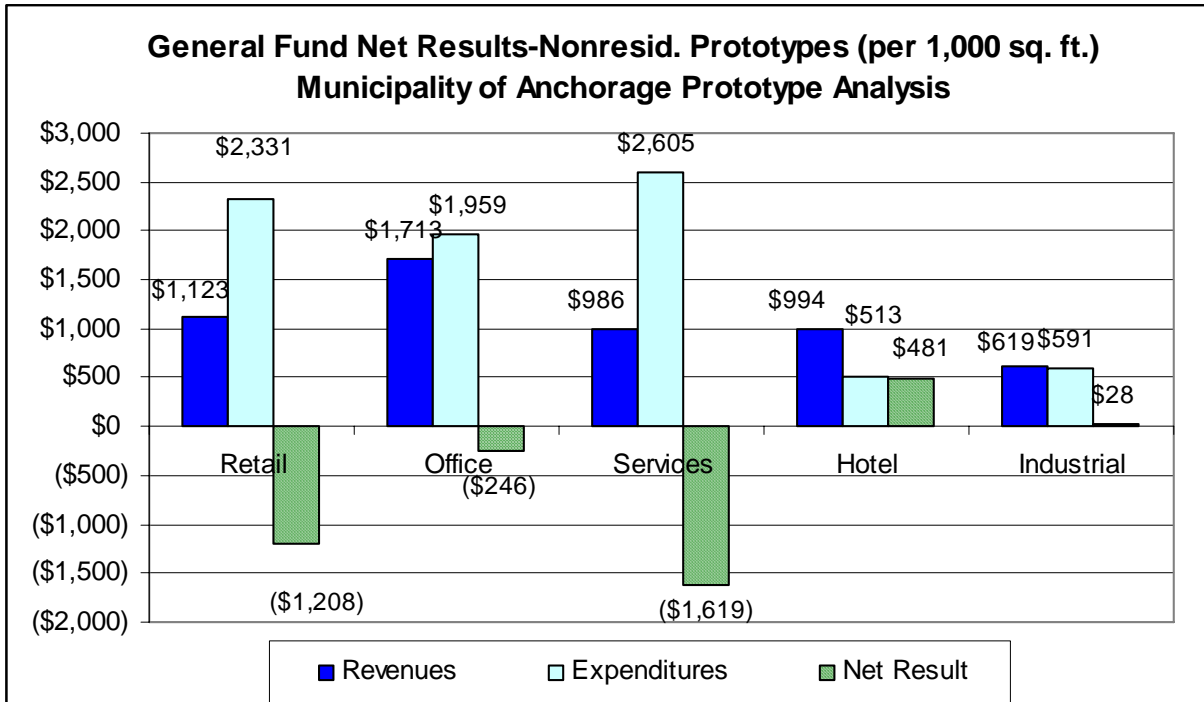


The chart above indicates that three of the four residential prototypes generate *net deficits* to the General Fund. The following points summarize the residential General Fund findings in order from best to worst:

- The single family-rural prototype is the only residential prototype to generate *net revenues* (\$579 per unit). This is due to the amount of property taxes generated by its substantially higher market value, which is approximately \$83,000 higher than the single family-urban/suburban prototype.
- The single family-urban/suburban prototype generates the second best result, annual *net deficits* of \$158 per unit. A contributing factor is that this prototype generates the second highest costs.
- The apartment and townhouse/condominium prototypes generate the largest *net deficits* as a result of lower market values. Because of a lower household size, the apartment prototype

generates a lower net deficit (\$386 per unit) than the townhouse/condominium prototype (\$513 per unit).

2. *Nonresidential Prototypes*



As the chart above indicates, only two of the five nonresidential prototypes produce *positive* General Fund net results. The following points summarize the nonresidential General Fund findings in order from best to worst:

- The hotel prototype generates the largest *net revenues* (\$481 per 1,000 square feet) because it generates the lowest costs for all General Fund services with the exception of Police. This is a result of having the lowest employment density per 1,000 square feet of space.
- Although the industrial prototype generates the lowest revenues, it produces the second best General Fund result, *net revenues* of \$28 per 1,000 square feet. This is because the second lowest costs are generated as a result of having the second lowest employment density per 1,000 square feet.
- Although the office prototype generates the highest revenues, it produces a *net deficit* of \$246 per 1,000 square feet. This is because this prototype generates the third highest costs.
- The retail prototype produces a *net deficit* (\$1,208 per 1,000 square feet) because it has a relatively low market value and generates the second highest costs. The higher costs are primarily for Police, which result from the higher vehicle trip generation rate.

- The services prototype produces the largest *net deficit* (\$1,619 per 1,000 square feet) because it generates the highest costs and the second lowest revenues. Like the retail prototype, the higher costs are primarily for Police and the lower revenues are a result of the having the second lowest market value.

B. Annual Revenues

The table below shows annual General Fund revenue factors in constant dollars for each of the residential and nonresidential prototypes.

**Annual Prototype General Fund Revenues (Per Unit for Residential and Per 1,000 Sq.Ft. for Nonresidential)
Municipality of Anchorage Fiscal Analysis**

Revenues	SF- Urb./Sub.	SF- Rural	TH/ Condo.	Apt.	Retail	Office	Services	Hotel	Ind.
Federal	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
State	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Local	\$107.32	\$107.32	\$96.87	\$59.06	\$204.51	\$329.85	\$272.67	\$50.87	\$104.34
Intragovernmental Revenues	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Fund Balance Applied	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Property Taxes	\$2,574	\$3,486	\$1,853	\$1,097	\$878	\$1,316	\$658	\$932	\$494
Fire and Rescue	\$18.06	\$18.06	\$16.30	\$9.94	\$15.97	\$25.76	\$21.30	\$3.97	\$8.15
Public Works	\$0.45	\$0.45	\$0.41	\$0.25	\$2.22	\$3.58	\$2.96	\$0.55	\$1.13
Community Planning & Dev.	\$0.34	\$0.34	\$0.31	\$0.19	\$0.29	\$0.46	\$0.38	\$0.07	\$0.15
Health & Human Services	\$21.75	\$21.75	\$19.63	\$11.97	\$9.81	\$15.83	\$13.09	\$2.44	\$5.01
Other Program	\$39.03	\$39.03	\$35.23	\$21.48	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Executive Manager	\$6.81	\$6.81	\$6.15	\$3.75	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Cultural & Recreation	\$27.72	\$27.72	\$25.02	\$15.25	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Police	\$6.19	\$6.19	\$5.58	\$3.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Transit	\$21.98	\$21.98	\$19.84	\$12.09	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Property & Fac. Management	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
General Fund Total	\$2,824	\$3,736	\$2,078	\$1,234	\$1,110	\$1,692	\$969	\$990	\$612

Of the four residential prototypes, single family-rural units generate the most revenues, approximately \$3,736 annually. This is because of its higher market value, which generates more property tax. The single family-urban/suburban prototype generates \$2,824 annually, followed by townhouse/condominium (\$2,078) and apartment (\$1,234).

Of the five nonresidential prototypes, office space generates the most revenues (approximately \$1,692 per 1,000 square feet), followed by retail (approximately \$1,110 per 1,000 square feet), hotel (approximately \$990 per 1,000 square feet), services (approximately \$969 per 1,000 square feet), and industrial space (approximately \$612 per 1,000 square feet). Office space has the highest market value, which produces more in property tax revenues.

C. One-Time Revenues

The table below shows one-time General Fund revenue factors in constant dollars for each of the residential and nonresidential prototypes. For purposes of the prototype analysis, these one-time revenues are annualized by dividing the one-time revenue amount by 21 years to obtain an average annual amount for the 1999 to 2020 analysis time period.

**One-Time Prototype General Fund Revenues (Per Unit for Residential and Per 1,000 Sq.Ft. for Nonresidential)
Municipality of Anchorage Fiscal Analysis**

Revenues	One-Time Per Cap./Emp Revenue	Annualized Revenue, 1999 to 2020								
		SF- Urb./Sub.	SF- Rural	TH/ Condo.	Apt.	Retail	Office	Services	Hotel	Ind.
Public Works	\$109.37	\$15.52	\$15.52	\$14.01	\$8.54	\$13.02	\$21.00	\$17.36	\$3.24	\$6.64
Community Planning & Dev.	\$0.55	\$0.08	\$0.08	\$0.07	\$0.04	\$0.07	\$0.11	\$0.09	\$0.02	\$0.03
General Fund Total	\$109.92	\$15.60	\$15.60	\$14.08	\$8.58	\$13.09	\$21.11	\$17.45	\$3.26	\$6.68

D. Annual Operating Costs

The table below shows General Fund operating cost factors in constant dollars for each of the residential and nonresidential prototypes.

**Annual Prototype General Fund Operating Expenditures (Per Unit for Residential and Per 1,000 Sq.Ft. for Nonresidential)
Municipality of Anchorage Fiscal Analysis**

Costs	SF- Urb./Sub.	SF- Rural	TH/ Condo.	Apt.	Retail	Office	Services	Hotel	Ind.
Assembly	\$20.19	\$20.19	\$18.23	\$11.11	\$7.70	\$12.41	\$10.26	\$1.91	\$3.93
General Government	\$50.47	\$50.47	\$45.56	\$27.78	\$60.00	\$37.47	\$63.43	\$12.72	\$10.91
Municipal Manager	\$3.05	\$3.05	\$2.75	\$1.68	\$2.40	\$3.87	\$3.20	\$0.60	\$1.22
Health & Human Services	\$52.97	\$52.97	\$47.81	\$29.15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Police	\$307.50	\$307.50	\$277.57	\$169.23	\$762.80	\$320.13	\$762.80	\$155.96	\$86.72
Fire	\$173.43	\$173.43	\$156.55	\$95.44	\$215.42	\$347.44	\$287.22	\$53.59	\$109.91
Public Transportation	\$97.58	\$97.58	\$88.08	\$53.70	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Cultural & Recreational	\$629.88	\$629.88	\$568.59	\$346.65	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Executive Manager	\$215.09	\$215.09	\$194.16	\$118.37	\$169.38	\$273.19	\$225.84	\$42.13	\$86.42
Community Planning & Dev.	\$59.11	\$59.11	\$53.36	\$32.53	\$49.59	\$79.98	\$66.12	\$12.33	\$25.30
Property & Fac. Maintenance	\$326.30	\$326.30	\$294.55	\$179.58	\$273.74	\$441.52	\$364.99	\$68.10	\$139.66
Public Works	\$120.63	\$295.60	\$23.21	\$20.72	\$119.13	\$57.06	\$121.11	\$24.62	\$15.97
General Fund Total	\$2,056	\$2,231	\$1,770	\$1,086	\$1,660	\$1,573	\$1,905	\$372	\$480

Of the residential prototypes, single family-rural units have the greatest operating costs, totaling approximately \$2,231 annually. This is followed by single family-urban/suburban prototype (\$2,056 annually), townhouse/condominium units (\$1,770 annually) and apartment units (\$1,086 annually). Because of the same average household size, costs are the same in all cost categories with the exception of Public Works for the two single family prototypes. Public Works costs are greater for the single family-rural prototype because of a higher front footage assumption (160 feet versus 55 feet). The greatest costs are for Cultural & Recreational Services (Parks & Libraries), Police, Fire and Property & Facilities Management.

Of the nonresidential prototypes, the services prototype generates the most in total expenditures, \$1,905 per 1,000 square feet annually. This is closely followed by retail and office space, with annual costs of \$1,660 and \$1,573 per 1,000 square feet, respectively. The industrial and hotel prototypes generate the least amount of expenditures, with annual costs of \$480 and \$372 per 1,000 square feet annually. Costs for the services prototype is the highest because of the high level of vehicle trips that are generated compared to office, hotel and industrial space. Higher trips results in greater Police and Public Works costs. In addition, this prototype has the second highest number of employees per 1,000 square feet.

E. One-Time Operating Costs

The table below shows one-time General Fund costs factors in constant dollars for each of the residential and nonresidential prototypes. For purposes of the prototype analysis, these one-time costs are annualized by dividing the one-time cost amount by 21 years to obtain an average annual amount for the 1999 to 2020 analysis time period.

**One-Time Prototype General Fund Expenditures (Per Unit for Residential and Per 1,000 Sq.Ft. for Nonresidential)
Municipality of Anchorage Fiscal Analysis**

Cost	One-Time Per Cap./Emp Cost	Annualized Cost, 1999 to 2020								
		SF- Urb./Sub.	SF- Rural	TH/ Condo.	Apt.	Retail	Office	Services	Hotel	Ind.
Building Safety	\$13.64	\$40.65	\$40.65	\$36.69	\$22.37	\$34.10	\$55.00	\$45.47	\$8.48	\$17.40

F. Annualized Capital Costs

The table below shows annualized General Fund capital cost factors in constant dollars for each of the residential and nonresidential prototypes.

**Annualized Prototype General Fund Capital Expenditures (Per Unit for Residential and Per 1,000 Sq.Ft. for Nonresidential)
Municipality of Anchorage Fiscal Analysis**

Costs	SF- Urb./Sub.	SF- Rural	TH/ Condo.	Apt.	Retail	Office	Services	Hotel	Ind.
Fire	\$2.79	\$2.79	\$2.52	\$1.54	\$3.73	\$6.02	\$4.98	\$0.93	\$1.90
Public Works	\$94.05	\$94.05	\$72.28	\$72.28	\$482	\$202	\$482	\$99	\$55
Cultural & Recreational	\$288.24	\$288.24	\$260.19	\$158.63	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Public Transportation	\$22.45	\$22.45	\$20.26	\$12.35	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Health & Human Services	\$6.09	\$6.09	\$5.50	\$3.35	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Prop. & Fac. Management	\$24.63	\$24.63	\$22.24	\$13.56	\$20.67	\$33.33	\$27.55	\$5.14	\$10.54
General Fund Total	\$438	\$438	\$383	\$262	\$507	\$242	\$515	\$105	\$67

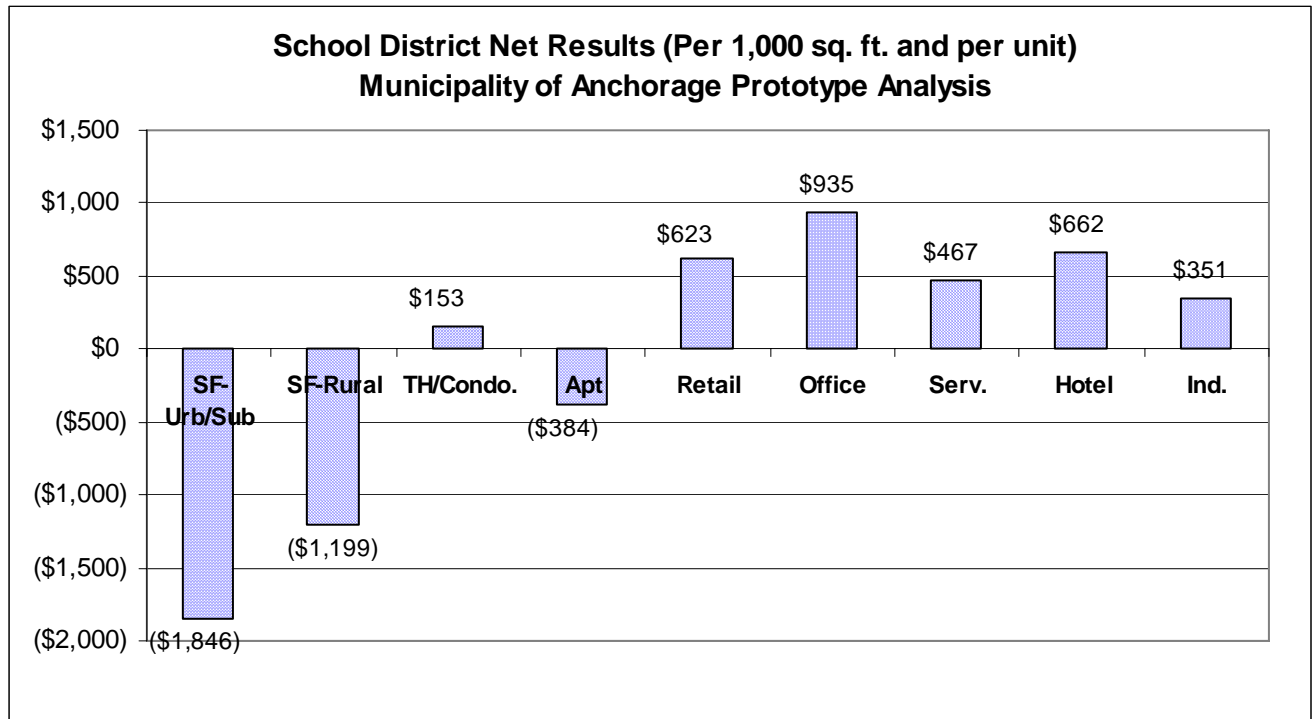
Of the residential prototypes, single family-rural and single family-urban/suburban units have the greatest annualized capital costs, totaling approximately \$438 per unit. Annualized capital costs are the same for these two prototypes because of the same average persons per household and trip generation assumptions. The townhouse/condominium and apartment prototypes generate annualized capital costs of \$383 and \$262 per unit, respectively. The greatest costs are for Cultural & Recreational Services (Parks & Libraries) and Public Works.

Of the nonresidential prototypes, the services prototype generates the most in annualized capital costs, \$515 per 1,000 square feet annually. This is followed by retail and office space, with annualized costs of \$507 and \$242 per 1,000 square feet, respectively. The industrial and hotel prototypes generate the lowest annualized capital costs, \$105 and \$67 per 1,000 square feet annually. Costs for the services and retail prototypes are the highest because of the high level of vehicle trips generated compared to office, hotel and industrial space. Higher trips results in greater Public Works costs.

VI. FISCAL IMPACT RESULTS-SCHOOL DISTRICT

A. Annual Net Results-School District

The charts below show the net results by land use prototype for the School District, assuming costs and revenues as indicated in the previously referenced fiscal impact report.



As the chart above indicates, *all nonresidential* prototypes generate *net revenues* to the School District and only *one residential* prototype generates *net revenues*. The following points summarize the findings:

- The townhouse/condominium prototype generates *net revenues* of \$153 per unit. Net revenues are the greatest for this prototype because it generates low School District costs as a result of a smaller pupil yield factor and its market value is relatively high compared to the other multifamily housing prototype.
- Although the apartment prototype generates the same low School District costs as the townhouse/condominium prototype, a *net deficit* of \$384 per unit is generated as a result of this prototype’s low market value.
- The single family-rural and single family-urban/suburban prototypes generate the same School District costs because the same pupil generation rate is assumed. However, the *net deficits* are less for the single family-rural prototype (\$1,199 per unit) compared to the single family-urban/suburban prototype (\$1,846 per unit) because the market value for this prototype is approximately \$83,000 higher.

- All nonresidential prototypes generate net revenues to the School District, as new jobs do not generate School District costs. Because both residential and nonresidential properties are assessed property taxes for the School District, the office prototype generates the most revenue per 1,000 square feet (\$935), followed by hotel (\$662), retail (\$623), services (\$467) and industrial (\$351).

B. Annual Revenues

The table below shows annual School District revenue factors in constant dollars for each of the residential and nonresidential prototypes.

**Annual Prototype School District Revenues (Per Unit for Residential and Per 1,000 Sq.Ft. for Nonresidential)
Municipality of Anchorage Fiscal Analysis**

Revenues	SF- Urb./Sub.	SF- Rural	TH/ Condo.	Apt.	Retail	Office	Services	Hotel	Ind.
Property Taxes	\$1,828	\$2,475	\$1,316	\$779	\$623	\$935	\$467	\$662	\$351
State Sources	\$3,062	\$3,062	\$976	\$976	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Federal Sources	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Local Revenues	\$7.65	\$7.65	\$2.44	\$2.44	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
School District Total	\$4,898	\$5,545	\$2,294	\$1,758	\$623	\$935	\$467	\$662	\$351

Single family-rural units generate the most School District revenues, approximately \$5,545 per unit annually. This single family prototype generates higher revenues than the other three residential prototypes because of the property tax revenue associated its higher market value. Single family-urban/suburban units generate approximately \$4,898 per unit annually, followed by townhouse/condominium units (\$2,294 per unit) and apartment units (\$1,758 per unit). Per unit state revenues are much higher for the two single family prototypes because they have a much higher pupil yield factor.

Of the five nonresidential prototypes, office space generates the most School District revenues (approximately \$935 per 1,000 square feet), followed by hotel (approximately \$662 per 1,000 square feet), retail (approximately \$623 per 1,000 square feet), services (approximately \$467 per 1,000 square feet) and industrial (\$351 per 1,000 square feet). The office prototype generates the most revenues because of its higher market value.

C. Annual Operating Costs

The table below shows School District operating cost factors in constant dollars for each of the residential and nonresidential prototypes.

**Annual Prototype School District Operating Expenditures (Per Unit for Residential and Per 1,000 Sq.Ft. for Nonresidential)
Municipality of Anchorage Fiscal Analysis**

Costs	SF- Urb./Sub.	SF- Rural	TH/ Condo.	Apt.	Retail	Office	Services	Hotel	Ind.
General Administration	\$25.09	\$25.09	\$8.00	\$8.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Instructional Support	\$1,623.08	\$1,623.08	\$517.50	\$517.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Oper./Maint. of Plant	\$376.03	\$376.03	\$119.89	\$119.89	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Pupil Transportation	\$222.18	\$222.18	\$70.84	\$70.84	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Elementary Education	\$527.98	\$527.98	\$208.41	\$208.41	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Charter Schools	\$80.61	\$80.61	\$25.70	\$25.70	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Special Education	\$759.31	\$759.31	\$242.10	\$242.10	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Middle School Education	\$175.61	\$175.61	\$47.89	\$47.89	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Secondary Education	\$343.78	\$343.78	\$68.76	\$68.76	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bilingual/Multicultural	\$83.98	\$83.98	\$26.78	\$26.78	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Community Services	\$26.22	\$26.22	\$8.36	\$8.36	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Non-Departmental	\$3.11	\$3.11	\$0.99	\$0.99	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
School District Total	\$4,247	\$4,247	\$1,345	\$1,345	\$0	\$0	\$0	\$0	\$0

The single family-urban/suburban and single family-rural prototypes each generate School District operating costs of \$4,247 per unit annually. Costs are the same for these two prototypes because each has the same pupil generation factor. The townhouse/condominium and apartment prototypes also have the same pupil generation factor, and as a result, generate annual School District operating costs of \$1,345 per unit. Since new jobs do not generate additional school children, the nonresidential prototypes do not directly generate additional public school costs.

D. Annualized Capital Costs

The table below shows annualized School District capital cost factors in constant dollars for each of the residential and nonresidential prototypes.

**Annualized Prototype School District Capital Expenditures (Per Unit for Residential and Per 1,000 Sq.Ft. for Nonresidential)
Municipality of Anchorage Fiscal Analysis**

Costs	SF- Urb./Sub.	SF- Rural	TH/ Condo.	Apt.	Retail	Office	Services	Hotel	Ind.
Capital Expenditures	\$980	\$980	\$312	\$312	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

The single family-urban/suburban and single family-rural prototypes each generate School District capital costs of \$980 per unit annually. Costs are the same for these two prototypes because each has the same pupil generation factor. The townhouse/condominium and apartment prototypes also have the same pupil generation factor, and as a result, generate annual School District capital costs of \$312 per unit. Since new jobs do not generate additional school children, the nonresidential prototypes do not generate additional public school capital costs.