HB

23

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STATE OF ALASKA
THE LEGISLATURE

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Mary Van Nimwegen

3/7/92 NHESS

7-LS0220\G
Ford
3/14/91

CS FOR HOUSE BILL NO. 23 ( )

IN THE LEGISLATURE OF THE STATE OF ALASKA

SEVENTEENTH LEGISLATURE - FIRST SESSION

BY

Offered:
Referred:

Sponsor(s): REPRESENTATIVES LARSON, Carney, Taylor

A BILL

FOR AN ACT ENTITLED

"An Act relating to the area cost differential for school districts; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 14.17.051 is repealed and reenacted to read:

Sec. 14.17.051. AREA COST DIFFERENTIAL. The board shall develop a methodology for calculating an area cost differential and shall establish by regulation an area cost differential for each school district. The department shall conduct a survey of school district personnel costs once every five years and a survey of school district nonpersonnel costs once every two years.

* Sec. 2. TRANSITION. Until the State Board of Education has established an area cost differential by regulation, as required by sec. 1 of this Act, the Department of Education shall calculate state aid for each school district by using the area cost differential provided in AS 14.17.051, as it existed before the effective date of this Act.

* Sec. 3. REPORT. The Department of Education shall report to the legislature the methodology used to calculate the area cost differential required by sec. 1 of this Act by January 15, 1992.

7-LS0220\G
Ford
3/12/91

CS FOR HOUSE BILL NO. 23 ( )

IN THE LEGISLATURE OF THE STATE OF ALASKA

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* Sec. 2. Notwithstanding AS 14.17.051, as repealed and reenacted by this Act, the area cost differential for the Aleutian East school district is 1.31 for the fiscal year beginning July 1, 1990, and shall be increased in equal percentage amounts over the next two fiscal years, beginning July 1, 1991, until the area cost differential is equal to 1.33.

* Sec. 3. REPORT. The Department of Education shall report to the legislature the methodology used to calculate the area cost differential required by this Act by January 15, 1992.

*** Sec. 4.** This Act takes effect immediately under AS 01.10.070(c).

Alaska State Legislature

HOUSE OF REPRESENTATIVES

Official Business

P.O. Box V
State Capitol
Juneau, Alaska 99811

MEMORANDUM

February 27, 1991

TO: House Health, Education, and Social Services Committee

FROM: Representative Ronald L. Larson

SUBJECT: HB 23, an Act revising the Area Cost Differential

Sec. 14.17.021. State foundation aid. (b) The basic need of a school district is determined by multiplying the area cost differential of the district under AS 14.17.051 by the number of instructional units in the district under AS 14.17.031 and then multiplying that product by the instructional unit value in AS 14.17.056.

Before you for consideration is HB 23, an Act revising the Area Cost Differential for education funding. The Area Cost Differential is an index set in statute (AS14.17.056) for computing state funding allocations to school districts.

HB 23 reflects the recommended area cost differentials from a 1988 study by the McDowell Group for the Legislative Budget & Audit Committee. Previous school district differentials had been based only on household cost of living data. Little was known about the cost of operating school districts in the different regions of Alaska.

Using the more pertinent and updated data from the 1988 McDowell Group, HB 23 attempts to establish an area cost differential that truly reflects the costs of operating a school district by considering both personnel and, for the first time, nonpersonnel costs.

Copies of the Alaska School District Profiles and Differential Study are available for your review. A summary of the information has been provided for the Committee's packets.

Thank you for this opportunity.

FISCAL NOTE

STATE OF ALASKA
1991 LEGISLATIVE SESSION

BILL NO. CSHB 23 (HESS)

Revision Date: _____ Department Affected: Education

Title: Area Cost Differential for School Districts BRU: K-12 Support, Education Finance

Component: Foundation, District Support

Sponsor: House HESS

Requestor: House HESS COMPONENT SERIAL NO. [ ][ ][ ][ ]

Expenditures/Revenues: (Thousands of Dollars)

OPERATING	FY 92	FY 93	FY 94	FY 95	FY 96	FY 97
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL	100.0	-0-	-0-	-0-	-0-	-0-
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS	29.4	58.8	58.8	58.8	58.8	58.8
MISCELLANEOUS						
TOTAL OPERATING	129.4	58.8	58.8	58.8	58.8	58.8
CAPITAL						
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND	129.4	58.8	58.8	58.8	58.8	58.8
FEDERAL FUNDS						
OTHER						
TOTAL	129.4	58.8	58.8	58.8	58.8	58.8

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

Estimate of current year impact: None/Aleutians East area differential is currently 1.31

ANALYSIS: (Attach a separate page if necessary.)

Section 2 of CSHB23(HESS) increases the Foundation program cost as follows:
FY 92 (Area cost differential 1.32) cost of $29,400
FY 93 (Area cost differential 1.33) cost of $58,800
Section 1 is estimated to require a one-time contractual cost of $100,000

Prepared By: Mary Hakala Phone: 465-2800

Division: Commissioner's Office Date: 3/13/91

Approved by Commissioner: Steve Hoffbeck, Acting Commissioner

Agency: Education Date: 3/13/91

Distribution (by preparer): Legislative Finance, Legislative Sponsor, Requestor, OMB, & Impacted Agency(les).

ACSA

ALASKA ASSOCIATION OF ELEMENTARY SCHOOL PRINCIPALS
ALASKA ASSOCIATION OF SECONDARY SCHOOL PRINCIPALS
ALASKA ASSOCIATION OF SCHOOL ADMINISTRATORS

• ALASKA COUNCIL OF SCHOOL ADMINISTRATORS •
326 Fourth St., Suite 408, Juneau, AK 99801-1101 (907) 586-9702 FAX (907) 586-5879

HOUSE BILL 23

POSITION STATEMENT

"An Act relating to the area cost differential for school districts; and providing for an effective date."

The Alaska Council of School Administrators supports HB 23 with some reservation and recommendations.

Because of the continued impact of sustaining the current level of funding for education over the past five year and the continued increased costs of providing education to students, districts have had to make substantial reductions in their budgets. This includes those districts who are the victims of a negative adjustment to their area cost differential listed in this legislation. We know the study completed two years ago which is used to establish the recommended changes in the differentials for all districts, was based more on cost of living in the region rather that the cost of educating by region. This raised the question of accuracy of data used in the final recommendations for differentials. Therefore we recommend some hold harmless agreement be added to HB 23 for those districts who would be subject to an area cost differential reduction under this legislation.

We agree the area cost differential must be examined. However, it must be examined along with the current foundation formula and in the text of many of the other issues facing educational funding today. That research must include the fair determination of the cost of educating children by region.

ALASKA SCHOOL DISTRICT PROFILES AND DIFFERENTIAL STUDY

SUMMARY OF RESULTS AND RECOMMENDATIONS

CHAPTER I OF VOLUME I

PREPARED FOR:

LEGISLATIVE BUDGET AND AUDIT COMMITTEE
ALASKA STATE LEGISLATURE

PREPARED BY:

THE MCDOWELL GROUP
A DIVISION OF
DATA DECISIONS GROUP, INC.

IN ASSOCIATION WITH
DR. NAT COLE

DECEMBER 1988

Alaska School District Profiles and Differential Study

Chapter I, *Summary of Results and Recommendations*
of
Volume I, *Summary and Analysis*

Prepared For:

Legislative Budget and Audit Committee
Alaska State Legislature

Prepared By:

The McDowell Group
A Division of
Data Decisions Group, Inc.

In Association with
Dr. Nat Cole

TABLE OF CONTENTS

Chapter I, *Summary of Results and Recommendations*, of Volume I

Reader Note: This document consists only of Chapter I, *Summary of Results and Recommendations*, of the two-volume **Alaska School District Profiles and Differential** Study. It is presented to give readers the summary of the 119-page, four-chapter Volume I, *Summary and Analysis*, and the 280-page Volume II, *District Profiles*.

Introduction

The *Alaska School District Profiles and Differential Study* is a two-volume study produced during 1988 at the request of the Legislative Budget and Audit Committee of the Alaska State Legislature by the McDowell Group, Alaskan economic and market consultants, in association with Dr. Nat Cole, a noted Alaskan education consultant.

Purpose

The study has two purposes. One is to provide a comprehensive geographic cost differential for each of the 53 public school districts scheduled to be in existence in Fiscal Year 1990, the next State budget cycle. Data from the current fifty-five districts were studied as three districts - Aleutian Region, Sand Point and King Cove - will merge in FY 1990, reducing the total to 53. The second purpose as directed by the Committee is to develop an information base on school districts for convenient use by decision makers.

Study Background

Of particular importance was the Legislative Budget and Audit Committee's direction to study all of the operating costs financed by the School Foundation Fund, commonly referred to in education circles as the 01 Fund. The result was a study design which measured both personnel and nonpersonnel costs. Previous school district differentials had been based only on household cost of living data and did not include consideration for nonpersonnel costs.

Until this current study, little was known of the comparative cost of operating widely different school districts in 53 distinctly different areas of Alaska. What was known was the relative cost of operating a household (household cost of living) in 19 areas of Alaska. This information was the result of the 1985 McDowell Group work, the *Alaska Geographic Differential Study*. In the past, these household cost differences were used to represent differences in operating school districts, a sometimes tenuous assumption since school districts rarely resemble households. This assumption was valid to the extent that personnel costs account for most of a typical district's operating cost. This study, *Alaska School District Profiles and Differential Study*, directly addresses and researches the costs of operating school districts and includes both personnel and, for the first time, nonpersonnel costs.

The study does not cover all aspects of public school finance. There are actually four areas of public school funding of which this study deals in detail with just one - differentials necessary to compensate for price differences among districts. And even more specifically, the study researches price differences for school expenditures covered by the 01 Fund, the basic fund which covers most school district operations. The study does not deal with the school foundation formula, capital costs or the criteria for other funding such as local contributions, PL 874, special programs, pupil transportation or extra curricular travel.

A companion to the differential is the school foundation formula. Though separate from the differential, its purpose also is to compensate for additional cost - that of providing education in locations with dispersed and lower density student populations. It simply takes more personnel, buildings, building space, travel, supplies and materials to provided education in a district of 10 communities with 200 students each than in a district consisting of one community with 2,000 students. It is simply less efficient per student, and therefore more costly, even if prices in the two districts are identical.

The school foundation formula compensates for this inherent inefficiency by granting more dollars per student to communities with fewer students. It does not compensate for differences in prices of nonpersonnel items or in the household cost of living. That is the function of the differential under study in this report. In most cases, the foundation formula is far more significant in allocating funding to districts than is the differential.

Content

Volume I, *Summary and Analysis*, provides complete results, recommendations and methodologies for the first purpose of the study. That is, to provide comprehensive differentials for districts. Volume I also contains additional data and ratio analysis of selected statistics on district fiscal, personnel, enrollment and facilities. Volume II, *District Profiles*, addresses the second purpose of providing an information base.

Volume II contains detailed profiles for the 53 districts. Each district profile contains three types of information. First is social, economic, geographic (including a district map) and governmental information about the district itself. The second is a FY 1988 profile of the district's fiscal data, personnel, facilities and enrollment. Finally, the last page of each profile contains the calculations and results of the district's geographic cost differential. This last section includes detailed data for the personnel, nonpersonnel and overall district differentials, data which are not presented in district format in Volume I. The profiles are typically 4 to 6 pages in length depending on the size of the district.

Volume II places a complete and relevant picture of Alaska's public school districts in one convenient and easily digestible document. Political and administrative decision makers have long been handcuffed by lack of reliable and consumable data on one of the State's most important and most expensive issues - public education.

Using these profiles, a single district can evaluate their operations in terms of personnel/enrollment ratios, maintenance efficiency for facilities, quality of facilities, expenditures per 100 ADM and many other measures. All of these can be compared to the same measures in every other district. Each district also has data showing the characteristics of the district itself such as population, average income, employment, unemployment, subsistence dependency, ethnic composition, climate data including heating degree days, transportation systems, district size, land status and political systems.

Districts can compare their costs for each of seven major household and eight major nonpersonnel expenditure categories by referring to the last page of each profile. For example food, transportation and clothing costs for households as well as equipment, utilities and travel costs for districts are some of the costs shown in each profile. Unique district expenditure patterns for personnel and nonpersonnel costs can also be identified and compared by using Volume II in this manner.

Methodology

Methodology for the *Alaska School District Profiles and Differential Study* utilized both survey and secondary research. The household cost of living in each district was used to represent differences in personnel costs. While district pay scales and actual salaries paid were examined, they were not used as the basis for personnel costs. It was observed that starting salaries in most districts closely paralleled the actual cost of living. But further up the scale this correlation faded. In general, urban scales rose at a more rapid rate, increasing actual personnel costs substantially with longevity. Therefore, what is actually paid in terms of average salary is primarily a function of negotiating policy, not cost. This eliminated salary scales and average salaries as objective measures of true cost.

District cost of living differentials were calculated by disaggregating and reorganizing the massive data base from the 1985 *Alaska Geographic Differential Study* from 19 larger districts to 53 school districts. Since the data base involved 2,500 households in 91 communities and 2,100 retail outlets in 54 communities, at least some data existed to compute a differential for each school district. Since differences in cost of living among Alaska locations tend to remain stable or change only slowly, the data was considered valid for the study. The alternative of resurveying in 53 districts would have been far beyond the budget limits of this study.

A comprehensive School District Survey, completed by 51 of the 55 current districts provided detailed budget data, a personnel inventory, a complete building by building facilities inventory plus a comprehensive survey of district purchasing patterns for each of the 30 items selected for the nonpersonnel market basket including, for example, utilities, insurance, teaching supplies, professional/technical services and equipment. Much of the data from this survey was used for both the differential calculations and the district profiles in Volume II.

A companion survey also done for this study was a School District Vendor Survey of dozens of firms serving Alaska school districts. Collected were current prices of all nonpersonnel items, shipping methods and costs, pricing policies and further information on district purchasing patterns.

Finally, a number of secondary sources were utilized, especially for the social, economic, geographic and governmental portions of the district profiles. District statistics provided in the surveys were supplemented by Alaska Department of Education reports, district audits and other sources.

I. Summary of Results and Recommendations

I. Summary of Results and Recommendations

Recommended School District Differentials

Table I-1 is a comparison of the final recommended differentials from this study and the existing differentials currently in force in state statute through FY 1989. It is suggested that readers consider three critical points when viewing the recommended differentials and those in the existing statute:

1. Study results should be expected to differ from existing statute differentials. Existing statute differentials are based solely on the 1985 McDowell Group work, *Alaska Geographic Differential Study* (with minor adjustments in some districts for multisite districts and as a result of an arbitrator's opinions). This study is in turn based solely on the household cost of living, not the cost of operating a school district. Further, the 1985 study provided differential data for only 19 election districts. These results were generalized to the 55 (to be 53 for FY 1990) school districts contained within the 19 election districts.

This current study,*Alaska School District Profiles and Differential Study,* differs in two significant respects. First, it is the first to include all costs of operating a school district in the differential formula. Second, this study provides data specifically for each school district for both household cost of living and for nonpersonnel district operating costs. Because of these fundamental differences, study results were not expected to mirror existing differentials. In short, operating a household is rarely the same as operating a school district and should not be expected to cost the same.

2. In nearly all cases, the differential is less important to district funding levels than the school foundation formula. The school foundation formula is designed to compensate for higher costs due to the inherent inefficiency of providing education in locations with dispersed population and lower student density. On the other hand, the differential in this study is designed to correct for higher costs due to higher prices, not inefficiency. A common result of the two forms of compensation is that districts with the same differential often receive different amounts of funding on a per student basis.

The most extreme foundation formula cases are the districts with very small communities. For example, in FY 1988 the Chugach district received only 11%

more funding per student because of the differential. By contrast it received 179% more dollars per student due to the foundation formula. In FY 1988 the Railbelt district had an additional 23% from the differential and 25% per student from the foundation formula. Many larger districts are also affected. The Kenai Peninsula district receives no differential because living costs are essentially the same as in Anchorage. But it does gain 16% more dollars per student from the foundation formula because it serves a moderately dispersed and less dense student population. See Chapter IV for a detailed discussion of the relationship of the foundation formula and the differential.

3. The small amounts of household cost of living data available in some groups of districts mean that raw study results are subject to moderate error, and therefore inequity. An improvement in accuracy results from averaging the differentials of similar districts which have limited data. Specifically, group averages are recommended for most districts in the rural Southeast Alaska, Alaska Peninsula and Aleutian Islands, Yukon and Kuskokwim Delta, Interior Remote and Interior Road System groups. See Table I-2 in this chapter for comparison of study results and recommended differentials.

Table I-1

Comparison of Recommended Differentials and Existing Statue Differentials

(Anchorage District = 1.00)

District	Recommended Differentials	Statute Differentials	Difference
Southern Southeast			
Annette Island	1.08	1.03	0.05
Craig	1.08	1.03	0.05
Klawock	1.08	1.03	0.05
Hydaburg	1.08	1.03	0.05
Southeast Island	1.08	1.04	0.04
Urban Southeast			
Ketchikan	1.00	1.00	0.00
Wrangell	1.00	1.00	0.00
Petersburg	1.00	1.00	0.00
Sitka	1.00	1.00	0.00
Juneau	1.00	1.00	0.00
Central and Northern Southeast			
Kake	1.10	1.03	0.07
Chatham	1.10	1.03	0.07
Hoonah	1.10	1.08	0.02
Pelican	1.10	1.08	0.02
Other Southeast			
Haines	1.03	1.05	-0.02
Skagway	1.05	1.05	0.00
Yakutat	1.20	1.08	0.12
Prince William Sound			
Cordova	1.20	1.11	0.09
Chugach	1.20	1.11	0.09
Valdez	1.08	1.11	-0.03
Copper River	1.13	1.14	-0.01

Table I-1 continued

Comparison of Recommended Differentials and Existing Statue Differentials

(Anchorage District = 1.00)

District	Recommended Differentials	Statute Differentials	Difference
Anchorage Urban Influence Area			
Anchorage (Base District)	1.00	1.00	0.00
Matanuska-Susitna	1.00	1.00	0.00
Kenai Peninsula	1.00	1.00	0.00
Kodiak	1.08	1.09	-0.01
Alaska Peninsula and Aleutian Islands			
Adak	1.29	1.27	0.02
Pribilofs	1.40	1.30	0.10
Aleutian (Region) East	1.33	1.31	0.02
Unalaska	1.29	1.27	0.02
Dillingham	1.29	1.27	0.02
Bristol Bay	1.33	1.27	0.06
Lake and Peninsula	1.33	1.31	0.02
Southwest	1.33	1.31	0.02
Yukon and Kuskokwim Delta			
Lower Kuskokwim	1.40	1.42	-0.02
Yupiit	1.40	1.41	-0.01
Kashunamiut	1.37	1.33	0.04
Lower Yukon	1.37	1.35	0.02
St. Mary's	1.37	1.30	0.07
Interior Remote			
Kuspuk	1.33	1.33	0.00
Iditarod	1.33	1.33	0.00
Galena	1.33	1.30	0.03
Yukon-Koyukuk	1.33	1.34	-0.01
Yukon Flats	1.36	1.46	-0.10
Tanana*	1.33	1.30	0.03
Interior Road System			
Alaska Gateway*	1.14	1.19	-0.05
Delta/Greely	1.14	1.16	-0.02
Nenana	1.14	1.20	-0.06
Railbelt*	1.14	1.23	-0.09
Fairbanks	1.03	1.04	-0.01
Arctic			
North Slope	1.49	1.45	0.04
Northwest Arctic	1.43	1.45	-0.02
Nome	1.36	1.34	0.02
Bering Straits	1.40	1.39	0.01

Summary of Results

Changes were modest considering the differences in the origin of the recommended and statute differentials. Forty-two of fifty-three district differentials changed by five points or less and over half of all district differentials (29) changed by less than three points. Eleven of those remained the same.

Of the eleven district differentials changing by more than five points, all had statute differentials that were not based on data specifically for their districts. The largest gain was Yakutat (+12) and the greatest loss was Yukon Flats (-10). The district specific data in this study supports the recommended differentials. In virtually every one of the following cases, the new nonpersonnel cost data is consistent with the revisions in the household data.

Valdez (-5), Cordova (+9) and Chugach (+9) had been assigned the same overall Prince William Sound differential, 1.11, because their data had been combined in the 1985 study. When disaggregated, the data clearly showed a significant difference between Valdez and Cordova cost of living, Valdez being less expensive. The nonpersonnel survey also identified significant cost differences.

Yakutat, Kake (+7) and Chatham (+7) had been combined with less expensive urban areas of Haines/Skagway, Wrangell/Petersburg and Sitka, respectively. When separated, their higher living costs became obvious. Higher costs in these communities were also confirmed by the results of the nonpersonnel cost research in this study. Yakutat, as the most isolated of these, had the largest gain.

Railbelt and Nenana, down six and nine points respectively, are locations with road access to major urban areas but previously had been combined with a larger interior remote . Once the higher costs of the remote interior communities were rem om data for communities with road access, more moderate differentials resulted.

Yukon Flats' statute differential was the results of an arbitrator's decision which classified it as an arctic district with costs at the North Slope level. However, district specific cost of living and nonpersonnel data place it conclusively in a more logical category with its closest geographic neighbors in the remote interior region south of the Brooks Range.

The St. Mary's district (+7) had been set at a low level due to an anomaly in the original Wade Hampton election district housing cost data. After adjustment for that exception, the district differential becomes average for the Yukon delta area.

The Pribilof district (+10), the most remote in Western Alaska, had an inadequate data base for computing a specific differential and had been assigned a level more typical of less isolated communities in the region. Adjustment for this inequity plus an addition of seven points for extreme costs resulting from exceptional isolation give the district a significant increase. Pribilof nonpersonnel costs are the Alaska Peninsula and Aleutian Island region's highest.

Recommended Differentials and Study Results

The results of the study reflect detailed analysis of both household cost of living data and district nonpersonnel operating costs. While the data are the most accurate and detailed ever used for school cost differentials, they are by no means perfect reflections of reality. This is especially true when comparing communities and school district operations which do not remotely resemble one another. Differences in local lifestyles, income, district spending patterns, student density, climate and dozens of other factors make the science of differential study less than a precision calculation.

While the study team believes the results are reasonable reflections of comparative costs they are not so precise as to eliminate inequity. For this reason the study team provides recommended adjustments to the final statistical results of the study. In the 1985 work, *Alaska Geographic Differential Study*, the professional team recommended that the State of Alaska consider grouping similar districts into a limited number of groups. The districts within each group would be assigned the same differential. This allows for very accurate measurement of costs in larger geographic areas already known to have roughly the same costs throughout each area. The study team makes the same recommendations for school district differentials.

The problem in both the 1985 study and this current study is one of hair splitting small amounts of data into even smaller districts. The accuracy of the data decreases as the number of households and retail outlets surveyed becomes smaller. A thorough reading of chapters II and III shows the procedures necessary to coax meaningful differentials out of small amounts of data in some districts.

Perhaps the most extreme examples are differentials in four areas of the state - rural Southeast, Alaska Peninsula and Aleutian islands, Yukon and Kuskokwim Delta, and the Interior Remote districts which stretch from Kuspuk to Yukon Flats. Often, the personnel differentials for a single district would be based on a sample of a hand full of households and on retail prices in just one of several communities in the district. Even so, nearly all results came within the parameters of the larger, more accurate districts used in 1985 and the cost differences between adjacent districts with minimal data were surprisingly close. This is due in part to the quality of the original data and in part to the tight procedures for handling data representing small districts.

Table I-2 details the differences between recommended differentials and unadjusted study results contained in Chapters II and III and in Volume II, *District Profiles*. Following Table I-2 is the summary discussion of all adjustments leading to the recommended differentials.

Table I-2

Recommended School District Differentials

(Anchorage District = 1.00)

District	Study Results	Recommended Differentials
Southern Southeast		
Annette Island	1.07	1.08
Craig	1.06	1.08
Klawock	1.08	1.08
Hydaburg	1.11	1.08
Southeast Island	1.11	1.08
Urban Southeast		
Ketchikan	1.02	1.00
Wrangell	1.02	1.00
Petersburg	1.01	1.00
Sitka	1.02	1.00
Juneau	1.02	1.00
Central and Northern Southeast		
Kake	1.13	1.10
Chatham	1.10	1.10
Hoonah	1.07	1.10
Pelican	1.07	1.10
Other Southeast		
Haines	1.03	1.03
Skagway	1.05	1.05
Yakutat	1.20	1.20
Prince William Sound		
Cordova	1.21	1.20
Chugach	1.20	1.20
Valdez	1.08	1.08
Copper River	1.13	1.13
Anchorage Urban Influence Area		
Anchorage (Base District)	1.00	1.00
Matanuska-Susitna	1.00	1.00
Kenai Peninsula	1.01	1.00
Kodiak	1.08	1.08
Alaska Peninsula and Aleutian Islands		
Adak	1.30	1.29
Pribilofs	1.34	1.40
Aleutian (Region) East	1.34	1.33
Unalaska	1.29	1.29
Dillingham	1.29	1.29
Bristol Bay	1.33	1.33
Lake and Peninsula	1.34	1.33
Southwest	1.33	1.33
Yukon and Kuskokwim Delta		
Lower Kuskokwim	1.40	1.40
Yupiit	1.40	1.40
Kashunamiut	1.37	1.37
Lower Yukon	1.37	1.37
St. Mary's	1.37	1.37

Table I-2 continued

Recommended School District Differentials

(Anchorage District = 1.00)

District	Study Results	Recommended Differentials
Interior Remote		
Kuspuk	1.34	1.33
Iditarod	1.29	1.33
Galena	1.33	1.33
Yukon-Koyukuk	1.31	1.33
Yukon Flats	1.36	1.36
Tanana	1.33	1.33
Interior Road System		
Alaska Gateway	1.11	1.14
Delta/Greely	1.11	1.14
Nenana	1.16	1.14
Railbelt	1.14	1.14
Fairbanks	1.03	1.03
Arctic		
North Slope	1.49	1.49
Northwest Arctic	1.43	1.43
Nome	1.36	1.36
Bering Straits	1.40	1.40

Basis for Recommended Differentials

Southeast: The five Southern Southeast districts are assigned a recommended group differential of 1.08. Craig, Klawock and Hydaburg are within a few miles of one another and all have access to the same road system. Hydaburg's study result of 1.11 was inflated by a low personnel expenditure weight due to that district's exceptionally low pay levels. Given the average weights of this group of districts, the Hydaburg differential would have been 1.08. Southeast Island has the central office as well as a substantial district correspondence program in Ketchikan. Both of these factors lower costs. Also, Southeast Island's dispersion over multiple small sites is compensated for in the foundation formula.

The recommended group differential for Urban Southeast districts is the 1.00 base level. Urban Southeast districts have virtually the same personnel and nonpersonnel cost levels, all of them within a few points of the base district. Further, their extremely low nonpersonnel expenditure weights show the effects of moderate climate and [illegible]dvantages not available to more northern isolated districts. While [illegible] results are slightly higher (1.01 o 1.02), numerous past studies have continued to verify that cost of living and other costs are essentially the same in most of urban Alaska. Finally, the slight difference from the base level in urban Southeast household living costs is due almost entirely to local sales tax, not actual cost levels. Some debate exists as to including the effect of local sales tax, a local choice, in living cost comparisons. Sales tax is included in the Alaska data base used in this

study. In summary, the difference between base level and Southeast urban differentials is not considered statistically significant.

The four Central and Northern Southeast districts are assigned a recommended differential of 1.10, the average for that group. Though they do not fall into a convenient group of similar districts, they are subject to the same isolation factors and they experience higher retail costs than the southern group. Pelican, which did not return a survey, is assigned the 1.10 average. The one multisite district, Chatham, is compensated for lack of density through the foundation formula.

Haines, Skagway and Yakutat recommendations are simply the study results - 1.03, 105 and 1.21. The statute differential for these districts was based on an overall average and Yakutat's costs inflated those of the entire district. In turn, the lower costs in Skagway and Haines were the major factor in Yakutat's low existing statute differential. Yakutat's isolation, lack of access to regional centers and high everyday retail prices separate it from the rest of Southeast Alaska. Its costs are actually similar to those of the isolated locations in Prince William Sound - Chugach and Cordova.

Prince William Sound: Prince William Sound differentials are an example of the advantage of road access. Valdez and even Copper River have lower everyday retail prices and nonpersonnel costs than Cordova and Chugach. The recommended differential for Cordova and Chugach (which is based on Cordova) is 1.20, the same as Yakutat and virtually the same as the study results. Study results are also recommended for Valdez (1.08) and Copper River (1.13). The former Prince William Sound differential of 1.11 for all locations was simply the average for the area. Enough data exists in each location to show a clear and significant difference in Cordova and Valdez costs, both household and nonpersonnel.

Anchorage Urban Influence Area: The Anchorage Urban Influence Area recommended differential is 1.00 for the three districts of Anchorage, Matanuska-Susitna and Kenai Peninsula. The Kenai Peninsula study result is actually 1.01, similar to some urban Southeast districts and is not considered statistically significant. Further, the Kenai district is compensated an extra 16% per student by the foundation formula for lower density and multisites.

Kodiak: The study result of 1.08 is the recommended Kodiak differential. Kodiak has no really comparable district other than some of the Southeast urban districts such as Sitka or Ketchikan, both with differentials near 1.00. It is large enough to have retail competition, reasonable utility rates and moderate shipping costs. Kodiak also benefits from a relatively modest maritime climate. However, it is more isolated than Southeast Alaska and shows moderately higher costs as a result, especially for transportation.

Alaska Peninsula and Aleutian Islands: The Alaska Peninsula and Aleutian Islands is a region which suffers from limited data. The communities are small and the number of households and retail outlets upon which these differentials are based is also small. However, the range of study results is surprisingly narrow showing these districts are subject to essentially the same cost levels. This similarity is further verified by the relative closeness of the nonpersonnel differentials.

Two differential are recommended. For Dillingham, Unalaska and Adak, 1.29 is recommended. Sufficient data is available for Dillingham and Unalaska and the study result for both was 1.29. These districts also show lower than average nonpersonnel expenditures, an indication that facility costs are more reasonable than in other districts in the area.

Adak benefits from the district's relationship with the military and its nonpersonnel differential is lower than average for the region. Further, it is unlikely that district personnel pay everyday retail prices as high as those in the small site districts, though the personnel differential assigned to Adak was from a high cost area, Sand Point.

The recommended differential for the remaining districts in the Alaska Peninsula and Aleutian Islands group is 1.33, their average. One exception to this is recommended. The Pribilof district is clearly subject to more extreme cost conditions than others in this group. The nonpersonnel differential is the region's highest, 1.38. Though no household data is available it would most certainly reflect higher costs than those districts less isolated and distant. A 1.40 is recommended for the Pribilofs - the same differential as Lower Kuskokwim, Yupiit and Bering Straits.

Yukon and Kuskokwim Delta: Yukon and Kuskokwim Delta recommendations are the study results of 1.40 for two districts and 1.37 for three others. Historically, Lower Kuskokwim and particularly Bethel, have had some of the state's highest household costs of living. The district's nonpersonnel results mirror this at 1.43, third highest in the state. Yupiit, for which no household or nonpersonnel data is available is assigned the Lower Kuskokwim differential of 1.40 which is the closest district but not particularly similar. It could have as easily been assigned the 1.33 for Kuspuk, its neighbor to the east. However, the line for groupings was drawn at Kuspuk so Yupiit is included in the delta group.

Interior Remote: The Interior Remote group of six districts which extends from Kuspuk to Yukon Flats is assigned a recommended differential of 1.33, the average for the group. The exception is Yukon Flats which shared with Yukon-Koyukuk the group's highest household costs and the next highest nonpersonnel differential. Study results of 1.36 are recommended for Yukon Flats. While this is a significant change from their 1.46 existing statute

differential, that differential was set in arbitration and was not based on actual data. Actual Yukon Flats district data for both households and nonpersonnel show patterns and prices very similar to other Interior Remote districts but not near the level of the Arctic districts which must cope with more severe climate and higher transportation costs.

Of all groups, the Interior Remote districts had the most limited data available. No single community was large enough to have a desirable number of households and outlets surveyed. Yet all districts had at least some household and price survey representation study results were fairly uniform, ranging from 1.29 to 1.36. These results also closely mirrored the 1985 study results for larger districts in the same region. Yukon-Koyukuk's lower than average nonpersonnel differential is modified by the fact that a portion of their students attend Nenana schools.

Interior Road System: Interior Road System district differentials are tightly grouped at 1.11 to 1.16. The differential of another road system district, Copper River's 1.13, further supports this range. Two inequities are apparent in this group. Nenana's 1.16 is noticeably higher than the others in spite of easy access to Fairbanks prices. The second apparent inequity is the Alaska Gateway district which had no household or price data and was assigned Delta/Greely numbers as the closest district. However, the small Delta/Greely sample had lower than normal housing cost factors. Alaska Gateway, on the other hand, has less retail price competition and is not an easy drive to either Fairbanks or Anchorage. This situation is more like that of Copper River and Railbelt.

An overall Interior Road System differential of 1.14 is recommended. This is the average of the two districts (Nenana and Delta/Greely) for which both household and nonpersonnel data were available. While this may not be an ideal solution, it is the only alternative which can be based on actual data. Further, it provides Alaska Gateway with virtually the same differential as the two most similar district - Copper River and Railbelt. These three districts, especially Alaska Gateway, benefit significantly more from the foundation formula than Nenana and especially Delta/Greely.

Fairbanks: Study results of 1.03 are recommended for Fairbanks. The state's second largest district, while typically urban in virtually all of its cost data, does have both household (1.03) and nonpersonnel (1.01) differentials above the urban base. Further, it did report the highest per gallon cost for heating oil of any urban district, in spite of the presence of two local refineries. While districts with 1.01 and 1.02 overall differentials were held to the urban base, the Fairbanks level of 1.03 becomes significant and is recommended.

Arctic: Arctic districts vary a great deal in all respects and no group differential could apply. Study results are recommended for North Slope (1.49), Northwest Arctic (1.43), Nome (1.36) and Bering Straits (1.40). Both

Nome and North Slope districts spend a high proportion of their budget on personnel (78% and 77%, respectively), indicating high salaries and/or lower than normal nonpersonnel costs. The North Slope differential is more a result of high household cost of living than nonpersonnel costs which are modified by reasonable (by Arctic standards) utility costs in Barrow.

Personnel and Nonpersonnel Differentials and Expenditure Weights

Table I-3 shows how each of the district differentials are calculated. First, the personnel cost differential is multiplied by the personnel expenditure weight. In the case of the Klawock district, for example, 81% of the total budget was spent on personnel and the personnel differential was 1.01, or 1% above Anchorage levels. Then, the nonpersonnel differential is multiplied by the nonpersonnel expenditure weight. In the Klawock case the district spent 19% of their budget on nonpersonnel costs and the nonpersonnel differential was 1.35 or 35% higher than Anchorage costs. The products of these two calculations are added and the sum, 1.08, is the district differential.

A summary discussion of these results follows Table I-3, on the following page.

Table I-3

School District Personnel, Nonpersonnel and Total Differentials

(Anchorage District = 1.00)

District	Personnel Differentials	Pers Expenditure Weight	Non Personnel Differentials	Nonpers Expenditure Weight	Total District Differential	Recommended Differential
Southern Southeast						
Annette Island	1.01	.75	1.23	.25	1.07	1.08
Craig	1.01	.77	1.25	.23	1.06	1.08
Klawock	1.01	.81	1.35	.19	1.08	1.08
Hydaburg	1.01	.63	1.27	.37	1.11	1.08
Southeast Island	1.01	.71	1.36	.29	1.11	1.08
Urban Southeast						
Ketchikan	1.02	.81	1.00	.19	1.02	1.00
Wrangell	1.00	.86	1.08	.14	1.02	1.00
Petersburg	1.00	.79	1.05	.22	1.01	1.00
Sitka	1.02	.82	1.03	.18	1.02	1.00
Juneau	1.03	.86	0.98	.14	1.02	1.00
Central and Northern Southeast						
Kake	1.05	.67	1.30	.33	1.13	1.10
Chatham	1.07	.75	1.21	.25	1.10	1.10
Hoonah	1.03	.81	1.24	.19	1.07	1.10
Pelican*	1.03	NP	NP	NP	1.07	1.10
Other Southeast						
Haines	1.02	.78	1.07	.22	1.03	1.03
Skagway	1.03	.75	1.11	.25	1.05	1.05
Yakutat	1.21	.78	1.19	.22	1.20	1.20
Prince William Sound						
Cordova	1.18	.84	1.37	.16	1.21	1.20
Chugach	1.13	.69	1.36	.31	1.20	1.20
Valdez	1.06	.83	1.17	.17	1.08	1.06
Copper River	1.13	.72	1.12	.28	1.13	1.13
Anchorage Urban Influence Area						
Anchorage (Base District)	1.00	.88	1.00	.12	1.00	1.00
Matanuska-Susitna	1.00	.86	1.01	.14	1.00	1.00
Kenai Peninsula	1.01	.81	1.01	.19	1.01	1.00
Kodiak	1.06	.83	1.15	.17	1.08	1.08

Table I-3 continued

School District Personnel, Nonpersonnel and Total Differentials

(Anchorage District = 1.00)

District	Personnel Differential	Personnel Expenditure Weight	Non Personnel Differential	Nonpers Expenditure Weight	Total District Differential	Recommended Differential
Alaska Peninsula and Aleutian Islands						
Adak	1.32	.69	1.25	.31	1.30	1.29
Pribilofs	1.32	.61	1.38	.39	1.34	1.40
Aleutian (Region) East	1.32	.59	1.37	.41	1.34	1.33
Unalaska	1.30	.71	1.27	.29	1.29	1.29
Dillingham	1.30	.79	1.24	.21	1.29	1.29
Bristol Bay	1.35	.64	1.31	.36	1.33	1.33
Lake and Peninsula	1.35	.65	1.31	.35	1.34	1.33
Southwest	1.35	.71	1.27	.29	1.33	1.33
Yukon and Kuskokwim Delta						
Lower Kuskokwim	1.39	.71	1.43	.29	1.40	1.40
Yupiit*	1.39	NP	NP	NP	1.40	1.40
Kashunamiut	1.39	.70	1.31	.30	1.37	1.37
Lower Yukon	1.38	.68	1.35	.32	1.37	1.37
St. Mary's	1.38	.64	1.35	.36	1.37	1.37
Interior Remote						
Kuspuk	1.37	.68	1.23	.32	1.34	1.33
Iditarod	1.32	.69	1.22	.31	1.29	1.33
Galena	1.32	.74	1.33	.26	1.33	1.33
Yukon-Koyukuk	1.39	.63	1.18	.37	1.31	1.33
Yukon Flats	1.39	.63	1.32	.37	1.36	1.36
Tanana*	1.32	NP	NP	NP	1.33	1.33
Interior Road System						
Alaska Gateway	1.10	.68	1.14	.32	1.11	1.14
Delta/Greely	1.10	.83	1.14	.17	1.11	1.14
Nenana	1.14	.75	1.22	.25	1.16	1.14
Railbelt	1.14	.75	1.14	.25	1.14	1.14
Fairbanks	1.03	.84	1.01	.16	1.03	1.03
Arctic						
North Slope	1.53	.78	1.34	.22	1.49	1.49
Northwest Arctic	1.41	.71	1.49	.29	1.43	1.43
Nome	1.41	.77	1.18	.23	1.36	1.36
Bering Straits	1.34	.68	1.53	.32	1.40	1.40

* Not Provided. District did not return *School District Survey*.

Summary of Results (See Table I-3)

Personnel Differentials and Expenditure Weights
Personnel (household cost of living) differentials range from 1.00 to 1.53 but they also fall into four very distinct groups - Arctic, Aleutian and Interior remote, districts with convenient access to major regional centers, and urban districts.

The highest differentials are in the Arctic region topped by the 1.53 cost of living differential in the North Slope district. Two other northern districts - Northwest Arctic and Nome - shared the next highest cost of living of 1.41.

The largest group, the 20 Aleutian and Interior Remote districts had cost of living differentials ranging from 1.30 to 1.39, only nine points. This narrow range is the differential for districts which are truly remote from major regional centers but are not true arctic districts. These twenty districts stretch in a solid band from the tip of the Aleutian Chain through the Yukon River, Kuskokwim River and Bristol Bay drainage systems to the Alaska/Canada border in the Eastern Interior.

Districts with reasonable road or ferry access to regional centers of Ketchikan, Juneau, Anchorage or Fairbanks fall into a third group with differentials of 1.01 for some smaller Southeast districts to 1.10 and 1.14 for all the interior road system districts.

Fourth, urban districts with most of the state's population are grouped closely about the 1.00 base level and range only to 1.03. This group includes Anchorage, Fairbanks, Matanuska-Susitna, Kenai Peninsula, Juneau, Ketchikan and Sitka. Essentially, urban Alaskans experience about the same cost of living.

Nonpersonnel Differentials and Expenditure Weights
Nonpersonnel differentials had nearly the same range as personnel differentials - 0.98 to 1.53. However, their pattern among districts is different than the personnel differential. Rarely were the personnel and nonpersonnel differentials the same in any one district. This supports the original premise of this study which was that, in most districts, nonpersonnel costs are at different levels than personnel costs. Personnel and nonpersonnel costs differed by ten or more points in 17 districts and by at least five points in 31 districts.

District size, not living costs, was a major determinant of high nonpersonnel costs. Even in small districts of Southeast Alaska where household costs tend to be reasonable, nonpersonnel costs were high. In small communities with

small schools several nonpersonnel costs were significantly higher than in urban areas. Utilities rates, fuel prices, insurance, travel and professional/technical services are significantly more expensive in small communities than in urban areas.

Ten districts including all major urban districts had nonpersonnel differentials of less than 1.10. Another eleven had differentials between 1.10 and 1.19. These tended to be smaller urban areas and small districts with road access to Anchorage and Fairbanks. Twelve districts including most of rural Southeast had differentials in the 1.20's and a nearly equal number (14) scored in the 1.30's. Many in the 1.30's group were in that remote Aleutian and Interior region where household costs of living tended to be so uniform, also in the 1.30's. Final, only three districts scored nonpersonnel differentials above 1.40 - Lower Kuskokwim (1.43), Northwest Arctic (1.49) and Bering Straits (1.53).

Readers should keep in mind that in many districts serving smaller communities nonpersonnel differentials are modified by an adjustment factor for facilities costs (utilities and property insurance) to avoid double payment for low density student populations by both the foundation formula and the differential. Again, the differential is an adjustment for price differences while the foundation formula compensates for the inherent inefficiency of providing education to dispersed and lower density student populations.

Nonpersonnel expenditure weights are typically 12% to 20% in urban districts reflecting the lower prices of most nonpersonnel market basket items from insurance to travel to utility and fuel prices. Anchorage spends a smaller portion of its budget than any other district, 12%, on nonpersonnel costs. MatSu and Juneau spend 14% and Fairbanks, 16%.

At the other extreme are seventeen districts, all but one of them remote, which spend over 30% of their budget on nonpersonnel costs. The Aleutian Region and the Pribilof districts devote a larger portions of their budget to nonpersonnel costs than any other districts - 41% and 39%, respectively.

Analysis of District Statistics

The *Alaska School District Profiles and Differential Study* also includes information not related to differentials. Chapter IV of this study volume provides tables and written analysis of selected district fiscal, enrollment, personnel and facility data. Additional data and ratios (per ADM) for each district are also included in Volume II of this study, *District Profiles*. The appendix to Volume I includes a sample district profile from Volume II. Readers are referred to Chapter IV of Volume I and to Volume II for detailed

data and analysis of district statistics. Following is a brief summary of some of the data analyzed in Chapter IV.

Budget Analysis per ADM
School Operating Fund (01 fund) total, personnel and nonpersonnel budgets, State funding and other funding are all analyzed on a per ADM basis.

Total budgets per ADM (meaning per student, more or less) range from a low of less than $4,600 for the Anchorage base district which has the largest and most dense - and therefore the most efficient to serve - student population to a high of just under $19,500 for the North Slope district. Urban districts typically spend up to $6,000 per ADM while 20 small and remote districts spend over $10,000 per ADM.

North Slope expenditure and personnel levels are unique among districts and the following brief discussion explains some factors which contribute to this. The North Slope has the highest cost differential (1.49) and, like many other remote Northern and Western Alaska districts, it also provides education for a student population in several scattered funding communities. In addition, the North Slope has made an enormous local financial commitment to upgrading the education of their population. According to district officials, the percentile competency scores of grade school students have increased dramatically from a depressing 11th to the 32nd percentile in the past four school years. In terms of State foundation funding, the North Slope receives about $6,200, less than 25 other districts and about the same as Lower Yukon, Skagway and Kake. However, funding from other sources, primarily local, triples this amount.

Personnel expenditures vary from less than $5,000 for the major urban districts to $15,163 for the North Slope. Only three other districts spend as much as $10,000 per ADM on personnel.

Nonpersonnel spending per ADM is more widely scattered, ranging from just $568 for Anchorage and less than $1,000 for the other major urban districts to a peak of nearly $8,000 for the tiny Aleutian Region. The spread between the districts with the highest and lowest per ADM personnel costs was a factor of just under four ($4,000 vs. $15,000). But in nonpersonnel costs the spread is a factor of fourteen (from under $600 in Anchorage to $8,000). Nonpersonnel costs per ADM tended to be highest in the districts with very small communities.

State funding per ADM averages less than $3,500 in major urban areas and is typically $6,000 to $10,000 in many remote districts. The extremes are seven districts receiving over $10,000 with the Aleutian Region over $15,000 per ADM in State foundation funding.

Funding from other sources in major urban areas ranges from $1,300 (MatSu) to $2,200 (Fairbanks). The North Slope and Valdez are the leaders in the other funding category with $13,310 and $6,311, respectively, most of it from local sources. The districts with the least funding from other sources are the seven receiving less than $1,000. Most of them are districts serving smaller though not remote communities such as Skagway (lowest at $379), Nenana and Copper River.

Enrollment, Personnel and Facility Analysis per ADM

Personnel ratios per 100 ADM are analyzed as are the relationships between enrollment and instructional units.

District enrollments range from slightly more than 100 students in small single site districts to over 38,000 in Anchorage. But of more interest is the relationship between total enrollment (1st count ADM) and the number of instructional units granted each district by the school foundation formula. An instructional unit is the basic funding unit for public schools and is worth about $60,000 per unit.

This analysis of students per funding unit shows a low of 4.0 ADM per instructional unit in the tiny Chugach district to 12.4 in the Anchorage district. Urban areas typically have 11 to 12.4 students per instructional unit of funding while many small and multisite districts receive an instructional unit for every 5 to 8 students. This is simply another way to express the efficiency differences caused by dispersed and lower density student populations.

Another measure of what districts provide is the number of square feet of instructional building space per student. Anchorage is the most efficient district with only 134 square feet of instructional space per student. Other major urban districts typically provide 140 to 150 square feet. By contrast, ten districts provide over 300 square feet with a high of 414 per ADM in the North Slope. In general, remote districts use about twice the instructional space per student because low density and dispersion cause inefficient use of buildings compared to the compactness possible in large urban area schools.

Personnel per 100 ADM reveals the same results as other data. Generally, major urban districts, which devote over 80% of their budgets to personnel still provide just 9 to 10 total personnel per 100 ADM. They also employ about twice as many certified as classified personnel. Anchorage, for example, employs six certificated and three classified per 100 ADM.

In contrast, sixteen districts employ 18 or more personnel per 100 ADM with a high of 30 for the North Slope. These districts, of course, are remote ones serving mostly small communities. Further, districts with high personnel/student ratios tend to hire about as many classified as certificated

personnel. A few districts hire more classified than certificated. A typical remote REAA might employ 11 certificated and 10 classified personnel per 100 ADM compared to the typical urban ratios of 6 and 3, respectively.

Summary of Methodology

Personnel Differential Methods and Data

While the overall study collected data on salary levels and other personnel costs for the profile portion, the only data used for the personnel cost differential was the household cost of living in the 55 (53 in FY 1990) school districts. Again, the sole basis for the personnel differential is household cost of living, not average salaries paid and not salary schedules.

Virtually all household data was derived from the comprehensive data base of the 1985 *Alaska Geographic Differential Study* done by The McDowell Group for the State of Alaska Department of Administration, Division of Labor Relations. The study surveyed nearly 2,500 households in 91 communities and collected retail prices from 2,100 retail outlets in 54 communities. The results were combined into the 19 Alaska election districts which the State uses for their differential districts. The household cost of living market basket included 310 items in the seven major Consumer Price Index household expenditure categories of housing, food, transportation, clothing, recreation and entertainment, medical and miscellaneous.

To meet the needs of the school district study this data base was disaggregated and then reorganized into the 55 school districts. Then a differential was calculated for the household cost of living in each of those districts. Because the original study sample was designed for 19 rather than 55 districts, data for some small school districts was either not available or was not considered statistically sound due small sample sizes or other factors. To compensate for these cases several rules were developed which provide each district with data considered sound for differential purposes. A summary of these rules follows:

- When data was missing (for example, no retail price surveys were conducted in some districts) data from the closest most similar district was substituted. If data from the closest most similar district was not available, data from the larger original district in the 1985 study was used.

- When household and price data appeared outside the normal limits of the original study, data from the closest most similar district was substituted. For example, in the original study no more than 36% of any district's household budget was spent on food. If a district with a small household sample size showed a food expenditure weight well beyond 36%, then data from the

closest most similar school district or from the original 1985 district was substituted.

• In general readers should keep in mind the basic results of not only the 1985 study but past major studies conducted in 1972 and 1976. Two findings are of importance:

1. The most significant finding is that housing in most districts is less expensive than in Anchorage but that Anchorage's everyday retail prices are the state's most favorable. These tend to balance each other out in most urban areas but in rural areas the high everyday prices cause higher differentials.

Essentially, there are four groups of cost of living differentials - urban Alaska, small communities with easy and inexpensive access to regional centers by road or ferry, remote rural communities and true Arctic locations. The cost of living in urban Alaska is essentially the same from Ketchikan to Fairbanks, varying only from 1.00 to 1.03. Communities with easy access to regional centers fall into the 1.01 (small Southeast communities) to 1.14 (Railbelt, Copper River) range. Finally, the cost of living in remote areas from the Aleutians to the Alaska/Canada border in the Interior is remarkably similar with differentials of 1.30 to 1.40 covering all cases. Only true Arctic districts exceed 1.40.

2. The second significant finding is that differences in cost of living among Alaska locations change little over time. For example, the difference in cost of living between Bethel and Anchorage is about the same as it was nearly 20 years ago. Therefore, the use of a 1985 data base for 1988 differentials is appropriate, though the 1986-88 recession in urban Alaska has affected housing costs in the short run. However, some significant changes have occurred in some locations over the past 20 years and the cost of living data base should be updated every several years.

Nonpersonnel Differential Methods and Data

Thirty nonpersonnel expenditure items in eight major school district expenditure code categories are used to compute differentials in nonpersonnel costs. Data was collected through the *School District Survey*, a comprehensive survey of expenditure patterns completed by 51 of the 55 districts existing in FY 1988, and a School District *Vendors' Survey* of dozens of firms doing business with Alaska's school districts. Both surveys were conducted specifically for the nonpersonnel differential in this study. See Chapter III for detailed methodology and results of these surveys.

Following is a brief description of methods used to develop a nonpersonnel differential for school districts. See Chapter III for detailed nonpersonnel differential methodology and results.

Professional/Technical Services (Budget Code 400)
Legal, audit and inservice training were the professional/technical services market basket items.

Legal Services
Legal costs were based on the hourly rate charged by lead attorneys - usually about $135 - plus travel and per diem to the central office of each district for those districts which did not use local attorneys. If any district lead attorney rate was significantly higher or lower than the normal rate, it was assigned the $135 standard rate. Travel costs were added to the fees for a typical travel assignment of one work day. Interviews with legal firms revealed that about 30% of the their time was spent onsite and 70% in their own offices. Therefore, travel costs were added to only 30% of the legal fees.

The legal differential is the cost difference between performing all work in Anchorage and 30% of the work onsite.

Audit Costs
Interviews with the four firms which conduct most district audits revealed fairly standard fees depending on the size of the district budget. In addition, the audit firms specified the amount of total time which would be spent onsite (and therefore subject to travel and per diem costs). Actual audit costs paid by districts varied significantly and did not allow a basis for differential comparison. Instead, audit firm standards for districts for specified budget sizes were used.

The audit differential is the cost difference between performing a district's audit without travel and per diem and performing the audit with a portion of it being onsite. About 40-60% of the professional time for an audit is spent onsite.

Inservice Training
Inservice training policies and expenditures varied dramatically among districts. However, the district surveys revealed that $250 per day in fees and a three-day assignment were the most common parameters for contract inservice training professionals. Travel and per diem costs from a central out-of-state point to each district office was calculated.

The differential is the difference in total costs (fees, travel and per diem) between sending that professional to regional centers (Anchorage, Juneau and Fairbanks) and other districts.

Communications (410)
The communications market basket included long distance telephone, local telephone charges and postage (a combination of postage and parcel post shipping).

Long Distance Telephone

According to district surveys the three most commonly called locations were Anchorage, Juneau and Fairbanks. The study team calculate the total cost of calling these locations from each district. The standard was a ten-minute daytime weekday station call. This cost was compared to the cost of Anchorage placing two calls (one to Fairbanks, the other to Juneau) and the differential calculated. Out-of-district calls account for most of the long distance expense even for multisite districts. Therefore, all long distance expenditures are given the out-of-district differential.

Local Telephone Service

A standard business telephone system (three-line rotary roll-over) monthly charge was selected as the basis for cost comparison. School district systems do not follow any particular patterns so this system was priced in each of the districts and its cost compared to the Anchorage price.

Postage

Postage budgets were split into two parts for single site district and three for multisites. Normal postage and parcel post packages of less than two pounds, which cost the same everywhere, were assumes to be 60% of the budget and the other 40% was parcel post shipping for packages over two pounds. The cost of shipping parcels over two pounds varies depending on the distance shipped. These larger packages were assumed to be shipped to both Juneau and to parcel post zone 8 (outside Alaska) from each district.

The differential is the cost of normal postage plus larger package shipping in each district as compared to Anchorage.

Insurance (415)

Property insurance rates were quoted by the two companies which insure the majority of districts. Essentially, three rates prevail for Alaska school districts - urban, remote sites with good condition buildings and remote sites with poor condition buildings. The urban rate is much lower than the remote rates which are only about 10% apart. Districts were divided into the three groups based on the urban - remote criteria and the condition of remote district buildings was taken from the district survey of facilities which rated buildings on a four-point condition scale.

Then the rates were adjusted to avoid double compensation for facilities costs. The foundation formula already compensates for the inefficiency of small site districts by having a declining formula as the size of funding communities increases. Unless the unit prices of facilities-related costs are indexed the foundation formula plus the differential result in mathematically inflated funding levels for small districts.

The adjustment index is the number of square feet per student. The unit price of insurance is divided by this index to come out with the actual property insurance differential used in this study.

Liability insurance, though included in the expenditure weights of school districts, is given the base differential because rates are not sensitive to geographic location.

Travel (420)

Out-of-district travel and intradistrict travel (for multisite districts) are the two items in this market basket. Student activity travel and pupil transportation (school busses) are not included because they are not paid for out of 01 funds being studied in this report.

Out-of-District Travel

Virtually all districts traveled most commonly to Anchorage and Juneau. Travel costs assume trips to each location from each district's central office. The air fare is weighted by the frequency of travel to each location as reported on the district survey. Then three days per diem ($300) are assumed for the typical trip to either location.

The total of the weighted air fare and per diem is the amount credited to each district. The base district (and Juneau) are credited with one trip plus three days per diem since they have the advantage of not having to fly to one location. The differential is the difference between the two trips from each district and the one trip from the base district.

Intradistrict Travel

The cost of travel to the three most common intradistrict locations - as stated in the district survey - was calculated on a per round trip mile basis. This was compared to the cost per round trip mile within the base district. The difference is the intradistrict travel differential.

Utilities (430)

The utility market basket consisted of heating fuel, electricity and a combined other utilities category which included water, sewer and solid waste disposal.

Fuel

Districts were divided into five groups based on what they paid per gallon for heating fuel in FY 1988. Then an average per gallon price was calculated for each group. Each district within the group was assigned the group's average price. This was done to allow for yearly variations in fuel prices, to avoid penalizing districts which negotiated lower than normal prices and not reward districts which may have paid unnecessarily high prices. The base district price is then the average paid for heating fuel in Alaska's seven largest urban areas.

Next, the facilities index was applied to the per gallon price for each group, again to avoid double compensation for building inefficiency. That index is the square feet per student for each group of districts. Then this is compared to the same indexed price in the base district to calculate the differential.

Electricity

Electricity is calculated in a manner identical to the fuel differential. The same groupings were used and the price then divided by the index of square feet per student.

Other Utilities

Since unit costs are not available for water, sewer and waste disposal in most districts, a slightly different method was used. A cost per square foot for other utilities was calculated using data from the district survey. Then this cost was indexed by dividing it by the same factor as were fuel and electricity.

Other Purchased Services (440)

Equipment repair services for copiers, typewriters and computers are the market basket in this category. Hourly rates were identified from the district surveys and by surveying vendors. The most common rate was selected and applied to all districts. Rates vary little among districts as the real variable is travel costs.

Copier and typewriter repair services were assumed to be onsite and the differential for them is simply the difference between having and not having travel costs. Computer repair and maintenance were assumed to be at central locations so shipping costs were added from each district to a regional center.

Supplies, Materials and Media (450)

A market basket of twelve items for teaching supplies (3), janitorial supplies (4), office supplies (3) and textbooks (2) was created for this major expenditure category. Vendors for these items were often the same ones for most districts so districts were assigned the most common vendor. Then the items were priced and shipped from the vendor to each district via the most commonly used transportation mode.

The total costs were then compared to FOB Anchorage prices for the same items in the same quantities from the same vendors, the difference being the differential. This prevents comparisons of Anchorage district purchasing practices with those of small districts. In reality, the FOB Anchorage price from the vendors which supply most outlying districts are nearly the same as those secured from Anchorage vendors by the Anchorage district bid process.

Equipment (510)
This market basket consisted of the most commonly purchased model and brand of copier, projector, VCR and VCR camera. They were priced and shipped from the most common vendors for each item via the most common type of transportation used in each district. Freight and parcel post rates were researched and applied to each piece of equipment according to its shipping weight. The total cost was then compared to the same items FOB Anchorage from the same vendors.

Alaska School District Profiles and Differential Study

Volume I
Summary and Analysis

Prepared for:

Legislative Budget and Audit Committee
Alaska State Legislature

Prepared by:

The McDowell Group
a Division of
Data Decisions Group, Inc.

in Association With
Dr. Nat Cole

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Introduction

The *Alaska School District Profiles and Differential Study* is a two-volume study produced during 1988 at the request of the Legislative Budget and Audit Committee of the Alaska State Legislature by the McDowell Group, Alaskan economic and market consultants, in association with Dr. Nat Cole, a noted Alaskan education consultant.

Purpose

The study has two purposes. One is to provide a comprehensive geographic cost differential for each of the 53 public school districts scheduled to be in existence in Fiscal Year 1990, the next State budget cycle. Data from the current fifty-five districts were studied as three districts - Aleutian Region, Sand Point and King Cove - will merge in FY 1990, reducing the total to 53. The second purpose as directed by the Committee is to develop an information base on school districts for convenient use by decision makers.

Study Background

Of particular importance was the Legislative Budget and Audit Committee's direction to study all of the operating costs financed by the School Foundation Fund, commonly referred to in education circles as the 01 Fund. The result was a study design which measured both personnel and nonpersonnel costs. Previous school district differentials had been based only on household cost of living data and did not include consideration for nonpersonnel costs.

Until this current study, little was known of the comparative cost of operating widely different school districts in 53 distinctly different areas of Alaska. What was known was the relative cost of operating a household (household cost of living) in 19 areas of Alaska. This information was the result of the 1985 McDowell Group work, the *Alaska Geographic Differential Study*. In the past, these household cost differences were used to represent differences in operating school districts, a sometimes tenuous assumption since school districts rarely resemble households. This assumption was valid to the extent that personnel costs account for most of a typical district's operating cost. This study, *Alaska School District Profiles and Differential Study*, directly addresses and researches the costs of operating school districts and includes both personnel and, for the first time, nonpersonnel costs.

The study does not cover all aspects of public school finance. There are actually four areas of public school funding of which this study deals in detail with just one - differentials necessary to compensate for price differences among districts. And even more specifically, the study researches price differences for school expenditures covered by the 01 Fund, the basic fund which covers most school district operations. The study does not deal with the school foundation formula, capital costs or the criteria for other funding such as local contributions, PL 874, special programs, pupil transportation or extra curricular travel.

A companion to the differential is the school foundation formula. Though separate from the differential, its purpose also is to compensate for additional cost - that of providing education in locations with dispersed and lower density student populations. It simply takes more personnel, buildings, building space, travel, supplies and materials to provided education in a district of 10 communities with 200 students each than in a district consisting of one community with 2,000 students. It is simply less efficient per student, and therefore more costly, even if prices in the two districts are identical.

The school foundation formula compensates for this inherent inefficiency by granting more dollars per student to communities with fewer students. It does not compensate for differences in prices of nonpersonnel items or in the household cost of living. That is the function of the differential under study in this report. In most cases, the foundation formula is far more significant in allocating funding to districts than is the differential.

Content

Volume I, *Summary and Analysis*, provides complete results, recommendations and methodologies for the first purpose of the study. That is, to provide comprehensive differentials for districts. Volume I also contains additional data and ratio analysis of selected statistics on district fiscal, personnel, enrollment and facilities. Volume II, *District Profiles*, addresses the second purpose of providing an information base.

Volume II contains detailed profiles for the 53 districts. Each district profile contains three types of information. First is social, economic, geographic (including a district map) and governmental information about the district itself. The second is a FY 1988 profile of the district's fiscal data, personnel, facilities and enrollment. Finally, the last page of each profile contains the calculations and results of the district's geographic cost differential. This last section includes detailed data for the personnel, nonpersonnel and overall district differentials, data which are not presented in district format in Volume I. The profiles are typically 4 to 6 pages in length depending on the size of the district.

Volume II places a complete and relevant picture of Alaska's public school districts in one convenient and easily digestible document. Political and administrative decision makers have long been handcuffed by lack of reliable and consumable data on one of the State's most important and most expensive issues - public education.

Using these profiles, a single district can evaluate their operations in terms of personnel/enrollment ratios, maintenance efficiency for facilities, quality of facilities, expenditures per 100 ADM and many other measures. All of these can be compared to the same measures in every other district. Each district also has data showing the characteristics of the district itself such as population, average income, employment, unemployment, subsistence dependency, ethnic composition, climate data including heating degree days, transportation systems, district size, land status and political systems.

Districts can compare their costs for each of seven major household and eight major nonpersonnel expenditure categories by referring to the last page of each profile. For example food, transportation and clothing costs for households as well as equipment, utilities and travel costs for districts are some of the costs shown in each profile. Unique district expenditure patterns for personnel and nonpersonnel costs can also be identified and compared by using Volume II in this manner.

Methodology

Methodology for the *Alaska School District Profiles and Differential Study* utilized both survey and secondary research. The household cost of living in each district was used to represent differences in personnel costs. While district pay scales and actual salaries paid were examined, they were not used as the basis for personnel costs. It was observed that starting salaries in most districts closely paralleled the actual cost of living. But further up the scale this correlation faded. In general, urban scales rose at a more rapid rate, increasing actual personnel costs substantially with longevity. Therefore, what is actually paid in terms of average salary is primarily a function of negotiating policy, not cost. This eliminated salary scales and average salaries as objective measures of true cost.

District cost of living differentials were calculated by disaggregating and reorganizing the massive data base from the 1985 *Alaska Geographic Differential Study* from 19 larger districts to 53 school districts. Since the data base involved 2,500 households in 91 communities and 2,100 retail outlets in 54 communities, at least some data existed to compute a differential for each school district. Since differences in cost of living among Alaska locations tend to remain stable or change only slowly, the data was considered valid for the study. The alternative of resurveying in 53 districts would have been far beyond the budget limits of this study.

A comprehensive School District Survey, completed by 51 of the 55 current districts provided detailed budget data, a personnel inventory, a complete building by building facilities inventory plus a comprehensive survey of district purchasing patterns for each of the 30 items selected for the nonpersonnel market basket including, for example, utilities, insurance, teaching supplies, professional/technical services and equipment. Much of the data from this survey was used for both the differential calculations and the district profiles in Volume II.

A companion survey also done for this study was a School District Vendor Survey of dozens of firms serving Alaska school districts. Collected were current prices of all nonpersonnel items, shipping methods and costs, pricing policies and further information on district purchasing patterns.

Finally, a number of secondary sources were utilized, especially for the social, economic, geographic and governmental portions of the district profiles. District statistics provided in the surveys were supplemented by Alaska Department of Education reports, district audits and other sources.

I. Summary of Results and Recommendations

I. Summary of Results and Recommendations

Recommended School District Differentials

Table I-1 is a comparison of the final recommended differentials from this study and the existing differentials currently in force in state statute through FY 1989. It is suggested that readers consider three critical points when viewing the recommended differentials and those in the existing statute:

1. Study results should be expected to differ from existing statute differentials. Existing statute differentials are based solely on the 1985 McDowell Group work, *Alaska Geographic Differential Study* (with minor adjustments in some districts for multisite districts and as a result of an arbitrator's opinions). This study is in turn based solely on the household cost of living, not the cost of operating a school district. Further, the 1985 study provided differential data for only 19 election districts. These results were generalized to the 55 (to be 53 for FY 1990) school districts contained within the 19 election districts.

This current study,*Alaska School District Profiles and Differential Study,* differs in two significant respects. First, it is the first to include all costs of operating a school district in the differential formula. Second, this study provides data specifically for each school district for both household cost of living and for nonpersonnel district operating costs. Because of these fundamental differences, study results were not expected to mirror existing differentials. In short, operating a household is rarely the same as operating a school district and should not be expected to cost the same.

2. In nearly all cases, the differential is less important to district funding levels than the school foundation formula. The school foundation formula is designed to compensate for higher costs due to the inherent inefficiency of providing education in locations with dispersed population and lowe student density. On the other hand, the differential in this study is designed to correct for higher costs due to higher prices, not inefficiency. A common result of the two forms of compensation is that districts with the same differential often receive different amounts of funding on a per student basis.

The most extreme foundation formula cases are the districts with very small communities. For example, in FY 1988 the Chugach district received only 11%

more funding per student because of the differential. By contrast it received 179% more dollars per student due to the foundation formula. In FY 1988 the Railbelt district had an additional 23% from the differential and 25% per student from the foundation formula. Many larger districts are also affected. The Kenai Peninsula district receives no differential because living costs are essentially the same as in Anchorage. But it does gain 16% more dollars per student from the foundation formula because it serves a moderately dispersed and less dense student population. See Chapter IV for a detailed discussion of the relationship of the foundation formula and the differential.

3. The small amounts of household cost of living data available in some groups of districts mean that raw study results are subject to moderate error, and therefore inequity. An improvement in accuracy results from averaging the differentials of similar districts which have limited data. Specifically, group averages are recommended for most districts in the rural Southeast Alaska, Alaska Peninsula and Aleutian Islands, Yukon and Kuskokwim Delta, Interior Remote and Interior Road System groups. See Table I-2 in this chapter for comparison of study results and recommended differentials.

Table I-1

Comparison of Recommended Differentials and Existing Statue Differentials

(Anchorage District = 1.00)

District	Recommended Differentials	Statute Differentials	Difference
Southern Southeast			
Annette Island	1.08	1.03	0.05
Craig	1.08	1.03	0.05
Klawock	1.08	1.03	0.05
Hydaburg	1.08	1.03	0.05
Southeast Island	1.08	1.04	0.04
Urban Southeast			
Ketchikan	1.00	1.00	0.00
Wrangell	1.00	1.00	0.00
Petersburg	1.00	1.00	0.00
Sitka	1.00	1.00	0.00
Juneau	1.00	1.00	0.00
Central and Northern Southeast			
Kake	1.10	1.03	0.07
Chatham	1.10	1.03	0.07
Hoonah	1.10	1.08	0.02
Pelican	1.10	1.08	0.02
Other Southeast			
Haines	1.03	1.05	-0.02
Skagway	1.05	1.05	0.00
Yakutat	1.20	1.08	0.12
Prince William Sound			
Cordova	1.20	1.11	0.09
Chugach	1.20	1.11	0.09
Valdez	1.08	1.11	-0.03
Copper River	1.13	1.14	-0.01

Table I-1 continued

Comparison of Recommended Differentials and Existing Statue Differentials

(Anchorage District = 1.00)

District	Recommended Differentials	Statute Differentials	Difference
Anchorage Urban Influence Area			
Anchorage (Base District)	1.00	1.00	0.00
Matanuska-Susitna	1.00	1.00	0.00
Kenai Peninsula	1.00	1.00	0.00
Kodiak	1.08	1.09	-0.01
Alaska Peninsula and Aleutian Islands			
Adak	1.29	1.27	0.02
Pribilofs	1.40	1.30	0.10
Aleutian (Region) East	1.33	1.31	0.02
Unalaska	1.29	1.27	0.02
Dillingham	1.29	1.27	0.02
Bristol Bay	1.33	1.27	0.06
Lake and Peninsula	1.33	1.31	0.02
Southwest	1.33	1.31	0.02
Yukon and Kuskokwim Delta			
Lower Kuskokwim	1.40	1.42	-0.02
Yupiit	1.40	1.41	-0.01
Kashunamiut	1.37	1.33	0.04
Lower Yukon	1.37	1.35	0.02
St. Mary's	1.37	1.30	0.07
Interior Remote			
Kuspuk	1.33	1.33	0.00
Iditarod	1.33	1.33	0.00
Galena	1.33	1.30	0.03
Yukon-Koyukuk	1.33	1.34	-0.01
Yukon Flats	1.36	1.46	-0.10
Tanana*	1.33	1.30	0.03
Interior Road System			
Alaska Gateway*	1.14	1.19	-0.05
Delta/Greely	1.14	1.16	-0.02
Nenana	1.14	1.20	-0.06
Railbelt*	1.14	1.23	-0.09
Fairbanks	1.03	1.04	-0.01
Arctic			
North Slope	1.49	1.45	0.04
Northwest Arctic	1.43	1.45	-0.02
Nome	1.36	1.34	0.02
Bering Straits	1.40	1.39	0.01

Summary of Results

Changes were modest considering the differences in the origin of the recommended and statute differentials. Forty-two of fifty-three district differentials changed by five points or less and over half of all district differentials (29) changed by less than three points. Eleven of those remained the same.

Of the eleven district differentials changing by more than five points, all had statute differentials that were not based on data specifically for their districts. The largest gain was Yakutat (+12) and the greatest loss was Yukon Flats (-10). The district specific data in this study supports the recommended differentials. In virtually every one of the following cases, the new nonpersonnel cost data is consistent with the revisions in the household data.

Valdez (-5), Cordova (+9) and Chugach (+9) had been assigned the same overall Prince William Sound differential, 1.11, because their data had been combined in the 1985 study. When disaggregated, the data clearly showed a significant difference between Valdez and Cordova cost of living, Valdez being less expensive. The nonpersonnel survey also identified significant cost differences.

Yakutat, Kake (+7) and Chatham (+7) had been combined with less expensive urban areas of Haines/Skagway, Wrangell/Petersburg and Sitka, respectively. When separated, their higher living costs became obvious. Higher costs in these communities were also confirmed by the results of the nonpersonnel cost research in this study. Yakutat, as the most isolated of these, had the largest gain.

Railbelt and Nenana, down six and nine points respectively, are locations with road access to major urban areas but previously had been combined with a larger interior remote [illegible]. Once the higher costs of the remote interior communities were rem[illegible]om data for communities with road access, more moderate differentials resulted.

Yukon Flats' statute differential was the results of an arbitrator's decision which classified it as an arctic district with costs at the North Slope level. However, district specific cost of living and nonpersonnel data place it conclusively in a more logical category with its closest geographic neighbors in the remote interior region south of the Brooks Range.

The St. Mary's district (+7) had been set at a low level due to an anomaly in the original Wade Hampton election district housing cost data. After adjustment for that exception, the district differential becomes average for the Yukon delta area.

The Pribilof district (+10), the most remote in Western Alaska, had an inadequate data base for computing a specific differential and had been assigned a level more typical of less isolated communities in the region. Adjustment for this inequity plus an addition of seven points for extreme costs resulting from exceptional isolation give the district a significant increase. Pribilof nonpersonnel costs are the Alaska Peninsula and Aleutian Island region's highest.

Recommended Differentials and Study Results

The results of the study reflect detailed analysis of both household cost of living data and district nonpersonnel operating costs. While the data are the most accurate and detailed ever used for school cost differentials, they are by no means perfect reflections of reality. This is especially true when comparing communities and school district operations which do not remotely resemble one another. Differences in local lifestyles, income, district spending patterns, student density, climate and dozens of other factors make the science of differential study less than a precision calculation.

While the study team believes the results are reasonable reflections of comparative costs they are not so precise as to eliminate inequity. For this reason the study team provides recommended adjustments to the final statistical results of the study. In the 1985 work, *Alaska Geographic Differential Study*, the professional team recommended that the State of Alaska consider grouping similar districts into a limited number of groups. The districts within each group would be assigned the same differential. This allows for very accurate measurement of costs in larger geographic areas already known to have roughly the same costs throughout each area. The study team makes the same recommendations for school district differentials.

The problem in both the 1985 study and this current study is one of hair splitting small amounts of data into even smaller districts. The accuracy of the data decreases as the number of households and retail outlets surveyed becomes smaller. A thorough reading of chapters II and III shows the procedures necessary to coax meaningful differentials out of small amounts of data in some districts.

Perhaps the most extreme examples are differentials in four areas of the state - rural Southeast, Alaska Peninsula and Aleutian Islands, Yukon and Kuskokwim Delta, and the Interior Remote districts which stretch from Kuspuk to Yukon Flats. Often, the personnel differentials for a single district would be based on a sample of a hand full of households and on retail prices in just one of several communities in the district. Even so, nearly all results came within the parameters of the larger, more accurate districts used in 1985 and the cost differences between adjacent districts with minimal data were surprisingly close. This is due in part to the quality of the original data and in part to the tight procedures for handling data representing small districts.

Table I-2 details the differences between recommended differentials and unadjusted study results contained in Chapters II and III and in Volume II, *District Profiles*. Following Table I-2 is the summary discussion of all adjustments leading to the recommended differentials.

Table I-2

Recommended School District Differentials

(Anchorage District = 1.00)

District	Study Results	Recommended Differentials
Southern Southeast		
Annette Island	1.07	1.08
Craig	1.06	1.08
Klawock	1.08	1.08
Hydaburg	1.11	1.08
Southeast Island	1.11	1.08
Urban Southeast		
Ketchikan	1.02	1.00
Wrangell	1.02	1.00
Petersburg	1.01	1.00
Sitka	1.02	1.00
Juneau	1.02	1.00
Central and Northern Southeast		
Kake	1.13	1.10
Chatham	1.10	1.10
Hoonah	1.07	1.10
Pelican	1.07	1.10
Other Southeast		
Haines	1.03	1.03
Skagway	1.05	1.05
Yakutat	1.20	1.20
Prince William Sound		
Cordova	1.21	1.20
Chugach	1.20	1.20
Valdez	1.08	1.08
Copper River	1.13	1.13
Anchorage Urban Influence Area		
Anchorage (Base District)	1.00	1.00
Matanuska-Susitna	1.00	1.00
Kenai Peninsula	1.01	1.00
Kodiak	1.08	1.08
Alaska Peninsula and Aleutian Islands		
Adak	1.30	1.29
Pribilofs	1.34	1.40
Aleutian (Region) East	1.34	1.33
Unalaska	1.20	1.29
Dillingham	1.29	1.29
Bristol Bay	1.33	1.33
Lake and Peninsula	1.34	1.33
Southwest	1.33	1.33
Yukon and Kuskokwim Delta		
Lower Kuskokwim	1.40	1.40
Yupiit	1.40	1.40
Kashunamiut	1.37	1.37
Lower Yukon	1.37	1.37
St. Mary's	1.37	1.37

Table I-2 continued

Recommended School District Differentials

(Anchorage District = 1.00)

District	Study Results	Recommended Differentials
Interior Remote		
Kuspuk	1.34	1.33
Iditarod	1.29	1.33
Galena	1.33	1.33
Yukon-Koyukuk	1.31	1.33
Yukon Flats	1.36	1.36
Tanana	1.33	1.33
Interior Road System		
Alaska Gateway	1.11	1.14
Delta/Greely	1.11	1.14
Nenana	1.16	1.14
Railbelt	1.14	1.14
Fairbanks	1.03	1.03
Arctic		
North Slope	1.49	1.49
Northwest Arctic	1.43	1.43
Nome	1.36	1.36
Bering Straits	1.40	1.40

Basis for Recommended Differentials

Southeast: The five Southern Southeast districts are assigned a recommended group differential of 1.08. Craig, Klawock and Hydaburg are within a few miles of one another and all have access to the same road system. Hydaburg's study result of 1.11 was inflated by a low personnel expenditure weight due to that district's exceptionally low pay levels. Given the average weights of this group of districts, the Hydaburg differential would have been 1.08. Southeast Island has the central office as well as a substantial district correspondence program in Ketchikan. Both of these factors lower costs. Also, Southeast Island's dispersion over multiple small sites is compensated for in the foundation formula.

The recommended group differential for Urban Southeast districts is the 1.00 base level. Urban Southeast districts have virtually the same personnel and nonpersonnel cost levels, all of them within a few points of the base district. Further, their extremely low nonpersonnel expenditure weights show the effects of moderate climate and other cost advantages not available to more northern isolated districts. While the study results are slightly higher (1.01 o 1.02), numerous past studies have continued to verify that cost of living and other costs are essentially the same in most of urban Alaska. Finally, the slight difference from the base level in urban Southeast household living costs is due almost entirely to local sales tax, not actual cost levels. Some debate exists as to including the effect of local sales tax, a local choice, in living cost comparisons. Sales tax is included in the Alaska data base used in this

study. In summary, the difference between base level and Southeast urban differentials is not considered statistically significant.

The four Central and Northern Southeast districts are assigned a recommended differential of 1.10, the average for that group. Though they do not fall into a convenient group of similar districts, they are subject to the same isolation factors and they experience higher retail costs than the southern group. Pelican, which did not return a survey, is assigned the 1.10 average. The one multisite district, Chatham, is compensated for lack of density through the foundation formula.

Haines, Skagway and Yakutat recommendations are simply the study results - 1.03, 105 and 1.21. The statute differential for these districts was based on an overall average and Yakutat's costs inflated those of the entire district. In turn, the lower costs in Skagway and Haines were the major factor in Yakutat's low existing statute differential. Yakutat's isolation, lack of access to regional centers and high everyday retail prices separate it from the rest of Southeast Alaska. Its costs are actually similar to those of the isolated locations in Prince William Sound - Chugach and Cordova.

Prince William Sound: Prince William Sound differentials are an example of the advantage of road access. Valdez and even Copper River have lower everyday retail prices and nonpersonnel costs than Cordova and Chugach. The recommended differential for Cordova and Chugach (which is based on Cordova) is 1.20, the same as Yakutat and virtually the same as the study results. Study results are also recommended for Valdez (1.08) and Copper River (1.13). The former Prince William Sound differential of 1.11 for all locations was simply the average for the area. Enough data exists in each location to show a clear and significant difference in Cordova and Valdez costs, both household and nonpersonnel.

Anchorage Urban Influence Area: The Anchorage Urban Influence Area recommended differential is 1.00 for the three districts of Anchorage, Matanuska-Susitna and Kenai Peninsula. The Kenai Peninsula study result is actually 1.01, similar to some urban Southeast districts and is not considered statistically significant. Further, the Kenai district is compensated an extra 16% per student by the foundation formula for lower density and multisites.

Kodiak: The study result of 1.08 is the recommended Kodiak differential. Kodiak has no really comparable district other than some of the Southeast urban districts such as Sitka or Ketchikan, both with differentials near 1.00. It is large enough to have retail competition, reasonable utility rates and moderate shipping costs. Kodiak also benefits from a relatively modest maritime climate. However, it is more isolated than Southeast Alaska and shows moderately higher costs as a result, especially for transportation.

Alaska Peninsula and Aleutian Islands: The Alaska Peninsula and Aleutian Islands is a region which suffers from limited data. The communities are small and the number of households and retail outlets upon which these differentials are based is also small. However, the range of study results is surprisingly narrow showing these districts are subject to essentially the same cost levels. This similarity is further verified by the relative closeness of the nonpersonnel differentials.

Two differential are recommended. For Dillingham, Unalaska and Adak, 1.29 is recommended. Sufficient data is available for Dillingham and Unalaska and the study result for both was 1.29. These districts also show lower than average nonpersonnel expenditures, an indication that facility costs are more reasonable than in other districts in the area.

Adak benefits from the district's relationship with the military and its nonpersonnel differential is lower than average for the region. Further, it is unlikely that district personnel pay everyday retail prices as high as those in the small site districts, though the personnel differential assigned to Adak was from a high cost area, Sand Point.

The recommended differential for the remaining districts in the Alaska Peninsula and Aleutian Islands group is 1.33, their average. One exception to this is recommended. The Pribilof district is clearly subject to more extreme cost conditions than others in this group. The nonpersonnel differential is the region's highest, 1.38. Though no household data is available it would most certainly reflect higher costs than those districts less isolated and distant. A 1.40 is recommended for the Pribilofs - the same differential as Lower Kuskokwim, Yupiit and Bering Straits.

Yukon and Kuskokwim Delta: Yukon and Kuskokwim Delta recommendations are the study results of 1.40 for two districts and 1.37 for three others. Historically, Lower Kuskokwim and particularly Bethel, have had some of the state's highest household costs of living. The district's nonpersonnel results mirror this at 1.43, third highest in the state. Yupiit, for which no household or nonpersonnel data is available is assigned the Lower Kuskokwim differential of 1.40 which is the closest district but not particularly similar. It could have as easily been assigned the 1.33 for Kuspuk, its neighbor to the east. However, the line for groupings was drawn at Kuspuk so Yupiit is included in the delta group.

Interior Remote: The Interior Remote group of six districts which extends from Kuspuk to Yukon Flats is assigned a recommended differential of 1.33, the average for the group. The exception is Yukon Flats which shared with Yukon-Koyukuk the group's highest household costs and the next highest nonpersonnel differential. Study results of 1.36 are recommended for Yukon Flats. While this is a significant change from their 1.46 existing statute

differential, that differential was set in arbitration and was not based on actual data. Actual Yukon Flats district data for both households and nonpersonnel show patterns and prices very similar to other Interior Remote districts but not near the level of the Arctic districts which must cope with more severe climate and higher transportation costs.

Of all groups, the Interior Remote districts had the most limited data available. No single community was large enough to have a desirable number of households and outlets surveyed. Yet all districts had at least some household and price survey representation study results were fairly uniform, ranging from 1.29 to 1.36. These results also closely mirrored the 1985 study results for larger districts in the same region. Yukon-Koyukuk's lower than average nonpersonnel differential is modified by the fact that a portion of their students attend Nenana schools.

Interior Road System: Interior Road System district differentials are tightly grouped at 1.11 to 1.16. The differential of another road system district, Copper River's 1.13, further supports this range. Two inequities are apparent in this group. Nenana's 1.16 is noticeably higher than the others in spite of easy access to Fairbanks prices. The second apparent inequity is the Alaska Gateway district which had no household or price data and was assigned Delta/Greely numbers as the closest district. However, the small Delta/Greely sample had lower than normal housing cost factors. Alaska Gateway, on the other hand, has less retail price competition and is not an easy drive to either Fairbanks or Anchorage. This situation is more like that of Copper River and Railbelt.

An overall Interior Road System differential of 1.14 is recommended. This is the average of the two districts (Nenana and Delta/Greely) for which both household and nonpersonnel data were available. While this may not be an ideal solution, it is the only alternative which can be based on actual data. Further, it provides Alaska Gateway with virtually the same differential as the two most similar district - Copper River and Railbelt. These three districts, especially Alaska Gateway, benefit significantly more from the foundation formula than Nenana and especially Delta/Greely.

Fairbanks: Study results of 1.03 are recommended for Fairbanks. The state's second largest district, while typically urban in virtually all of its cost data, does have both household (1.03) and nonpersonnel (1.01) differentials above the urban base. Further, it did report the highest per gallon cost for heating oil of any urban district, in spite of the presence of two local refineries. While districts with 1.01 and 1.02 overall differentials were held to the urban base, the Fairbanks level of 1.03 becomes significant and is recommended.

Arctic: Arctic districts vary a great deal in all respects and no group differential could apply. Study results are recommended for North Slope (1.49), Northwest Arctic (1.43), Nome (1.36) and Bering Straits (1.40). Both

Nome and North Slope districts spend a high proportion of their budget on personnel (78% and 77%, respectively), indicating high salaries and/or lower than normal nonpersonnel costs. The North Slope differential is more a result of high household cost of living than nonpersonnel costs which are modified by reasonable (by Arctic standards) utility costs in Barrow.

Personnel and Nonpersonnel Differentials and Expenditure Weights

Table I-3 shows how each of the district differentials are calculated. First, the personnel cost differential is multiplied by the personnel expenditure weight. In the case of the Klawock district, for example, 81% of the total budget was spent on personnel and the personnel differential was 1.01, or 1% above Anchorage levels. Then, the nonpersonnel differential is multiplied by the nonpersonnel expenditure weight. In the Klawock case the district spent 19% of their budget on nonpersonnel costs and the nonpersonnel differential was 1.35 or 35% higher than Anchorage costs. The products of these two calculations are added and the sum, 1.08, is the district differential.

A summary discussion of these results follows Table I-3, on the following page.

Table I-3

School District Personnel, Nonpersonnel and Total Differentials

(Anchorage District = 1.00)

District	Personnel Differentials	Pers Expenditure Weight	Non Personnel Differentials	Nonpers Expenditure Weight	Total District Differential	Recommended Differential
Southern Southeast						
Annette Island	1.01	.75	1.23	.25	1.07	1.08
Craig	1.01	.77	1.25	.23	1.06	1.08
Klawock	1.01	.81	1.35	.19	1.08	1.08
Hydaburg	1.01	.63	1.27	.37	1.11	1.08
Southeast Island	1.01	.71	1.36	.29	1.11	1.08
Urban Southeast						
Ketchikan	1.02	.81	1.00	.19	1.02	1.00
Wrangell	1.00	.86	1.08	.14	1.02	1.00
Petersburg	1.00	.79	1.05	.22	1.01	1.00
Sitka	1.02	.82	1.03	.18	1.02	1.00
Juneau	1.03	.86	0.98	.14	1.02	1.00
Central and Northern Southeast						
Kake	1.05	.67	1.30	.33	1.13	1.10
Chatham	1.07	.75	1.21	.25	1.10	1.10
Hoonah	1.03	.81	1.24	.19	1.07	1.10
Pelican*	1.03	NP	NP	NP	1.07	1.10
Other Southeast						
Haines	1.02	.78	1.07	.22	1.03	1.03
Skagway	1.03	.75	1.11	.25	1.05	1.05
Yakutat	1.21	.78	1.19	.22	1.20	1.20
Prince William Sound						
Cordova	1.18	.84	1.37	.16	1.21	1.20
Chugach	1.13	.69	1.36	.31	1.20	1.20
Valdez	1.06	.83	1.17	.17	1.08	1.06
Copper River	1.13	.72	1.12	.28	1.13	1.13
Anchorage Urban Influence Area						
Anchorage (Base District)	1.00	.88	1.00	.12	1.00	1.00
Matanuska-Susitna	1.00	.86	1.01	.14	1.00	1.00
Kenai Peninsula	1.01	.81	1.01	.19	1.01	1.00
Kodiak	1.06	.83	1.15	.17	1.08	1.08

Table I-3 continued

School District Personnel, Nonpersonnel and Total Differentials

(Anchorage District = 1.00)

District	Personnel Differential	Personnel Expenditure Weight	Non Personnel Differential	Nonpers Expenditure Weight	Total District Differential	Recommended Differential
Alaska Peninsula and Aleutian Islands						
Adak	1.32	.69	1.25	.31	1.30	1.29
Pribilofs	1.32	.61	1.38	.39	1.34	1.40
Aleutian (Region) East	1.32	.59	1.37	.41	1.34	1.33
Unalaska	1.30	.71	1.27	.29	1.29	1.29
Dillingham	1.30	.79	1.24	.21	1.29	1.29
Bristol Bay	1.35	.64	1.31	.36	1.33	1.33
Lake and Peninsula	1.35	.65	1.31	.35	1.34	1.33
Southwest	1.35	.71	1.27	.29	1.33	1.33
Yukon and Kuskokwim Delta						
Lower Kuskokwim	1.39	.71	1.43	.29	1.40	1.40
Yupiit*	1.39	NP	NP	NP	1.40	1.40
Kashunamiut	1.39	.70	1.31	.30	1.37	1.37
Lower Yukon	1.36	.68	1.35	.32	1.37	1.37
St. Mary's	1.38	.64	1.35	.36	1.37	1.37
Interior Remote						
Kuspuk	1.37	.68	1.23	.32	1.34	1.33
Iditarod	1.32	.69	1.22	.31	1.29	1.33
Galena	1.32	.74	1.33	.26	1.33	1.33
Yukon-Koyukuk	1.39	.63	1.18	.37	1.31	1.33
Yukon Flats	1.39	.63	1.32	.37	1.36	1.36
Tanana*	1.32	NP	NP	NP	1.33	1.33
Interior Road System						
Alaska Gateway	1.10	.68	1.14	.32	1.11	1.14
Delta/Greely	1.10	.83	1.14	.17	1.11	1.14
Nenana	1.14	.75	1.22	.25	1.16	1.14
Railbelt	1.14	.75	1.14	.25	1.14	1.14
Fairbanks	1.03	.84	1.01	.16	1.03	1.03
Arctic						
North Slope	1.53	.78	1.34	.22	1.49	1.49
Northwest Arctic	1.41	.71	1.49	.29	1.43	1.43
Nome	1.41	.77	1.18	.23	1.36	1.36
Bering Straits	1.34	.68	1.53	.32	1.40	1.40

* Not Provided. District did not return *School District Survey*.

Summary of Results (See Table I-3)

Personnel Differentials and Expenditure Weights
Personnel (household cost of living) differentials range from 1.00 to 1.53 but they also fall into four very distinct groups - Arctic, Aleutian and Interior remote, districts with convenient access to major regional centers, and urban districts.

The highest differentials are in the Arctic region topped by the 1.53 cost of living differential in the North Slope district. Two other northern districts - Northwest Arctic and Nome - shared the next highest cost of living of 1.41.

The largest group, the 20 Aleutian and Interior Remote districts had cost of living differentials ranging from 1.30 to 1.39, only nine points. This narrow range is the differential for districts which are truly remote from major regional centers but are not true arctic districts. These twenty districts stretch in a solid band from the tip of the Aleutian Chain through the Yukon River, Kuskokwim River and Bristol Bay drainage systems to the Alaska/Canada border in the Eastern Interior.

Districts with reasonable road or ferry access to regional centers of Ketchikan, Juneau, Anchorage or Fairbanks fall into a third group with differentials of 1.01 for some smaller Southeast districts to 1.10 and 1.14 for all the interior road system districts.

Fourth, urban districts with most of the state's population are grouped closely about the 1.00 base level and range only to 1.03. This group includes Anchorage, Fairbanks, Matanuska-Susitna, Kenai Peninsula, Juneau, Ketchikan and Sitka. Essentially, urban Alaskans experience about the same cost of living.

Nonpersonnel Differentials and Expenditure Weights
Nonpersonnel differentials had nearly the same range as personnel differentials - 0.98 to 1.53. However, their pattern among districts is different than the personnel differential. Rarely were the personnel and nonpersonnel differentials the same in any one district. This supports the original premise of this study which was that, in most districts, nonpersonnel costs are at different levels than personnel costs. Personnel and nonpersonnel costs differed by ten or more points in 17 districts and by at least five points in 31 districts.

District size, not living costs, was a major determinant of high nonpersonnel costs. Even in small districts of Southeast Alaska where household costs tend to be reasonable, nonpersonnel costs were high. In small communities with

small schools several nonpersonnel costs were significantly higher than in urban areas. Utilities rates, fuel prices, insurance, travel and professional/technical services are significantly more expensive in small communities than in urban areas.

Ten districts including all major urban districts had nonpersonnel differentials of less than 1.10. Another eleven had differentials between 1.10 and 1.19. These tended to be smaller urban areas and small districts with road access to Anchorage and Fairbanks. Twelve districts including most of rural Southeast had differentials in the 1.20's and a nearly equal number (14) scored in the 1.30's. Many in the 1.30's group were in that remote Aleutian and Interior region where household costs of living tended to be so uniform, also in the 1.30's. Final, only three districts scored nonpersonnel differentials above 1.40 - Lower Kuskokwim (1.43), Northwest Arctic (1.49) and Bering Straits (1.53).

Readers should keep in mind that in many districts serving smaller communities nonpersonnel differentials are modified by an adjustment factor for facilities costs (utilities and property insurance) to avoid double payment for low density student populations by both the foundation formula and the differential. Again, the differential is an adjustment for price differences while the foundation formula compensates for the inherent inefficiency of providing education to dispersed and lower density student populations.

Nonpersonnel expenditure weights are typically 12% to 20% in urban districts reflecting the lower prices of most nonpersonnel market basket items from insurance to travel to utility and fuel prices. Anchorage spends a smaller portion of its budget than any other district, 12%, on nonpersonnel costs. MatSu and Juneau spend 14% and Fairbanks, 16%.

At the other extreme are seventeen districts, all but one of them remote, which spend over 30% of their budget on nonpersonnel costs. The Aleutian Region and the Pribilof districts devote a larger portions of their budget to nonpersonnel costs than any other districts - 41% and 39%, respectively.

Analysis of District Statistics

The *Alaska School District Profiles and Differential Study* also includes information not related to differentials. Chapter IV of this study volume provides tables and written analysis of selected district fiscal, enrollment, personnel and facility data. Additional data and ratios (per ADM) for each district are also included in Volume II of this study, *District Profiles*. The appendix to Volume I includes a sample district profile from Volume II. Readers are referred to Chapter IV of Volume I and to Volume II for detailed

data and analysis of district statistics. Following is a brief summary of some of the data analyzed in Chapter IV.

Budget Analysis per ADM

School Operating Fund (01 fund) total, personnel and nonpersonnel budgets, State funding and other funding are all analyzed on a per ADM basis.

Total budgets per ADM (meaning per student, more or less) range from a low of less than $4,600 for the Anchorage base district which has the largest and most dense - and therefore the most efficient to serve - student population to a high of just under $19,500 for the North Slope district. Urban districts typically spend up to $6,000 per ADM while 20 small and remote districts spend over $10,000 per ADM.

North Slope expenditure and personnel levels are unique among districts and the following brief discussion explains some factors which contribute to this. The North Slope has the highest cost differential (1.49) and, like many other remote Northern and Western Alaska districts, it also provides education for a student population in several scattered funding communities. In addition, the North Slope has made an enormous local financial commitment to upgrading the education of their population. According to district officials, the percentile competency scores of grade school students have increased dramatically from a depressing 11th to the 32nd percentile in the past four school years. In terms of State foundation funding, the North Slope receives about $6,200, less than 25 other districts and about the same as Lower Yukon, Skagway and Kake. However, funding from other sources, primarily local, triples this amount.

Personnel expenditures vary from less than $5,000 for the major urban districts to $15,163 for the North Slope. Only three other districts spend as much as $10,000 per ADM on personnel.

Nonpersonnel spending per ADM is more widely scattered, ranging from just $568 for Anchorage and less than $1,000 for the other major urban districts to a peak of nearly $8,000 for the tiny Aleutian Region. The spread between the districts with the highest and lowest per ADM personnel costs was a factor of just under four ($4,000 vs. $15,000). But in nonpersonnel costs the spread is a factor of fourteen (from under $600 in Anchorage to $8,000). Nonpersonnel costs per ADM tended to be highest in the districts with very small communities.

State funding per ADM averages less than $3,500 in major urban areas and is typically $6,000 to $10,000 in many remote districts. The extremes are seven districts receiving over $10,000 with the Aleutian Region over $15,000 per ADM in State foundation funding.

Funding from other sources in major urban areas ranges from $1,300 (MatSu) to $2,200 (Fairbanks). The North Slope and Valdez are the leaders in the other funding category with $13,310 and $6,311, respectively, most of it from local sources. The districts with the least funding from other sources are the seven receiving less than $1,000. Most of them are districts serving smaller though not remote communities such as Skagway (lowest at $379), Nenana and Copper River.

Enrollment, Personnel and Facility Analysis per ADM

Personnel ratios per 100 ADM are analyzed as are the relationships between enrollment and instructional units.

District enrollments range from slightly more than 100 students in small single site districts to over 38,000 in Anchorage. But of more interest is the relationship between total enrollment (1st count ADM) and the number of instructional units granted each district by the school foundation formula. An instructional unit is the basic funding unit for public schools and is worth about $60,000 per unit.

This analysis of students per funding unit shows a low of 4.0 ADM per instructional unit in the tiny Chugach district to 12.4 in the Anchorage district. Urban areas typically have 11 to 12.4 students per instructional unit of funding while many small and multisite districts receive an instructional unit for every 5 to 8 students. This is simply another way to express the efficiency differences caused by dispersed and lower density student populations.

Another measure of what districts provide is the number of square feet of instructional building space per student. Anchorage is the most efficient district with only 134 square feet of instructional space per student. Other major urban districts typically provide 140 to 150 square feet. By contrast, ten districts provide over 300 square feet with a high of 414 per ADM in the North Slope. In general, remote districts use about twice the instructional space per student because low density and dispersion cause inefficient use of buildings compared to the compactness possible in large urban area schools.

Personnel per 100 ADM reveals the same results as other data. Generally, major urban districts, which devote over 80% of their budgets to personnel still provide just 9 to 10 total personnel per 100 ADM. They also employ about twice as many certified as classified personnel. Anchorage, for example, employs six certificated and three classified per 100 ADM.

In contrast, sixteen districts employ 18 or more personnel per 100 ADM with a high of 30 for the North Slope. These districts, of course, are remote ones serving mostly small communities. Further, districts with high personnel/student ratios tend to hire about as many classified as certificated

personnel. A few districts hire more classified than certificated. A typical remote REAA might employ 11 certificated and 10 classified personnel per 100 ADM compared to the typical urban ratios of 6 and 3, respectively.

Summary of Methodology

Personnel Differential Methods and Data

While the overall study collected data on salary levels and other personnel costs for the profile portion, the only data used for the personnel cost differential was the household cost of living in the 55 (53 in FY 1990) school districts. Again, the sole basis for the personnel differential is household cost of living, not average salaries paid and not salary schedules.

Virtually all household data was derived from the comprehensive data base of the 1985 *Alaska Geographic Differential Study* done by The McDowell Group for the State of Alaska Department of Administration, Division of Labor Relations. The study surveyed nearly 2,500 households in 91 communities and collected retail prices from 2,100 retail outlets in 54 communities. The results were combined into the 19 Alaska election districts which the State uses for their differential districts. The household cost of living market basket included 310 items in the seven major Consumer Price Index household expenditure categories of housing, food, transportation, clothing, recreation and entertainment, medical and miscellaneous.

To meet the needs of the school district study this data base was disaggregated and then reorganized into the 55 school districts. Then a differential was calculated for the household cost of living in each of those districts. Because the original study sample was designed for 19 rather than 55 districts, data for some small school districts was either not available or was not considered statistically sound due small sample sizes or other factors. To compensate for these cases several rules were developed which provide each district with data considered sound for differential purposes. A summary of these rules follows:

- When data was missing (for example, no retail price surveys were conducted in some districts) data from the closest most similar district was substituted. If data from the closest most similar district was not available, data from the larger original district in the 1985 study was used.

- When household and price data appeared outside the normal limits of the original study, data from the closest most similar district was substituted. For example, in the original study no more than 36% of any district's household budget was spent on food. If a district with a small household sample size showed a food expenditure weight well beyond 36%, then data from the

closest most similar school district or from the original 1985 district was substituted.

• In general readers should keep in mind the basic results of not only the 1985 study but past major studies conducted in 1972 and 1976. Two findings are of importance:

1. The most significant finding is that housing in most districts is less expensive than in Anchorage but that Anchorage's everyday retail prices are the state's most favorable. These tend to balance each other out in most urban areas but in rural areas the high everyday prices cause higher differentials.

Essentially, there are four groups of cost of living differentials - urban Alaska, small communities with easy and inexpensive access to regional centers by road or ferry, remote rural communities and true Arctic locations. The cost of living in urban Alaska is essentially the same from Ketchikan to Fairbanks, varying only from 1.00 to 1.03. Communities with easy access to regional centers fall into the 1.01 (small Southeast communities) to 1.14 (Railbelt, Copper River) range. Finally, the cost of living in remote areas from the Aleutians to the Alaska/Canada border in the Interior is remarkably similar with differentials of 1.30 to 1.40 covering all cases. Only true Arctic districts exceed 1.40.

2. The second significant finding is that differences in cost of living among Alaska locations change little over time. For example, the difference in cost of living between Bethel and Anchorage is about the same as it was nearly 20 years ago. Therefore, the use of a 1985 data base for 1988 differentials is appropriate, though the 1986-88 recession in urban Alaska has affected housing costs in the short run. However, some significant changes have occurred in some locations over the past 20 years and the cost of living data base should be updated every several years.

Nonpersonnel Differential Methods and Data

Thirty nonpersonnel expenditure items in eight major school district expenditure code categories are used to compute differentials in nonpersonnel costs. Data was collected through the *School District Survey*, a comprehensive survey of expenditure patterns completed by 51 of the 55 districts existing in FY 1988, and a School District *Vendors' Survey* of dozens of firms doing business with Alaska's school districts. Both surveys were conducted specifically for the nonpersonnel differential in this study. See Chapter III for detailed methodology and results of these surveys.

Following is a brief description of methods used to develop a nonpersonnel differential for school districts. See Chapter III for detailed nonpersonnel differential methodology and results.

Professional/Technical Services (Budget Code 400)
Legal, audit and inservice training were the professional/technical services market basket items.

Legal Services
Legal costs were based on the hourly rate charged by lead attorneys - usually about $135 - plus travel and per diem to the central office of each district for those districts which did not use local attorneys. If any district lead attorney rate was significantly higher or lower than the normal rate, it was assigned the $135 standard rate. Travel costs were added to the fees for a typical travel assignment of one work day. Interviews with legal firms revealed that about 30% of the their time was spent onsite and 70% in their own offices. Therefore, travel costs were added to only 30% of the legal fees.

The legal differential is the cost difference between performing all work in Anchorage and 30% of the work onsite.

Audit Costs
Interviews with the four firms which conduct most district audits revealed fairly standard fees depending on the size of the district budget. In addition, the audit firms specified the amount of total time which would be spent onsite (and therefore subject to travel and per diem costs). Actual audit costs paid by districts varied significantly and did not allow a basis for differential comparison. Instead, audit firm standards for districts for specified budget sizes were used.

The audit differential is the cost difference between performing a district's audit without travel and per diem and performing the audit with a portion of it being onsite. About 40-60% of the professional time for an audit is spent onsite.

Inservice Training
Inservice training policies and expenditures varied dramatically among districts. However, the district surveys revealed that $250 per day in fees and a three-day assignment were the most common parameters for contract inservice training professionals. Travel and per diem costs from a central out-of-state point to each district office was calculated.

The differential is the difference in total costs (fees, travel and per diem) between sending that professional to regional centers (Anchorage, Juneau and Fairbanks) and other districts.

Communications (410)
The communications market basket included long distance telephone, local telephone charges and postage (a combination of postage and parcel post shipping).

Long Distance Telephone

According to district surveys the three most commonly called locations were Anchorage, Juneau and Fairbanks. The study team calculate the total cost of calling these locations from each district. The standard was a ten-minute daytime weekday station call. This cost was compared to the cost of Anchorage placing two calls (one to Fairbanks, the other to Juneau) and the differential calculated. Out-of-district calls account for most of the long distance expense even for multisite districts. Therefore, all long distance expenditures are given the out-of-district differential.

Local Telephone Service

A standard business telephone system (three-line rotary roll-over) monthly charge was selected as the basis for cost comparison. School district systems do not follow any particular patterns so this system was priced in each of the districts and its cost compared to the Anchorage price.

Postage

Postage budgets were split into two parts for single site district and three for multisites. Normal postage and parcel post packages of less than two pounds, which cost the same everywhere, were assumes to be 60% of the budget and the other 40% was parcel post shipping for packages over two pounds. The cost of shipping parcels over two pounds varies depending on the distance shipped. These larger packages were assumed to be shipped to both Juneau and to parcel post zone 8 (outside Alaska) from each district.

The differential is the cost of normal postage plus larger package shipping in each district as compared to Anchorage.

Insurance (415)

Property insurance rates were quoted by the two companies which insure the majority of districts. Essentially, three rates prevail for Alaska school districts - urban, remote sites with good condition buildings and remote sites with poor condition buildings. The urban rate is much lower than the remote rates which are only about 10% apart. Districts were divided into the three groups based on the urban - remote criteria and the condition of remote district buildings was taken from the district survey of facilities which rated buildings on a four-point condition scale.

Then the rates were adjusted to avoid double compensation for facilities costs. The foundation formula already compensates for the inefficiency of small site districts by having a declining formula as the size of funding communities increases. Unless the unit prices of facilities-related costs are indexed the foundation formula plus the differential result in mathematically inflated funding levels for small districts.

The adjustment index is the number of square feet per student. The unit price of insurance is divided by this index to come out with the actual property insurance differential used in this study.

Liability insurance, though included in the expenditure weights of school districts, is given the base differential because rates are not sensitive to geographic location.

Travel (420)

Out-of-district travel and intradistrict travel (for multisite districts) are the two items in this market basket. Student activity travel and pupil transportation (school busses) are not included because they are not paid for out of 01 funds being studied in this report.

Out-of-District Travel

Virtually all districts traveled most commonly to Anchorage and Juneau. Travel costs assume trips to each location from each district's central office. The air fare is weighted by the frequency of travel to each location as reported on the district survey. Then three days per diem ($300) are assumed for the typical trip to either location.

The total of the weighted air fare and per diem is the amount credited to each district. The base district (and Juneau) are credited with one trip plus three days per diem since they have the advantage of not having to fly to one location. The differential is the difference between the two trips from each district and the one trip from the base district.

Intradistrict Travel

The cost of travel to the three most common intradistrict locations - as stated in the district survey - was calculated on a per round trip mile basis. This was compared to the cost per round trip mile within the base district. The difference is the intradistrict travel differential.

Utilities (430)

The utility market basket consisted of heating fuel, electricity and a combined other utilities category which included water, sewer and solid waste disposal.

Fuel

Districts were divided into five groups based on what they paid per gallon for heating fuel in FY 1988. Then an average per gallon price was calculated for each group. Each district within the group was assigned the group's average price. This was done to allow for yearly variations in fuel prices, to avoid penalizing districts which negotiated lower than normal prices and not reward districts which may have paid unnecessarily high prices. The base district price is then the average paid for heating fuel in Alaska's seven largest urban areas.

Next, the facilities index was applied to the per gallon price for each group, again to avoid double compensation for building inefficiency. That index is the square feet per student for each group of districts. Then this is compared to the same indexed price in the base district to calculate the differential.

Electricity

Electricity is calculated in a manner identical to the fuel differential. The same groupings were used and the price then divided by the index of square feet per student.

Other Utilities

Since unit costs are not available for water, sewer and waste disposal in most districts, a slightly different method was used. A cost per square foot for other utilities was calculated using data from the district survey. Then this cost was indexed by dividing it by the same factor as were fuel and electricity.

Other Purchased Services (440)

Equipment repair services for copiers, typewriters and computers are the market basket in this category. Hourly rates were identified from the district surveys and by surveying vendors. The most common rate was selected and applied to all districts. Rates vary little among districts as the real variable is travel costs.

Copier and typewriter repair services were assumed to be onsite and the differential for them is simply the difference between having and not having travel costs. Computer repair and maintenance were assumed to be at central locations so shipping costs were added from each district to a regional center.

Supplies, Materials and Media (450)

A market basket of twelve items for teaching supplies (3), janitorial supplies (4), office supplies (3) and textbooks (2) was created for this major expenditure category. Vendors for these items were often the same ones for most districts so districts were assigned the most common vendor. Then the items were priced and shipped from the vendor to each district via the most commonly used transportation mode.

The total costs were then compared to FOB Anchorage prices for the same items in the same quantities from the same vendors, the difference being the differential. This prevents comparisons of Anchorage district purchasing practices with those of small districts. In reality, the FOB Anchorage price from the vendors which supply most outlying districts are nearly the same as those secured from Anchorage vendors by the Anchorage district bid process.

Equipment (510)

This market basket consisted of the most commonly purchased model and brand of copier, projector, VCR and VCR camera. They were priced and shipped from the most common vendors for each item via the most common type of transportation used in each district. Freight and parcel post rates were researched and applied to each piece of equipment according to its shipping weight. The total cost was then compared to the same items FOB Anchorage from the same vendors.

II. Personnel Differentials

II. Personnel Differentials

Introduction

The basis for the personnel cost differential in each of the 53 Alaska public school districts is the household cost of living as compared to Anchorage, the base district. Actually 55 districts - the number in existence in FY 1988 - were studied, but results are reported for the 53 districts which will exist for the next budget cycle, FY 1990, when 3 districts merge into one. Virtually all of the data used to calculate each school district's household cost of living differential are derived from the comprehensive 1985 *Alaska Geographic Differential Study* by The McDowell Group for the State of Alaska Department of Administration, Division of Labor Relations.

The purpose of that study was to update the cost of living differentials (last studied in 1972 previous to the 1985 study) paid to state employees throughout Alaska and in Seattle. The study was done by using the results of two massive surveys to calculate the household cost of living in 19 Alaska districts and Seattle. One was a survey of household consumption patterns and expenditures in 2,478 households and the other a retail price survey covering 2,106 outlets. These 19 Alaska districts were the districts used by the State personnel system and are based on 1961 Alaska election district boundaries.

The method selected for computing the cost of living in each of the 53 school districts was to disaggregate the data for the original 19 districts into data for the 53 school districts. Then a differential was computed for each school district.

Use of the *Alaska Geographic Differential Study* data base for calculating the household cost of living in the 53 public school districts was studied extensively in the planning stages of the *Alaska School District Information Base and Differential Study* before a decision was made to proceed. Issues of concern were limited sample sizes in small districts, the appropriateness of using average household data for determining school personnel differentials, the computer programming difficulty of disaggregating a massive data base designed for 19 districts into 55 districts and potential aging problems of a three-year-old data base.

After studying these questions the McDowell Group then made the recommendation to the Legislative Budget and Audit Committee that the 1985 data base could be disaggregated. In cases where data was not available or sample sizes presented problems, a system of proxy values could be developed. Finally, the decision was made to use the 1985 data for the following reasons:

1. All districts had at least some household and/or price data available. The household consumption survey included 91 communities and the retail price survey was conducted in 54 communities.

2. The age of the data base presented minimal problems. Differences in cost of living between Anchorage and other areas of Alaska tend to change little over time. A review by the McDowell Group of 30 years of Alaska differential research revealed only moderate change over time in the relative difference in household cost of living among Alaska locations. Absolute price levels of individual items such as fuel or mortgage rates vary over time, but their relative differences among Alaska locations tend to be fairly stable. For example, it is about as much more expensive today as it was 20 years ago to live in Bethel compared to Anchorage.

One significant change over time is a lower Alaska cost of living when compared to Seattle. The gap is narrowing. Another more moderate change is the equalizing of living costs in most of urban Alaska. Today the cost of living for most of Alaska's population - Anchorage, Fairbanks, Juneau, MatSu, Kenai Peninsula, Ketchikan and Sitka - is essentially the same, varying no more than a couple of percentage points. This was shown in the 1985 study and has since been verified repeatedly by several other studies including those by the American Chamber of Commerce Research Association which includes several Alaska cities in its nationwide cost of living surveys.

3. Sample sizes for the household consumption survey are quite small in some of the 53 districts. From 38 to 300 households were surveyed in each of the 19 districts in the 1985 study. Sub samples for several school districts were less than 20. This affects the expenditure weights which represent how households spend their budgets, but does not affect the accuracy of the price data. The price data were not collected in a random sample. Instead, the outlets surveyed were the three to eight (depending on community size) where most people in each community did their shopping.

In cases where school district household expenditure weights varied significantly those of from their original 1985 parent district weights, the weights of the larger 1985 parent district household sample were used as proxies.

4. Using average household data to measure cost of living for school district personnel was suggested for several reasons. First, school personnel have a wide variety of consumption patterns and lifestyles. Therefore, the diversity of consumption patterns embodied in the community averages is considered fairly representative of the diversity of school personnel living patterns in most areas of Alaska. Further, averages for the whole community or district better reflects the cost of living than averages of a much smaller group, school district employees.

Also, in virtually all cases where school personnel clearly earn significantly more and choose to live and spend differently than the average household in the district, school personnel are subsidized in the most important category - housing. In many cases where housing is provided, school personnel pay less for housing than does the average family in the district.

Finally, from a practical standpoint, a survey of school personnel living patterns and costs in 53 districts would be a major research undertaking beyond the scope of this study.

Table II-1 is a summary of the results of disaggregating and reorganizing the 1985 data base into cost of living differentials for school districts.

Table II-1

District Personnel (Household Cost of Living) Differentials

(Anchorage costs = 1.00)

District	Personnel Differential
Southern Southeast	
Annette Island*	1.01
Craig	1.01
Klawock*	1.01
Hydaburg*	1.01
Southeast Island*	1.01
Urban Southeast	
Ketchikan	1.02
Wrangell**	1.00
Petersburg	1.00
Sitka	1.02
Juneau	1.03
Central and Northern Southeast	
Kake	1.05
Chatham	1.07
Hoonah	1.03
Pelican*	1.03
Other Southeast	
Haines	1.02
Skagway	1.03
Yakutat	1.21

Table II-1 continued

District Personnel (Household Cost of Living) Differentials

(Anchorage costs = 1.00)

District	Personnel Differential
Prince William Sound	
Cordova	1.18
Chugach*	1.13
Valdez	1.06
Copper River	1.13
Anchorage Urban Influence Area	
Anchorage (Base District)	1.00
Matanuska-Susitna**	1.00
Kenai Peninsula	1.01
Kodiak	1.06
Alaska Peninsula and Aleutian Island	
Adak*	1.32
Pribilofs*	1.32
Aleutian (Region) East*	1.32
Unalaska	1.30
Dillingham	1.30
Bristol Bay	1.35
Lake and Peninsula*	1.35
Southwest*	1.35
Yukon and Kuskokwim Delta	
Lower Kuskokwim	1.39
Yupiit*	1.39
Kashunamiut*	1.39
Lower Yukon	1.38
St. Mary's*	1.38
Interior Remote	
Kuspuk	1.37
Iditarod	1.32
Galena	1.32
Yukon-Koyukuk	1.39
Yukon Flats	1.39
Tanana*	1.32
Interior Road System	
Alaska Gateway*	1.10
Delta/Greely	1.10
Nenana	1.14
Railbelt*	1.14
Fairbanks	1.03
Arctic	
North Slope	1.53
Northwest Arctic	1.41
Nome	1.41
Bering Straits	1.34

Source: Derived from data base of *Alaska Geographic Differential Study*, 1985, by The McDowell Group for the Alaska Department of Administration, Division of Labor Relations.

*Personnel (Household cost of living) differential data not available in these districts. Differential from closest most similar district assigned.

**Personnel differentials adjusted to base level.

The Reverse Pricing Method of Cost Differential Research

The cost of living methodology is based on the "reverse pricing" concept. This concept is important because overall school district cost differentials are also based on the reverse pricing concept. Reverse pricing is a differential measuring technique which considers the uniqueness of each area (or school district) of Alaska. It measures what is consumed in each district and what prices are paid for those items. This unique expenditure pattern for each district is then duplicated in the base district at base district prices. The difference is the district differential.

Reverse pricing answers the question, "How much would it cost to operate your existing household (or school district) if it remained exactly as it is but was located in Anchorage?" In reverse pricing, the household (or school district) would continue to buy the same items in the same quantities as it now does, except it would pay Anchorage prices.

Reverse pricing allows the cost of living (or operating a school district) in Nome, for example, to be compared with the cost of living (or operating a school district) as one does in Nome but in Anchorage at Anchorage prices. One cannot price out how one lives in Nome and compare that equitably to the cost of living as one does in Anchorage. The same is true for school districts. Lifestyles, local conditions and expenditure patterns in many areas are simply not comparable to those in Anchorage .

Just as it is impossible to duplicate and price out the Anchorage lifestyle in each of 91 communities surveyed in 1985, it is likewise impossible to invent and price out microcosms of the Anchorage school district in 53 regions of Alaska. Reverse pricing eliminates this need which has tended to produce unrealistic results in some past Alaska cost of living studies.

The advantage of reverse pricing is that it respects the expenditure patterns of households (and school districts) in each location. It measures how people actually live and what is consumed and then compares local prices to Anchorage prices for these items.

Forward pricing, on the other hand, imposes the expenditure patterns of the base district onto other areas of Alaska, few of which resemble Anchorage. It then prices how much it would cost to live an Anchorage lifestyle in other locations in Alaska. The truth is, in much of Alaska, people don't live an urban lifestyle and therefore do not have the same expenditure pattern as Anchorage households. Further, many items consumed in the urban lifestyle are simply not available or are at least not commonly purchased in many areas of Alaska. On the other hand, most everything purchased in other areas of Alaska is actually available in Anchorage and can be priced for comparison using reverse pricing.

For households, this means continuing to buy the same mix of food, size and type of housing, types of transportation, clothes, entertainment/recreation, medical services and miscellaneous items which the household currently buys in Nome, Craig, Dillingham or wherever.

For school districts, this means continuing to educate the same number of children with the same staff in the same buildings with the same professional/technical services, communications, insurance coverage, utilities, supplies, materials, media and equipment as the district now has in Nome, Craig, Dillingham or wherever. The reverse pricing comparison is simply the difference between paying local vs. Anchorage prices for the household (or school district) market basket as it exists today in its home location.

Methodology for Household Expenditure Categories

Methodologies from the 1985 *Alaska Geographic Differential Study* for measuring household cost of living differentials in the seven major Consumer Price Index (CPI) expenditure categories are described below. This is included so readers can gain a basic understanding of how cost of living research is conducted and how the computations are made. The seven household expenditure categories are housing, food, transportation, clothing, entertainment/recreation, medical and miscellaneous.

Housing

It was necessary to develop a separate methodology for housing costs in the Alaska. Unlike items in most other expenditure categories, housing has no readily available standard unit for price comparisons. Housing does not come by the pound, gallon, 16-oz. can or dozen. Housing throughout the state varies greatly by size, type and quality. While no measurement exists for housing quality, one does exist for housing quantity - square feet.

The standard unit of price comparison for the housing differential is cost per square foot. All monthly housing costs related to shelter, fuels and utilities were collected through interviews with each household in the sample. Households revealed their spending on shelter costs (mortgage and/or rent payments, mobile home space rental, condo fees, taxes and insurance), fuels (amount spend on fuels whether oil, gas, wood or propane) and on utilities (water, sewer, electricity, garbage, basic cable TV charge and telephone). These monthly costs were then totalled and a cost per square foot calculated. This cost in each district was then compared to the cost per square foot of housing in the base district, Anchorage. The difference is the housing differential in each district.

Using this methodology, the per gallon price of heating fuel is not compared directly to an Anchorage price for each of the several types of fuel. Instead, the cost of heating a standard unit of housing (a square foot) is compared between Anchorage and each district, regardless of the type of fuel used. This simplified the virtually impossible task of quantifying consumption, pricing the mix of fuels and adjusting for burning efficiency of each of several fuels used by Alaska households. The housing methodology also had the advantage of compensating, to some extent, for differences in housing quality. Poor quality housing, while usually cheaper in terms of mortgage or rent payments, is often more expensive to heat. The square foot method considers the difference in heating costs rather than just the difference in fuel prices.

For shelter costs, the amount households actually paid for mortgages and/or rent was the amount used. Some households held older, cheaper mortgages or none at all if the house was paid off. These amounts were averaged in with all other mortgages payments - many of them recent and with high interest rates. Shelter cost averages also included households paying subsidized rental or mortgage rates.

The important thing for readers to understand is that the 1985 study measured the cost to the household, whatever that cost was. It did not measure the cost to other entities such as school districts which may bear some of the cost of shelter. It also was not a survey of current market rates for home owners. It was a study of what Alaskan households pay for their housing. Any alternative would have involved measuring an amount which was not paid for housing - an example being the rental equivalent of the 2/3 of all Alaska housing which is owner occupied. Measuring an amount not actually paid by a household was not acceptable methodology for the 1985 study.

Housing expenditure weights vary from 19% to 34% of household expenditures. Ironically, more of total income is spent on housing in urban areas than in remote areas and this is true for several reasons. It is due partly to the fact that other expenditure items (food, transportation, clothing) take less of the family budget because of lower prices in urban areas. This allows the urban household to spend more on housing. Secondly, housing tends to be more expensive in high density urban areas where land costs and property taxes are high when compared to remote areas. Third, in urban areas most homes pay for the full complement of utilities including water, sewer and garbage. Some rural areas do not have these amenities available and therefore do not pay for them. Fourth, urban housing tends to be significantly larger than rural housing. The average Anchorage house is twice as large as the average Bethel home. Therefore, greater quantities of heating fuel, electricity and water are consumed, increasing the total expenditure weight of urban housing.

Finally, housing expenditure weights tend to be income sensitive. The higher the income, the greater proportion of it is spent on housing. While expenditures on the basics of food, clothing and transportation generally level off when income increases, the extra money usually gets spent on larger, better quality housing. Thus, in urban areas where incomes are higher, more of it is spent on housing. Conversely, in remote areas with lower income, a smaller proportion is spent on housing while relatively greater percentages are spent on the basics of food, transportation and clothing.

Housing cost differentials varied from a low of .70 to 1.00 for the base district to 1.41 in a remote area of the state. In fact, 12 districts had per square foot housing costs lower than the base district. Several factors explain this including urban vs. rural land costs, property taxes, age and condition of housing, local economic conditions, housing stock availability, housing quality, age and rates of average mortgages, population stability, housing subsidies and home ownership patterns. Perhaps the most notable example of Anchorage housing being relatively expensive is the comparison to housing in the MatSu Valley. There, land costs are lower and many areas do not have (and do not pay for) the full complement of housing utilities. As a result of living outside of the densely populated Anchorage urban area, MatSu residents pay 22% less per square foot for their housing than Anchoragites.

Clearly, Anchorage households are in a trade-off situation. They pay more for housing by living in a dense urban area but in turn enjoy the benefits of lower prices and more selection in the retail sector.

Finally, housing is by far the single most influential factor in the difference in cost of living between Anchorage and Seattle. In 1985, Anchorage housing costs (1.00) were nearly twice those of Seattle (.53 price differential) and accounted for nearly all of the 16% difference between the locations. In 1988, with the significant decline in Anchorage residential real estate values and rentals, the difference from Seattle could be as little as 10%.

Food

The food market basket of 67 items was taken from the larger market basket of the University of Alaska Cooperative Extension Service (CES) which has been conducting food cost surveys in Alaska since after statehood. Items selected - after consultation with the CES food survey expert - were those items most commonly consumed and most likely to be available in most of Alaska. This maximized the number of direct price comparisons which could be made between all other districts and Anchorage.

To identify local consumption patterns, food was broken down into groups and the household expenditure pattern for each food group was factored into the final food differential. For example, if residents of the Nome districts purchased more meat and less produce than Anchorage residents, this was

accounted for by weighting Nome's meat and produce expenditures accordingly. This technique is part of the reverse pricing methodology which respects and accounts for local consumption and expenditure patterns. The food groups were meat, cereal (grains, breads, cereals), dairy, fruits and vegetables (produce), non-alcoholic beverages (soda, coffee, tea, juice), prepared foods (canned and frozen including soups, mayonnaise, jelly, sugar, cooking oils and deserts) and food away from home (restaurants). Restaurant food comparisons included comparison pricing of the most common meals such and the standard breakfast of bacon/eggs/hashbrowns/coffee. Food away from home accounted for as much as 30% of some urban food budgets down to almost nothing in some rural districts with few restaurants.

Food outlets surveyed were those where households said they did most of their shopping. The number of food stores surveyed varied from 3 to 8, depending on the size of the community. Obviously, in communities with less than three outlets, all existing ones were surveyed. Again, this technique measures what people actually paid in the outlets in which they actually shopped so local expenditure patterns were preserved in the data. For example, if 60% of the households in a community shopped at one store, the prices of that store were given 60% of the price weight for that community.

Food expenditures vary from 22% of the typical household budget in Anchorage the base district to 36% in the most remote districts with the highest prices. Part of the reason for the high food weights in remote areas has to do with income levels. The poorer the district, the lower the income spent on housing and the more is spent on food. Another factor is the absence of other consumer expenditure opportunities in remote areas with weak economies. Some income is not spent simply because there is no selection to spend it on.

Food price differentials varied significantly, from 1.00 in the base district to a high of 1.67 in the Barrow/Kotzebue district. Price differentials in seven remote districts exceeded 1.38. In contrast, food prices before sales tax in the six largest urban areas varied by less than 7% in 1985. Most of the population of Alaska, which lives in these six urban areas, pays about the same food prices.

Transportation

The third largest household expenditure category, behind housing and food, is transportation. The transportation market basket in the *Alaska Geographic Differential Study* consisted of 25 items in standard categories used in the Consumer Price Index. Initially, some 36 transportation market basket items were included in the survey and from these, the items most effectively measuring differentials in most districts were selected. These 25 items were grouped into seven categories under local transportation and one under nonlocal transportation (air fare). The seven local transportation categories were gasoline (regular and unleaded), parts and repairs (batteries, tires, oil,

antifreeze and hourly auto repair shop rates), insurance (rate for a specific model car and specific driver, automobiles (sale prices of 12 models of new and used cars and trucks), snowmobiles/ATVs, boats (16-ft aluminum skiff) and bus/taxi transportation.

The nonlocal transportation category included the cost of air fare from each district to Seattle compared with an Anchorage to Seattle fare. While a more comprehensive measure might have included costing out places where most people in a district traveled to, the complexity of the interviewing and multiple fare calculations and weighting were beyond the scope of the study. For the relatively small portion of the average household budget allocated to air travel, the district-Seattle differential was considered representative. Districts with more air travel in the typical budget received credit by having greater weights assigned to air travel costs.

Transportation market basket prices were collected on the local costs of each of these items by means of the retail price survey. In cases where items were not purchased locally, prices in the locations where they were purchased, plus freight, were used. For example, many remote districts purchased their vehicles of all kinds in Anchorage, Fairbanks and Seattle, then shipped to the buyer's local area.

Households were surveyed to determine how much spending was done on each of the eight transportation categories. This way, districts spending more on snowmobiles and boats than on cars, for example, were credited with those expenditure weights as well as the differentials between local and Anchorage prices. This, of course, is reverse pricing. Local consumption patterns are identified and quantified, then compared to Anchorage prices. Districts spending more than normal on air travel are credited in the same manner.

Total transportation expenditure weights vary between 16% and 25% of household expenditures, depending on the district. Most of this total is local transportation expenditures. Nonlocal transportation expenditures, even in the most remote districts, do not usually exceed 10% of all expenditures. Only in remote districts which are literally devoid of other consumer spending opportunities, such as the Aleutians and Bristol Bay, do nonlocal transportation expenditures exceed 11%. A typical urban household budget in Anchorage or Juneau, for example includes 5-7% for nonlocal transportation compared to about twice that for local transportation expenditures. For example, the typical Anchorage household spends about 12% of their budget on automotive transportation and 5% on nonlocal travel.

Clothing

The clothing market basket consisted of 59 apparel and footwear items and six clothing upkeep services including coin laundry and dry cleaning. The clothing differential is weighted in three groups in accordance with the

Anchorage CPI subcategory expenditure weights for womens'/girls' clothing, mens'/boys' clothing and upkeep. The typical household spends about half of their clothing budget on womens'/girls' clothing, 35-40% on mens'/boys' clothing and 10-15% on upkeep, mostly dry cleaning.

Clothing items selected for the market basket ranged from pants, dresses, sweaters and blouses of differing fabrics to blue jeans, insulated winter boots, running shoes, work shirts and underwear. Thirty seven items were womens'/girls' clothing and footwear and 22 were mens'/boys'. The items were kept generic to allow for wider regional pricing coverage. If specific brands, sizes and styles had been specified, coverage would have been limited to the urban areas which have a wide selection. On the other hand, using generic products caused some problems because prices ranged widely for some of the items. However, it was found that about 80% of the 59 item market basket was useful for measuring differentials. The other 20% of the items were not used.

Differences in household expenditure weights for clothing were fairly modest. Three fourths of all districts spent 7% or 8% of their household budget on clothing. The lowest was 6% in Palmer/Wasilla and Fairbanks and the highest, 12% in Wade Hampton. In general, rural households spent slightly more of their budgets on clothing than urban households, indicating that the typical rural budget goes more for the basics.

Prices were collected in the retail price survey in the same manner as grocery prices. Households were asked where they purchased their clothing and these outlets were weighted accordingly. In districts except Anchorage, which has the greatest selection, significant percentages of clothing were purchased outside the community - by catalogue and in major regional centers while traveling. The percentage purchased outside the community was weighted and freight added to the catalog, Anchorage or Seattle prices where the items were purchased.

Clothing differentials tend to be low because clothing has low shipping weight (and therefore low shipping cost) in relation to total value. Clothing differentials are further modified by the Alaska traditions of catalog shopping and shopping when traveling to major cities. As a result, what households actually pay for clothing is some combination of local, catalog and urban prices. Clothing price differentials for most districts fall into the 1.10 to 1.20 range. Only two districts have differentials higher than 1.20 and five are below 1.10.

Recreation and Entertainment

The goods and services in this market basket are those considered representative of what typical Alaskan households might be expected to buy in support of their leisure time needs. Sixteen items including a rifle, pistol,

softball bat, ball and glove, basketball, sport fishing rods and reels, cable TV subscriptions, records, tapes and videos and movie tickets were selected. Following the retail price survey, ten of these items were considered adequate measures of price differentials for most districts. These are the basis for recreation and entertainment differentials. Items from all major categories - hunting, sport fishing, sports and home entertainment - were included in this final selection.

Household expenditure weights on recreation and entertainment clearly reflect differences in district lifestyles and consumer selection. Households in the largest urban areas had the highest expenditures, 6% to 7%. This obviously reflected the variety of commercial opportunities for recreation and entertainment as well as the urban lifestyle of purchase goods and services for enjoyment. The lowest spending on recreation and entertainment - nearly half of all districts spent 3% to 4% - occurs in rural districts where the commercial fun opportunities are sparse and where lifestyles and spending are more oriented to the basics. Further, recreation and entertainment in rural areas tend to be more along noncommercial lines.

Price differentials are very modest in this category, ranging from slightly less than the base district in one case to a high of 1.21. Only two districts had differentials over 1.14.

Medical

Medical services included in the medical market basket included both hospital and other medical items. The market basket consists of a physician's office call, the most common surgery, dentist x-rays, examination and most common procedure, optical exam, a pair of eyeglasses plus the daily rates for hospital private, semi-private and ward rooms. From this selection, the items found to be most effective in measuring differentials were the physician's office call, dental exam and most common procedure (a filling), eye exam, eyeglasses and daily rates for private and semi-private hospital rooms.

Household medical expenditure weights reflected racial differences in health care programs as well as the effects of consumer availability. Native Alaskans have complete coverage while other racial groups pay health care policy premiums and/or deductibles or some remain uninsured. In general, urban consumers spend much more heavily on health care than do rural households, partly as a result of availability and partly due to premiums and incomplete coverage. Households in three-fourths of all districts pay between 5% and 7% of their household budget on medical costs of all kinds. Households in five districts, all of them remote rural areas with high Alaska Native populations, pay out from 2% to 4% of their budgets for medical care.

Miscellaneous
The CPI category of miscellaneous includes items which are mostly associated with personal care and its opposite, tobacco. Eight items were ultimately used in this market basket - shaving cream, lipstick, toothpaste, shampoo,toilet paper, laundry and bath soap and a carton of regular size filter cigarettes.

Household expenditure weights varied moderately with households in three-fourth of the districts spending between 4% and 6% of their budget on miscellaneous items. The range was also limited from 4% to 8%. No discernible urban/rural patterns were apparent.

Price differentials ranged widely and were similar to food price patterns. Many of these items are found in both food stores and drug/variety stores. Prices were collected from both types of outlets and averages. Prices for the same items tended to be higher in drug/variety stores than in food stores.They ranged from the base district 1.00 to remote rural differentials as high as 1.45. Miscellaneous differentials in eight rural districts topped 1.30.

Methodology for Computing School District Personnel Differentials

As described in the previous section, the 1985 *Alaska Geographic Differential Study* data base was disaggregated from 19 to 53 districts. The data from 2,500 household interviews in 91 communities and 2,100 retail price surveys in 54 communities were recombined into the 53 Alaska school districts. This task was accomplished by a complex computer reprogramming process from the University of Southern California mainframe to an inhouse PC system. In the process, the weighting system for communities within the new districts was revised as well as the weighting of the retail outlets for food and clothing. Several hundred professional hours were required to perform the process of converting data for 19 districts into 53 districts.

Programs for the original data base were SAS and SPSS-X. Programs used to produce the final detailed differentials for each of the 55 districts included Z-Basic and Lotus 1-2-3. Finally, the results were converted to Excel for MacIntosh desktop publishing of the final document.

Expenditure Weights Adjustments
Several procedures were followed when converting the original data base into expenditure weights for the seven household expenditure categories in each of the 53 districts.

In most cases, household expenditure weights resulting from the reprogramming fell within the normal ranges shown in the previous section. In districts where the expenditure weight for any of the seven household

items appeared outside normal ranges, further analysis was done to determine if these weights were appropriate for those items in those particular districts. When weights were outside the normal range or if no household surveys existed in the school district a set of rules were applied.

1. If no surveys existed in a district household expenditure weights from the closest similar district were used. Similar means similar in terms of social, economic and geographic characteristics. Thus, nearby similar district weights were used a proxies for those with missing data.

2. If the sample of households in any district produced an atypical weight in any category, the nature of that district was studied to see if the weight was justified. If not, then a proxie was assigned from the closest most similar district or group of districts.

3. If a district with a small household sample size had more than one weight outside the normal range, then the entire set of expenditure weights were replaced with those of the closest most similar district or district.

4. In cases where weighting data appeared atypical and the closest, most similar district also had small sample size problems, weights from the larger original election district in the 1985 study were substituted.

Readers should be cautioned that the sample sizes in many of the small districts are not large enough for precise statistically results. However, what makes the expenditure weights in most districts valid is the fact that expenditure patterns in a given area vary little from household to household. When variance is minimal, small sample sizes (less than 30), can closely reflect the true mean of the population being sampled.

Retail Price Data Adjustments

The retail price survey data base from the 1985 *Alaska Geographic Differential Study* was disaggregated in the same manner as the household expenditure data base. Prices from 2,100 outlets in 19 districts were reorganized and programmed into price data for the 53 school districts. The weights of retail outlets were recalculated based on the populations of their respective communities in the new districts.

Price data does not have sample size problem and therefore is not subject to the same error as household expenditure weight data. In small communities surveyed virtually every outlet of significance was surveyed, therefore the coverage was quite complete. And in small communities where residents do a significant share of their shopping in urban areas and/or through catalogs, those prices (plus shipping) were also averaged in. For larger communities with many outlets, four to eight outlets in each category were surveyed and those selected were the outlets where households did most of their buying.

For example, in Anchorage, eight food stores were surveyed and this included chain stores in which Anchorage households did nearly 100% of their food shopping.

The primary problem with price data was the lack of it in many districts and communities. Only 54 communities had price surveys conducted in them, compared to 91 with household surveys. Further, the limited retail offerings in many surveyed communities means that a number of goods and services simply were not present to have prices to be surveyed.

Price adjustments were made using rules very similar to those for the household expenditure weights. For districts without price data, prices of the closest similar district are used. Further, when a price differential falls outside the normal limits of the original 19 districts, an analysis of that district is done to see if the price is justified. If not, then a price from the closest similar district is used. When prices from the closest similar district do not appear complete or within the reasonable range, then the price(s) of the larger original election district was substituted.

Tables II-2 and II-3 give the household expenditure weights (II-2) and the price differentials (II-3) are for each district. The final differential is calculated in Table II-4 at the end of this chapter. This is done by multiplying the weight in each category in Table II-2 by the price of that category in Table II-3. These seven products are then added together in Table II-4 and their sum is the district personnel differential.

Table II-2

District Household Expenditure Category Weights

(% of average household budget spent on each category)

District	Housing	Food	Transp.	Clothing	Rec & Ent.	Medical	Misc.
Southern Southeast							
Annette Island	0.22	0.35	0.21	0.08	0.04	0.04	0.06
Craig	0.22	0.35	0.21	0.08	0.04	0.04	0.06
Klawock	0.22	0.35	0.21	0.08	0.04	0.04	0.06
Hydaburg	0.22	0.35	0.21	0.08	0.04	0.04	0.06
Southeast Island	0.22	0.35	0.21	0.08	0.04	0.04	0.06
Urban Southeast							
Ketchikan	0.31	0.29	0.18	0.08	0.04	0.05	0.05
Wrangell	0.23	0.32	0.18	0.11	0.03	0.07	0.06
Petersburg	0.25	0.33	0.17	0.09	0.05	0.06	0.05
Sitka	0.30	0.30	0.16	0.08	0.05	0.06	0.07
Juneau	0.33	0.24	0.17	0.08	0.07	0.06	0.06
Central and Northern Southeast							
Kake	0.16	0.36	0.21	0.12	0.04	0.03	0.08
Chatham	0.20	0.40	0.15	0.12	0.03	0.02	0.08
Hoonah	0.15	0.41	0.22	0.09	0.02	0.05	0.06
Pelican							
Other Southeast							
Haines	0.26	0.33	0.18	0.08	0.04	0.07	0.04
Skagway	0.26	0.30	0.20	0.07	0.02	0.08	0.07
Yakutat	0.28	0.33	0.21	0.06	0.03	0.05	0.04
Prince William Sound							
Cordova	0.18	0.31	0.26	0.08	0.06	0.08	0.03
Chugach							
Valdez	0.31	0.22	0.21	0.07	0.05	0.07	0.07
Copper River	0.35	0.25	0.24	0.03	0.05	0.03	0.05
Anchorage Urban Influence Area							
Anchorage (Base District)	0.34	0.22	0.17	0.08	0.07	0.06	0.06
Matanuska-Susitna	0.34	0.27	0.18	0.06	0.04	0.05	0.06
Kenai Peninsula	0.26	0.26	0.21	0.08	0.05	0.07	0.07
Kodiak	0.30	0.28	0.19	0.08	0.05	0.05	0.05

Table II-3

District Household Price Differentials

(Anchorage prices = 1.00)

District	Housing	Food	Transp	Clothing	Rec & Ent	Medical	Misc.
Southern Southeast							
Annette Island	0.85	1.10	0.82	1.10	1.05	1.15	1.31
Craig	0.85	1.10	0.82	1.10	1.05	1.15	1.31
Klawock	0.85	1.10	0.82	1.10	1.05	1.15	1.31
Hydaburg	0.85	1.10	0.82	1.10	1.05	1.15	1.31
Southeast Island	0.85	1.10	0.82	1.10	1.05	1.15	1.31
Urban Southeast							
Ketchikan	0.95	1.09	0.83	1.23	1.26	1.15	1.09
Wrangell	0.65	1.04	1.04	1.15	1.06	1.09	0.98
Petersburg	0.76	1.15	0.94	1.12	1.05	1.09	1.12
Sitka	0.85	1.18	0.94	1.10	0.97	1.04	1.17
Juneau	1.01	1.07	0.93	1.14	1.03	1.03	1.13
Central and Northern Southeast							
Kake	0.84	1.26	0.82	1.10	1.08	1.01	1.25
Chatham	0.69	1.25	1.00	1.10	1.09	1.04	1.19
Hoonah	0.53	1.25	0.90	1.10	1.20	0.90	1.22
Pelican							
Other Southeast							
Haines	0.69	1.21	1.02	1.10	1.40	1.03	1.11
Skagway	0.83	1.19	0.99	1.07	1.40	1.03	0.98
Yakutat	0.96	1.58	1.06	0.95	1.33	0.90	1.29
Prince William Sound							
Cordova	0.90	1.29	1.12	1.41	1.37	1.12	1.29
Chugach							
Valdez	0.87	1.23	1.11	1.10	1.17	1.06	1.08
Copper River	1.05	1.27	1.10	0.96	1.18	1.00	1.22
Anchorage Urban Influence Area							
Anchorage (Base District)	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Matanuska-Susitna	0.78	1.00	1.04	1.14	1.00	0.99	0.96
Kenai Peninsula	0.76	1.12	1.09	1.14	1.09	0.87	1.17
Kodiak	0.81	1.18	1.22	1.12	1.07	0.97	1.21

Table II-2 continued

District Household Expenditure Category Weights

(% of average household budget spent on each category)

District	Housing	Food	Transp.	Clothing	Rec & Ent.	Medical	Misc.
Alaska Peninsula and Aleutian Islands							
Adak							
Pribilofs	0.14	0.31	0.31	0.10	0.03	0.06	0.05
Aleutian (Region) East							
Unalaska	0.26	0.29	0.21	0.07	0.07	0.04	0.06
Dillingham	0.23	0.29	0.19	0.10	0.05	0.06	0.08
Bristol Bay	0.24	0.24	0.25	0.06	0.05	0.07	0.09
Lake and Peninsula							
Southwest							
Yukon and Kuskokwim Delta							
Lower Kuskokwim	0.25	0.36	0.18	0.10	0.03	0.03	0.05
Yupiit							
Kashunamiut							
Lower Yukon	0.24	0.33	0.23	0.12	0.04	0.02	0.02
St. Mary's	0.24	0.33	0.23	0.12	0.04	0.02	0.02
Interior Remote							
Kuspuk	0.19	0.36	0.20	0.08	0.05	0.04	0.08
Iditarod	0.19	0.36	0.20	0.08	0.05	0.04	0.08
Galena	0.19	0.36	0.20	0.08	0.05	0.04	0.08
Yukon-Koyukuk	0.19	0.36	0.20	0.08	0.05	0.04	0.08
Yukon Flats	0.19	0.36	0.20	0.08	0.05	0.04	0.08
Tanana	0.19	0.36	0.20	0.08	0.05	0.04	0.08
Interior Road System							
Alaska Gateway							
Delta/Greely	0.29	0.31	0.21	0.06	0.04	0.05	0.04
Nenana	0.29	0.31	0.21	0.06	0.04	0.05	0.04
Railbelt							
Fairbanks	0.32	0.24	0.19	0.07	0.06	0.05	0.07
Arctic							
North Slope	0.27	0.31	0.20	0.07	0.02	0.03	0.10
Northwest Arctic	0.31	0.32	0.18	0.06	0.04	0.04	0.05
Nome	0.36	0.35	0.14	0.06	0.03	0.02	0.04
Bering Straits	0.24	0.29	0.18	0.10	0.05	0.09	0.05

Source: Derived from data base of *Alaska Geographic Differential Study*, 1985, by The McDowell Group for the Alaska Department of Administration, Division of Labor Relations.

Table II-3 continued

District Household Price Differentials

(Anchorage prices = 1.00)

District	Housing	Food	Transp	Clothing	Rec & Ent	Medical	Misc.
Alaska Peninsula and Aleutian Islands							
Adak							
Pribilofs	1.23	1.37	1.49	1.04	1.06	0.97	1.39
Aleutian (Region) East							
Unalaska	1.23	1.37	1.49	1.04	1.06	0.97	1.36
Dillingham	1.12	1.42	1.40	1.11	1.18	1.07	1.61
Bristol Bay	1.02	1.68	1.40	1.11	1.18	1.07	1.67
Lake and Peninsula							
Southwest							
Yukon and Kuskokwim Delta							
Lower Kuskokwim	1.41	1.47	1.41	1.18	1.27	1.07	1.39
Yupiit							
Kashunamiut							
Lower Yukon	1.11	1.65	1.55	0.97	1.03	1.17	1.57
St. Mary's	1.11	1.65	1.55	0.97	1.03	1.17	1.57
Interior Remote							
Kuspuk	1.05	1.61	1.44	1.10	1.16	1.01	1.47
Iditarod	1.05	1.50	1.44	1.16	1.08	1.01	1.23
Galena	1.05	1.49	1.42	1.22	1.08	1.01	1.41
Yukon-Koyukuk	1.05	1.58	1.62	1.22	1.08	1.01	1.36
Yukon Flats	1.05	1.62	1.36	1.23	1.43	0.94	1.54
Tanana	1.02	1.59	1.55	0.93	1.08	1.01	1.32
Interior Road System							
Alaska Gateway							
Delta/Greely	0.92	1.10	1.22	1.22	1.18	1.14	1.21
Nenana	0.89	1.33	1.28	0.97	1.18	1.08	1.12
Railbelt							
Fairbanks	0.92	1.02	1.16	1.22	1.08	0.94	1.06
Arctic							
North Slope	1.39	1.71	1.59	1.12	1.54	1.18	1.63
Northwest Arctic	1.34	1.59	1.45	0.99	1.19	1.08	1.44
Nome	1.36	1.60	1.28	1.00	1.06	1.17	1.54
Bering Straits	1.13	1.64	1.41	0.96	1.12	1.17	1.31

Source: Derived from data base of *Alaska Geographic Differential Study*, 1985, by The McDowell Group for the Alaska Department of Administration, Division of Labor Relations.

Summary of Results
School District Personnel Differentials

Study results and adjustments to district household expenditure weights and retail prices by district groups are described below:

Southern Southeast: Craig, Klawock, Hydaburg, Annette Island and Southeast Island are all assigned Craig household expenditure weights since Craig was the only community among these districts to have a significant number of households surveyed in the 1985 study. Craig's weights were adjusted to compensate for an overweight in medical and an underweight in food expenditures. These weights now reflect typical rural Alaska patterns which include high food expenditures and minimal out-of-pocket spending on medical costs.

For prices differentials the retail prices of the Craig survey are used in all five small southern southeast districts. In general, price levels compared to Anchorage are higher for all categories of items except housing and transportation. The lower housing costs in these small communities reflect something in common with most areas of rural Alaska. (See housing discussion under methodology in previous section).

In short, the higher retail prices representing this group of districts is balanced out by their lower-than-Anchorage cost of housing. The resulting household cost of living differentials for these five districts fall into the range typical of virtually the entire region, 1.01.

Urban Southeast: Household expenditure weights from the 1985 study were used for Ketchikan, Juneau and Sitka. The original Wrangell-Petersburg-Kake election district was disaggregated into three separate district, each with their own community weights. Petersburg and Wrangell weights are specifically from these respective communities. Wrangell's medical prices were out of range at the low end and Petersburg's (1.09) were substituted.

The region's five largest districts - Ketchikan, Wrangell, Petersburg, Sitka and Juneau - have about the same household cost of living ranging from a low of .97 for Wrangell to a high of 1.03 for Juneau. Given the methodology and degree of accuracy of this type of research, numbers in this range are considered virtually the same. Variations are due largely to the differences in what residents of Juneau pay for housing (per sq. ft.) compared to residents of other southeast urban communities.

In general, residents of larger urban communities pay more for housing and less for food and other retail items than do residents of smaller urban communities. There is no question that everyday retail prices in Juneau and

Anchorage are lower than in other southeast locations but this advantage is balanced out by higher urban housing costs on a square foot basis.

Central and Northern Southeast: Kake, Hoonah, Chatham and Pelican are placed in this group and household surveys were conducted in Hoonah, Angoon (Chatham) and Kake in the 1985 study. The expenditure weights used were those calculated from the sample in each of these first three districts. In the case of Pelican, where no surveys were conducted, expenditure weights from the closest community - Hoonah - were used.

Food price adjustments were made in Hoonah and Angoon by combining the prices in both communities, thereby increasing the items and outlets surveyed. The same food price differential was assigned both districts. Clothing prices in these two districts were outside the range at the low end and Kake's clothing prices were substituted.

These communities showed a very typical rural Alaska pattern of lower expenditures on housing and a significantly higher proportion of the household budget spent on food. In rural Native areas, housing mortgage and rent payments tend to be very low compared to Anchorage due to subsidies of various kinds, little or no land costs due to Native entitlements and a quality of housing which does not command top price. Even though utilities are often quite expensive in rural communities it is not enough to offset the low mortgage/rent payments. Therefore housing in rural areas is often cheaper, especially in Southeast Alaska where the climate is mild compared to most of rural Alaska.

For example, in both Hoonah and Angoon the proportion of total spending on housing ranges from 15-20%. In contrast, residents of these communities spend 40% of their budget on food - partly because food prices are significantly higher than in Anchorage and partly because expenditures on housing are lower, making food a larger than normal portion of the budget. Kake exhibits a similar pattern, 16% spent on housing and 36% on food. This pattern is typical throughout rural Alaska.

Because of more spending on higher priced food and less spending on lower priced housing, the cost of living differential for these districts is somewhat higher than in urban southeast and in southern southeast. These central and northern communities have less access to the regional center and do not benefit from road systems in their areas. Their differentials are somewhat higher and include 1.03 (Hoonah and, by proxy, Pelican), 1.05 (Kake) and 1.07 (Chatham).

Other Southeast: Haines and Skagway are small communities but benefit from being on the mainline ferry and highway transportation systems. As a result, their cost of living falls into the same range as the region's urban

communities. Haines and Skagway expenditure weights also resemble the regional urban pattern more than the rural regional pattern. Expenditures on housing in these districts are 26% of the household budget, significantly higher than that of the rural communities in the region. But food expenditure weights in Haines and Skagway are lower reflecting lower retail prices than in Hoonah and Angoon, for example.

Prices are also typical of smaller regional urban communities with housing costs less than Juneau (and Anchorage) while retail prices are higher. The result is household cost of living differentials of 1.02 for Haines and 1.03 for Skagway. Both of these are slightly lower than the larger original election district differential of 1.06. However, when rural areas are disaggregated out of the Haines-Skagway data, it is obvious that Yakutat especially raised the differential for the whole district.

Yakutat is usually considered a Southeast regional community but in terms of geography, access and economy it more resembles small Prince William Sound communities. Its expenditure weights and prices reflect its isolation and lack of economical freight transportation. Further, both expenditure weights and prices for Yakutat housing are significantly higher than in other communities (Hoonah, Haines, Skagway) in Yakutat's original election district. They begin to resemble housing data from more northern communities. Yakutat food prices are significantly higher than those in any other Southeast community, the differential being 1.58 compared to the next highest in Hoonah and Angoon at 1.25.

Yakutat's household cost of living differential is calculated at 1.20.

Prince William Sound: Cordova, Valdez, Chugach and Copper River are in the same geographic area but each represents a different type of district and their household cost of living differentials reflect those differences. Valdez, with a stable oil-based economy and on the main Alaska road system, shows a typical urban pattern of household expenditure weights and prices. Housing is weighted more in Valdez than in the isolated Prince William Sound communities and Valdez housing costs are slightly less than in Anchorage. Food in Valdez is higher than in Anchorage but not as high as in Cordova or the Copper River district (which uses Glennallen prices).

No household or price surveys were conducted in the Chugach district in the 1985 study so proxies were taken from the Copper River district for both household expenditure weights and retail prices. Neither the Copper River nor Cordova proxies were completely satisfactory for Chugach and the fact that Chugach's central office is located in Anchorage complicates the selection of a similar district's data. The Copper River district, like the Chugach district, is a multi-site district of small schools. Primarily for this reason Copper River was considered the closest similar district.

An upward price adjustment was made to the medical category in the Copper River district to better reflect typical prices of nearby districts. Cordova's clothing price data were adjusted downward to 1.15 because the original data base included prices outside the high limits of the original districts. Since Cordova's other retail prices were moderately but not excessively higher than those in Valdez it was judged the original data did not accurately reflect Cordova's overall price differentials.

Cordova's differential was significantly different from Valdez's for several reasons. With the exception of housing costs where the two communities were essentially the same, Cordova's prices were higher in all six other household expenditure categories. Also, Cordova's household weights were more typical of isolated coastal fishing communities than more urban communities with stable economies. As a result, significantly more weight falls on food which is more expensive in Cordova. Finally, access to Anchorage via highway has the effect of modifying retail costs in Valdez, as it does in all communities within driving range of Anchorage.

Anchorage Urban Economic Influence Area: The Anchorage, Matanuska-Susitna Borough (MatSu) and Kenai Peninsula Borough districts encompass the majority of Alaska's population and are economically integrated to a significant degree. They are connected by both highway and everyday commercial activity. Further, these areas are subject to about the same climate conditions (a little colder in MatSu) and many of the same economic influences.

While they do not resemble one another physically or in population terms their respective household costs of living are essentially the same. As in most other districts in the state when compared to Anchorage, MatSu and Kenai Peninsula housing is less expensive on a per square foot basis (22-24% less expensive). However, this is balanced out by slightly to moderately higher retail costs in most other expenditure categories. Food costs are the same in MatSu and Anchorage (Carr's, for example, has the same pricing policy in MatSu, Anchorage, Kenai/Soldotna and Fairbanks). But food prices are slightly higher on the Kenai due to the smaller, more expensive stores in several smaller communities. Costs of transportation and clothing - the next most important expenditure categories - are moderately higher than Anchorage in both MatSu and the Kenai Peninsula.

The household expenditure weights on the Kenai Peninsula resemble those of moderate sized coastal communities which normally have smaller weights for housing and larger ones for food when compared to Anchorage. This is logical since most of the population of the Kenai is distributed among several small to medium sized urban areas. MatSu, on the other hand, reflects the suburban lifestyle prevalent there with housing expenditure weights equal to

those in Anchorage which are the state's highest among urban areas. Anchorage and MatSu households spend 8% more of their total budget on housing than do residents of the Kenai Peninsula.

It should be recognized that the Kenai Peninsula area has some locations where retail prices are more than slightly higher than Anchorage's. However, the populations of these small communities, when weighted into the total Peninsula population, do not have much influence on the final calculations for the Kenai Peninsula Borough. In short, it costs about the same to live on the Kenai Peninsula (1.01 differential) as it does to live in Anchorage (1.00).

In the MatSu Borough, which benefits from lower housing costs as well as virtually the same retail prices as Anchorage, the cost of living is actually lower (0.95) than in Anchorage. However, as in the case of Wrangell in Southeast Alaska (0.97) the study team agrees with the State arbitrator's decision in 1985 and recommends that a 1.00 differential be assigned these two areas. It should not be implied that any cost of living research is accurate to within a point or two of the mathematical results of these complex calculations. The true differentials in these two areas of exception might well be closer to 1.00. Therefore, if there is some risk that residents in these areas be penalized, a 1.00 level is suggested.

Further, the reason the MatSu housing is less is not so much the lower cost of housing but the size of the housing. A separate analysis of the data showed that larger housing in the Anchorage-MatSu economic area tends to be less expensive per square foot and houses in MatSu are larger than those in Anchorage. This likely accounts for the difference rather than any true cost advantage in MatSu. Since Anchorage and MatSu are essentially the same economic community, it would not be reasonable to set a separate differential for a part of a single economic area. In the case of Wrangell, the closest most similar districts (Petersburg and Ketchikan) have differentials of 1.00 or more and there is no obvious reason for the Wrangell differential to vary significantly from the 1.00 level.

Kodiak: The Kodiak Borough district is in a unique geographic and economic situation. It does not experience the transportation and lifestyle hardships of the Alaska Peninsula and Aleutian region discussed below. It is a medium sized coastal urban area with good community infrastructure, some degree of retail competition, strong fishing and military industries and is reasonably well served with freight and passenger transportation systems. However, it does not enjoy road access to a regional center and has a location of some disadvantage. In short, Kodiak is in a similar situation as some medium sized Southeast communities.

Kodiak household expenditure weights are normal for a community of its size with the key housing and food weights well within what would

normally be expected. In fact, Kodiak expenditure patterns almost exactly duplicate the coastal community it most resembles in size and economic composition, Sitka. While Cordova is closer, it is less than one-third the size of Kodiak and this alone eliminates comparison, especially of retail prices.

Kodiak price levels are also typical with retail prices running moderately above Anchorage levels. For example, food prices were 18% higher, transportation, 22% and miscellaneous retail 21%. However, Kodiak housing costs are nearly 20% lower on a square foot basis when compared to Anchorage. This means Kodiak housing is still more expensive than Kenai Peninsula, MatSu and Petersburg (also a fishing port) housing but less expensive than Cordova or Valdez housing.

Overall, with no adjustments to either weights or prices, the household cost of living differential in Kodiak is 1.06.

Alaska Peninsula and the Aleutians Islands: With the exception of Kodiak, Alaska Peninsula and Aleutian districts fall into a general group characterized by small scattered communities, expensive access to the regional center (Anchorage), inclement weather and lack of an economical freight transportation system.

This group of districts includes Adak, Aleutian East (a new district combining the present districts of Sand Point, King Cove and most of the Aleutian Region district), Pribilofs, Unalaska, Lake and Peninsula, Southwest Region, Bristol Bay (King Salmon) and Dillingham. In the 1985 study household surveys were conducted in five of these communities -Unalaska, Sand Point, St. Paul (Pribilofs), King Salmon and Dillingham. Household surveys were conducted in five additional communities in this group but the number of surveys was so limited the data is not used. Retail price surveys were conducted in four communities - Unalaska, Sand Point, Naknek and Dillingham.

The Pribilofs, Adak and Aleutian East were assigned Sand Point household expenditure weights and a combination of Unalaska and Sand Point retail prices. This was done because the more limited Sand Point selection prevented pricing some items. Two adjustments to the Sand Point household data were made to modify medical and housing weights falling outside the normal parameters. Once these adjustments were made, Sand Point household expenditure weights closely resembled the typical remote rural pattern common in many districts in Western and Southwestern Alaska. Unique to the Aleutian districts is the expenditure weight (31% of the household budget) for transportation, highest in the state.

Aleutian prices also reflect actual conditions on the Chain with housing being well above Anchorage but food (1.37) and especially transportation (1.49) even

higher. Though the Sand Point sample was small, household weights and prices seem to be a fair reflection of economic and lifestyle conditions in the region. Overall, the Aleutian cost of living differential computes to 1.32, a level between districts in less severe conditions but less than the highest differentials of the most inclement and distant districts.

Unalaska weights and prices were retained for that district with no adjustments made due to the satisfactory sample of both households and retail outlets. Unalaska housing weights were higher and housing costs were lower when compared to smaller communities The net result is a differential for Unalaska of 1.30. Likewise, Dillingham weights and prices were retained and the resulting differential was also 1.30. Both Dillingham and Unalaska showed somewhat higher expenditures on housing than in the smaller village communities in the region. This also is a common trend, the larger the community, the higher proportion of the budget households spend on housing.

Bristol Bay weights and prices were used as proxies for the Lake and Peninsula and Southwest Region districts following the closest most similar district rule. Bristol Bay household expenditure weights required no adjustment. On the other hand, retail prices from Dillingham were used as proxies in four categories in which Bristol Bay (King Salmon) data were incomplete or not available. Bristol Bay's original prices were retained in the most important categories of food and housing as well as in the miscellaneous category. The household cost of living differential for Bristol Bay was 1.35, also assigned to Lake and Peninsula and to the Southwest Region. Though the Southwest region surrounds Dillingham, its likely expenditure weights would more closely resemble those used for the Lake and Peninsula district, a similar type of district.

Though the Alaska Peninsula and Aleutian Island region covers vast territory and includes a number of different types of communities, it is not surprising that these district differentials fall in a fairly narrow range - 1.30 to 1.35. All communities surveyed suffer the same factors which increase living costs - climate, geography, small community size (therefore lack of selection and of retail competition), time consuming and expensive access to the regional center and lack of economical freight transportation.

It is suggested that the Pribilofs, as the most remote location in the district and without the luxury of Adak's military presence, be granted additional cost of living points. No price data was collected on the Pribilofs but clearly freight and passenger access costs exceed those of Unalaska and Sand Point, the closest most similar communities.

Yukon and Kuskokwim Delta: Lower Kuskokwim, Yupiit, Kashunamiut, Lower Yukon and St. Mary's school districts cover the coastal geographic area

from Cape Newenham on the South to the southern shore of Norton Sound on the north. The area lies between the Bristol Bay/Aleutians district group and the arctic districts which start with the Bering Straits district. Kuspuk was considered as part of this group but is perhaps more similar to the inland grouping of districts. Also Kuspuk was included originally in the Yukon/Kuskokwim election district which consists of the inland reaches of these two great river valleys.

The area is characterized by cold but not arctic climate, small subsistence-oriented communities with the exception of Bethel (which is large but still partially dependent on subsistence), long distance and expensive access to the regional center of Anchorage, no road systems, relatively expensive freight transportation systems, generally poor economies with low household income, and lack of retail price competition and selection.

District boundaries in this area are somewhat inconsistent. The largest district, Lower Kuskokwim, includes 26 sites including Bethel but does not include the Yupiit district. Strangely, Yupiit is nearly surrounded by other Lower Kuskokwim locations, is near Bethel and could easily be included in the larger district with perhaps a significant administrative savings. Kashunamiut (150 students) is in a similar situation. Serving a single small community, Chevak, it is located on the line dividing the Lower Kuskokwim and Lower Yukon districts and could easily be included as part of either district. St. Mary's, the largest community on the Yukon delta, has its own district with about 100 students while the Lower Yukon district surrounds it with several other sites with a total of 1,300 students.

Household and retail price surveys were conducted in 1985 in Bethel, Mountain Village and St. Mary's among the communities in this group of districts. Bethel household expenditure weights and retail prices were used for Lower Kuskokwim, Yupiit and Kashunamiut. Bethel expenditure patterns and prices were somewhat different than patterns typical of smaller isolated communities. In particular, housing expenditure weights as well as housing costs were higher than expected.

Living costs in Alaska tend to be highest not in the remote villages but in the village trade centers of Bethel, Kotzebue, Nome and Barrow. In these more urbanized locations, residents tend to buy a greater variety of goods and services locally but do so at very high prices. Even though these village centers are larger they still suffer from the same disadvantages as smaller villages. Those disadvantages include lack of retail price competition, climate, expensive passenger and freight transportation, high utility costs and poor quality housing which is expensive to heat and maintain. Finally, the village centers tend to have more cash economic activity and therefore higher incomes. Households with higher incomes demand and are willing to pay for

more goods and services. In remote rural Alaska larger does not mean less expensive.

The Bethel housing differential is the highest in the state, 1.41, and is confirmed by the higher than average Bethel housing weight. This Bethel housing factor raises the overall cost of living differential for this area to 1.39, above that of the Bristol Bay districts to the south and the inland districts to the northeast. Otherwise, Bethel prices for food and transportation and clothing are similar to those in most other remote districts in the same area of the state.

The original election district of Wade Hampton, which encompasses the Lower Yukon and St. Mary's districts, had the smallest total sample size in the 1985 study. As a result, household weights and retail price data were studied carefully before new differentials were calculated for these districts. The Mountain Village sample was larger than that of St. Mary's so the final weights used were a combination of the Mountain village sample and that of the larger original district. Revisions to the weights included Mountain Village housing weights and prices as these more closely resembled those of the three closest most similar districts. Then original district weights were used for transportation, clothing, recreation and medical. The final weights used fell well within normal ranges for the most remote small districts in the western and northern areas of the state. This includes high weights for food and transportation and a moderate weight for housing expenditures.

Price data used were primarily those of the Mountain Village retail survey which reveals higher-than-Bethel costs of food (1.65) and transportation (1.55) but somewhat lower housing costs. This is a typical pattern when comparing prices of a smaller community with those of a larger one. Only clothing does not have a significant differential because of the heavy use of catalogs in remote areas with little local selection. In summary the differential assigned to the Lower Yukon and St. Mary's districts was 1.38, nearly identical to the Lower Kuskokwim differential of 1.39.

Interior Remote: This group falls into two general areas. One area is the lower interior districts of Kuspuk and Iditarod. The other area is the arctic interior districts of Yukon-Koyukuk, Galena, Tanana and Yukon Flats. This entire group shares small remote locations, no road systems, severe winter climates but particularly so in the arctic interior areas, generally poor economies, expensive transportation but closer-than-Bethel access to the Fairbanks and Anchorage regional centers. Lack of retail price competition and lack of selection are also conditions shared by all six districts. There is some variation in access ease and cost with the Yukon Flats and Tanana having relative advantage in time and cost of getting to Fairbanks.

In the lower interior districts, household and retail price surveys were conducted in Aniak and McGrath and data from these surveys were used for computing differentials in the Kuspuk and Iditarod districts, respectively. Household sample sizes for the expenditure weight data were small in each of these districts. Household and retail price surveys were also conducted in Nulato, Tanana, Galena and Fort Yukon though the household sample size in each of these was very limited.

A detailed examination of the household expenditure weights in all six of these districts was conducted. While most weights stayed within the normal range for remote rural household expenditure patterns, the small sample sizes presented more variance than considered reasonable. In addition, the cost of housing, which is taken from the household survey rather than the retail price survey, was also affected by the small samples - a small as four households for Fort Yukon, for example. In total, 43 households in 10 communities were surveyed but no single community had a significant sample size.

For the reasons listed above, the study team felt the most accurate and fair cost of living data would be generated by using the original Yukon-Koyukuk election district household expenditure weights rather than trying to salvage usable weights from each community which might result in wide differences among similar districts in the same geographic area. The original election district household expenditure weights are classic for these small remote interior districts stretching from the middle Kuskokwim River Basin to the Upper Yukon River flats near the arctic circle. The election district weights are classic rural Alaska weights - light on housing, heavy on food, transportation and clothing and light again on recreation/entertainment and medical.

Retail price data, which is not dependent on sample size, showed some variation but in each category they were grouped in fairly close ranges. For example food price differentials ranged only from 1.49 (Galena) to 1.62 (Fort Yukon), high differentials typical of small remote communities. Retail prices in each of the six districts were retained except when prices for individual categories were not available. In such cases the category price from the closest most similar district was used. The exception was housing where the data was affected by extremely small household sample sizes. Instead, the original district housing cost differential (1.05) was assigned to all six districts.

The net result of these adjustments to both household weights and price data is the difference in cost of living among these six districts in due strictly to differences in everyday retail prices. Galena and Iditarod (McGrath prices) had 1.32 overall cost of living differentials, primarily due to slightly lower food prices. Tanana was assigned the proxy of nearby Galena, 1.32. Kuspuk's differential of 1.37 nearly matches the adjacent Lower Kuskokwim number of

1.39. It is higher than Galena due to higher food (1.61) and miscellaneous retail (1.47) prices.

The difference between the Kuspuk and Iditarod differentials is of some concern. These districts are adjacent and very similar geographically, they both have the same freight transportation system and share the lack of price competition because they contain only small communities. Also, only one of the several locations in each district had price survey data. The data from those single locations may not accurately reflect the similarity in costs. The true cost of living in the Iditarod district should more closely resemble that of Kuspuk rather than Galena, a single site location with military influence in the economy.

Finally, both Yukon-Koyukuk (Nulato prices) and Yukon Flats (Fort Yukon prices) scored a 1.39 overall household cost of living differential. These were higher than expected, especially since both have reasonable cost access to Fairbanks and Fairbanks prices.

However, an inspection of the everyday retail prices in these communities shows very high food prices in particular as well as high shelf prices for clothing and miscellaneous items. It is likely the small household surveys in these communities did not reflect the amount of shopping actually done in Fairbanks and through the catalogs. Had this been the case prices of clothing, transportation vehicles and some food would have been lower for these districts. Correctly, Fort Yukon's transportation price differential was lower than other more remote districts but other local prices more than made up for the lower transportation costs. Though Fort Yukon was surveyed in 1985 as part of the Fairbanks-Fort Yukon election district, the Yukon Flats school district most closely resembles the remote communities of the original Yukon-Koyukuk election district. For this reason, that district's household consumption weights were assigned to Fort Yukon.

Interior Road System: Nenana, Railbelt, Delta/Greely and Gateway districts are in the general category of districts on the main Alaska road system but with small communities which lack the retail competition and selection advantages of urban Alaska. Their economies are stronger than in most remote districts, they have frequent and reasonably priced freight transportation and some price competition exists both locally and as a result of nearby urban centers.These districts have a far lower cost of living than the remote districts in interior Alaska but do not enjoy the daily retail price advantages of the major urban centers of Fairbanks and Anchorage. On the other hand, reasonably convenient highway access to Fairbanks and Anchorage means residents of these districts pay urban prices for many major goods and services as well as some food purchases.

Clearly, the expenditure patterns of the interior road system districts should resemble something between the urban and remote rural patterns. Compared to the urban pattern, road system districts are likely to be lower in housing and higher in food and transportation. Compared to rural remote districts, road system districts should have expenditure weights higher in housing, lower in food and similar in transportation. On average, housing, food and transportation account for about three-quarters of all household expenditures.

Both household and price surveys were conducted in 1985 in Delta/Fort Greely and Nenana. Household surveys but not price surveys were also conducted in Healy, Cantwell, Clear, Tok and Northway. Readers should recall that the sample selection for the 1985 survey was to insure accurate results on an election district basis, which it did. But it was not designed to provide accurate household expenditure weight data in small communities with very small samples. The Tok, Northway, Healy, etc. household surveys were part of a statistically determined sample which totalled up to 300 per election district and was extremely accurate for those districts. However, taking tiny pieces of the sample and applying those results to small districts such as Alaska Gateway or Railbelt invites statistical variance which may not be truly representative of these small districts.

To overcome the small household sample problem, the largest samples - Delta/Greely and Nenana - are combined and an overall typical road system district pattern of household expenditure weights are calculated. They are in turn applied to all four Alaska road system districts. These new weights definitely take the middle ground between the urban and remote rural household expenditure patterns and appear quite reasonable for these highway districts which are neither truly remote nor urban. Housing and food weights fall in the middle and transportation is within four percentage points of both the rural and urban typical weights.

Price data in the Nenana retail price survey are applied to both the Nenana and Railbelt districts while Delta/Greely price survey data is applied to both the Delta/Greely and Alaska Gateway districts. Prices on the Alaska Highway side of the road system are slightly lower. Reasons likely include highway freight transportation costs and more local retail competition. Major settlements in the Alaska Gateway and Delta/Greely districts have more developed retail sectors than the major communities in the Nenana and Railbelt districts. The most significant price difference is in food which accounts for virtually all the difference in differentials.

In summary, the Nenana cost of living differential is 1.14 and Railbelt receives this Nenana differential as a proxy. Delta/Greely's cost of living differential is 1.10, reflecting the slightly lower retail prices. Alaska gateway is assigned the Delta/Greely differential.

Fairbanks: As in virtually all of urban Alaska, the cost of living in Fairbanks, the state's second largest urban area, is essentially the same as in Anchorage, 1.03. This places Fairbanks in the same category as Anchorage, the Kenai Peninsula, MatSu, Juneau, Sitka and Ketchikan. Prior to the development of the TransAlaska Pipeline and the restructuring of the urban Alaska economy which accompanied it, some moderate differences in cost of living existed between Anchorage and other major urban areas. Before the pipeline, Fairbanks generally scored 6 to 9 points higher than Anchorage.

However, with the change in scale of the Fairbanks economy and the intense retail expansion and competition accompanying it, daily retail prices became very similar to but slightly higher than those in Anchorage. Carr's food store chain, for example, charges the same prices throughout the railbelt region. In 1985, housing in Fairbanks on a square foot basis is slightly less expensive than in Anchorage. This is due to lower rent/mortgage payments per square foot, slightly larger housing size due to a greater proportion of single family units and probably lower land costs than in more densely populated Anchorage. These factors more than balance out the higher heating costs caused by climate and fuel oil prices. Fairbanks heating fuel costs are double those of Anchorage but still accounted for a very small proportion of the total household budget. Fairbank's lower-than-Anchorage housing costs are typical of most areas of the state.

Fairbanks' household expenditure pattern is nearly identical to that of Anchorage. Slightly less is spent on housing and slightly more on food but the difference is not statistically significant. As noted, Fairbanks housing costs were lower and food prices slightly higher (1.02) than the Anchorage base district. Prices of transportation, clothing, recreation/entertainment and miscellaneous retail were moderately higher ranging from 1.08 to 1.22. Medical prices were about the same as in Anchorage.

Finally, some rural households and outlets were included in the 1985 Fairbanks/Fort Yukon original election district and may have had an upward bias effect on the Fairbanks numbers. However, the weight of these rural surveys was almost insignificant. A separate run of just Fairbanks surveys confirmed the differential still at 1.03 without the rural bias.

Arctic: The North Slope and Northwest Arctic districts are the most arctic of all districts. However, both the Nome and Bering Straits districts are included in this group because they share some similarities with the true arctic districts. Bering Straits could also have been included with the Kuskokwim and Yukon River Delta group but this district actually extends to the arctic circle and surrounds Nome, giving it more ties with the arctic group.

The arctic districts are characterized by extreme climate, very long air distances from the regional centers of Anchorage and Fairbanks, the presence

is much further south and has a somewhat more mild climate than the true arctic districts. In fact, the cost of housing in this district is nearly identical (1.13 vs 1.11) to that in the closest districts to the south, St. Mary's and Lower Yukon.

Food prices are the highest in the state in the arctic districts with Barrow topping the list at 1.71 and Northwest Arctic the lowest at 1.59. These arctic food prices combined the results of both the 1985 differential study and the University of Alaska's Cooperative Extension Service surveys done at the same time. This resulted in more items and outlets being included in the data. Transportation costs were also some of the highest in the state with Barrow's being the highest of the arctic group. As expected, Barrow's overall retail prices were moderately higher than Kotzebue's and Nome's. This confirms the results of past studies which place Barrow at the top of the cost of living scale for Alaska.

Kotzebue and Nome overall cost of living differentials computed out the same, 1.41. Bering Straits' household differential was 1.34, mostly because of lower housing costs, while the North Slope district topped out at 1.53, the state's highest.

Table II-4 shows the last step in computing the district personnel for each district. As explained earlier in this chapter. The weight for each districts' expenditure category in Table II-2 is multiplied by that category's price differential in Table II-3. These seven category products are then summed in Table II-4 to arrive at the total Personnel Differential for each district.

of high-cost village service centers (Nome, Kotzebue and Barrow), no road systems, and scattered small communities. The economies of these village trade center communities are fairly strong compared to the smaller communities in these arctic districts. The village economies are typically subsistence dependent with low average household incomes.

Household expenditure weights for the arctic group tend to be high for both housing and food; housing because the climate requires substantial fuel and utility costs and food due to the highest local food prices in the state. In spite of the high cost of transportation to regional centers, transportation expenditure weights are moderate in the arctic. Clearly, food and shelter rather than transportation are the priorities in these districts and over 60% of household spending is on these two categories.

Household expenditure weights and retail prices for Nome and Barrow were used for the Nome and North Slope districts, respectively. Composites of several communities were calculated to provide household and price data for Bering Straits and Northwest Arctic districts. Both household and price surveys were conducted in Unalakleet, Gamble and Shishmaref. The results of these surveys were weighted by the population of those respective communities and the totals are the household expenditure weights and retail prices for the Bering Straits district. Using the same composite technique for Northwest Arctic, household and price survey results from Kotzebue, Selawick and Noorvik were combined and weighted to form the data for that district.

Predictably, the Bering Straits district showed the most rural pattern of household expenditure weights while Nome weights were the most urban in nature with slightly higher weights on housing than on food. Northwest Arctic and North Slope weights fell in between these extremes. Actually, the range of expenditure patterns among these four districts was fairly moderate, confirming the methodology used to compute them.

As expected, housing cost differentials for this group are the highest in the state except for the Bethel differential of 1.41. Barrow (1.39), Northwest Arctic (1.34) and Nome (1.36) were very close because they are village trade center communities in similar climate conditions. Uniformly, village trade centers have the highest housing costs in the state. The housing cost exception among the arctic group was the Bering Straits district with a differential of 1.13. This accounts for virtually all of the difference between this district's differential and those of the other arctic districts. Two reasons explain the lower Bering Straits housing differential. Throughout the state, housing costs are lower in village areas than in village trade centers. There is less demand for housing and less ability to pay for it in smaller communities. Also, housing stock is generally of lower quality, something which can't be measured in cost of living research. Finally, most of the Bering Straits district

Table II-4

District Personnel (Household Cost of Living) Differential Sums

(Sum of seven categories = district differential)

District	Housing	Food	Transp	Clothing	Rec & Ent	Medical	Misc	Total
Southern Southeast								
Annette Island	0.19	0.39	0.17	0.09	0.04	0.05	0.08	1.01
Craig	0.19	0.39	0.17	0.09	0.04	0.05	0.08	1.01
Klawock	0.19	0.39	0.17	0.09	0.04	0.05	0.08	1.01
Hydaburg	0.19	0.39	0.17	0.09	0.04	0.05	0.08	1.01
Southeast Island	0.19	0.39	0.17	0.09	0.04	0.05	0.08	1.01
Urban Southeast								
Ketchikan	0.29	0.32	0.15	0.10	0.05	0.06	0.05	1.02
Wrangell	0.15	0.33	0.19	0.13	0.03	0.08	0.06	1.00
Petersburg	0.19	0.38	0.16	0.10	0.05	0.07	0.06	1.00
Sitka	0.26	0.33	0.15	0.09	0.05	0.06	0.08	1.02
Juneau	0.33	0.26	0.16	0.09	0.07	0.06	0.07	1.03
Central and Northern Southeast								
Kake	0.13	0.45	0.17	0.13	0.04	0.03	0.10	1.05
Chatham	0.14	0.50	0.15	0.13	0.03	0.02	0.10	1.07
Hoonah	0.08	0.51	0.20	0.10	0.02	0.05	0.07	1.03
Pelican	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03
Other Southeast								
Haines	0.18	0.40	0.18	0.09	0.06	0.07	0.04	1.02
Skagway	0.22	0.36	0.20	0.07	0.03	0.08	0.07	1.03
Yakutat	0.27	0.52	0.22	0.06	0.04	0.05	0.05	1.21
Prince William Sound								
Cordova	0.16	0.40	0.29	0.11	0.08	0.09	0.04	1.18
Chugach	0.00	0 00	0.00	0.00	0.00	0.00	0.00	1.13
Valdez	0.27	0.27	0.23	0.08	0.06	0.07	0.08	1.06
Copper River	0.37	0.32	0.26	0.03	0.06	0.03	0.06	1.13
Anchorage Urban Influence Area								
Anchorage (Base District)	0.34	0.22	0.17	0.08	0.07	0.06	0.06	1.00
Matanuska-Susitna	0.27	0.27	0.19	0.07	0.04	0.05	0.06	1.00
Kenai Peninsula	0.20	0.29	0.23	0.09	0.05	0.06	0.08	1.01
Kodiak	0.24	0.33	0.23	0.09	0.05	0.05	0.06	1.06

Table II-4 continued

District Personnel (Household Cost of Living) Differential Sums

(Sum of seven categories = district differential)

District	Housing	Food	Transp	Clothing	Rec & Ent	Medical	Misc	Total
Alaska Peninsula and Aleutian Islands								
Adak	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.32
Pribilofs	0.17	0.42	0.46	0.10	0.03	0.06	0.07	1.32
Aleutian (Region) East	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.32
Unalaska	0.32	0.40	0.31	0.07	0.07	0.04	0.08	1.30
Dillingham	0.26	0.41	0.27	0.11	0.06	0.06	0.13	1.30
Bristol Bay	0.24	0.40	0.35	0.07	0.06	0.07	0.15	1.35
Lake and Peninsula	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.35
Southwest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.35
Yukon and Kuskokwim Delta								
Lower Kuskokwim	0.35	0.53	0.25	0.12	0.04	0.03	0.07	1.39
Yupiit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.39
Kashunamiut	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.39
Lower Yukon	0.27	0.54	0.36	0.12	0.04	0.02	0.03	1.38
St. Mary's	0.27	0.54	0.36	0.12	0.04	0.02	0.03	1.38
Interior Remote								
Kuspuk	0.20	0.58	0.29	0.09	0.06	0.04	0.12	1.37
Iditarod	0.20	0.54	0.29	0.09	0.05	0.04	0.10	1.32
Galena	0.20	0.54	0.28	0.10	0.05	0.04	0.11	1.32
Yukon-Koyukuk	0.20	0.57	0.32	0.10	0.05	0.04	0.11	1.39
Yukon Flats	0.20	0.58	0.27	0.10	0.07	0.04	0.12	1.39
Tanana	0.19	0.57	0.31	0.07	0.05	0.04	0.11	1.32
Interior Road System								
Alaska Gateway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10
Delta/Greely	0.27	0.34	0.26	0.07	0.05	0.06	0.05	1.10
Nenana	0.26	0.41	0.27	0.06	0.05	0.05	0.04	1.14
Railbelt	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.14
Fairbanks	0.29	0.24	0.22	0.09	0.06	0.05	0.07	1.03
Arctic								
North Slope	0.38	0.53	0.32	0.08	0.03	0.04	0.16	1.53
Northwest Arctic	0.42	0.51	0.26	0.06	0.05	0.04	0.07	1.41
Nome	0.49	0.56	0.18	0.06	0.03	0.02	0.06	1.41
Bering Straits	0.27	0.48	0.25	0.10	0.06	0.11	0.07	1.34

Source: Derived from data base of *Alaska Geographic Differential Study*, 1985, by The McDowell Group for the Alaska Department of Administration, Division of Labor Relations.

III. Nonpersonnel Differentials

III. Nonpersonnel Differentials

Introduction

All previous school district differentials have been based solely on the differences in household cost of living throughout Alaska. Since the bulk of the typical school district budget is spent on personnel, this makes the household cost of living reasonably relevant as a measure for distributing school funding. From 59% (Aleutian Region) to 88% (Anchorage) of the total school district operating funds are spent on personnel. The use of household differentials to determine school district funding assumes that operating households and school districts should cost about the same in any given district. This is not always an accurate assumption.

In short, the question of nonpersonnel costs has never been addressed in school district differential formulas. The exception was a 1981 study by Homan-McDowell which quantified personnel, media (textbooks, travel, etc.) and facilities operations cost differentials. However, results of this study were not incorporated into the school funding formula. Therefore, comparative costs of utilities, travel, freight, insurance, teaching and janitorial supplies, professional services, equipment and maintenance have never been a part of school district differentials.

This current study, *Alaska School District Profiles and Differential Study,* addresses the nonpersonnel cost side of school operations to the same extent as household costs have been addressed in other school district differential studies. By the study team doing so, the Alaska Legislature and other decision makers now have a credible information base for total school cost differential decisions. Using virtually the same methodology for school nonpersonnel costs as is used in household cost of living research, the study team calculated the differences in cost of operating school districts in 53 areas of Alaska. As a result, cost differential data now exists for the 12% (Anchorage) to 41% (Aleutian Region) of each district's budget which is spent on nonpersonnel items.

The nonpersonnel differential portion of the study was conducted in five phases, all following standard cost of living methodology:

1. Selecting Nonpersonnel Market Basket

2. Establishing District Nonpersonnel Expenditure Weights
3. Collecting Price Data
4. Developing Methodologies for Measuring Differentials of Nonpersonnel Market Basket items.
5. Calculating Nonpersonnel Cost Differentials

Table III-1 presents the results of the nonpersonnel differential research and analysis conducted in this study. The methods used in each of the five study phases are explained in detail following Table III-1, below.

Table III-1

District Nonpersonnel Differentials

(Anchorage District = 1.00)

District	Nonpersonnel Differential
Southern Southeast	
Annette Island	1.23
Craig	1.25
Klawock	1.35
Hydaburg	1.27
Southeast Island	1.36
Urban Southeast	
Ketchikan	1.00
Wrangell	1.08
Petersburg	1.05
Sitka	1.03
Juneau	0.98
Central and Northern Southeast	
Kake	1.30
Chatham	1.21
Hoonah	1.24
Pelican*	
Other Southeast	
Haines	1.07
Skagway	1.11
Yakutat	1.19
Prince William Sound	
Cordova	1.37
Chugach	1.36
Valdez	1.17
Copper River	1.12
Anchorage Urban Influence Area	
Anchorage (Base District)	1.00
Matanuska-Susitna	1.01
Kenai Peninsula	1.01
Kodiak	1.15
Alaska Peninsula and Aleutian Island	
Adak	1.25
Pribilofs	1.38
Aleutian (Region) East	1.37
Unalaska	1.27
Dillingham	1.24
Bristol Bay	1.31
Lake and Peninsula	1.31
Southwest	1.27

Yukon and Kuskokwim Delta	
Lower Kuskokwim	1.43
Yupiit*	
Kashunamiut	1.31
Lower Yukon	1.35
St. Mary's	1.35
Interior Remote	
Kuspuk	1.23
Iditarod	1.22
Galena	1.33
Yukon-Koyukuk	1.18
Yukon Flats	1.32
Tanana*	
Interior Road System	
Alaska Gateway	1.14
Delta/Greely	1.14
Nenana	1.22
Railbelt	1.14
Fairbanks	1.01
Arctic	
North Slope	1.34
Northwest Arctic	1.49
Nome	1.18
Bering Straits	1.53

Source: Based on data from *School District Survey* and *District Vendor Survey*, conducted as part of *Alaska School District Profiles and Differential Study*.

*Yupiit, Pelican and Tanana districts did not return *School District Survey*. Therefore, no district nonpersonnel expenditure data is available for calculating nonpersonnel differential. Differentials of closest most similar districts assigned.

Selection of the Nonpersonnel Market Basket

Just as the household market basket consisted of 310 items in seven major expenditure categories (housing, food, transportation, clothing, recreation/entertainment, medical and miscellaneous), a nonpersonnel market basket had to be developed for purpose of cost comparisons.

A nonpersonnel market basket was designed which included eight major expenditure categories and 30 individual items. The eight major nonpersonnel expenditure categories, which include virtually all nonpersonnel expenditures from the School Operating Fund (01 fund), were taken directly from the Department of Education standard account codes for objects of expenditure.

The 30 market basket items were selected to represent subdivisions of the major account codes. A larger group of 38 items was first selected by the study team with input from educational professionals, including officials of the base districts, Anchorage. Next, the market basket was pretested by means of site visits to the central offices of three districts - Juneau (urban), Hoonah (rural single site) and Chatham (an REAA). Tested were ease of retrieving purchasing data from district files and the relevance of each item for

measuring cost differences among districts. After pretesting, a refined market basket was included in the school district surveys. Once the surveys were returned and analyzed and the vendor survey completed, a final nonpersonnel market basket of 30 items was selected. Final selection criteria included common use among districts, quality of data provided by districts, suitability for differential comparisons and available vendor data.

Nonpersonnel Differential Market Basket

Major Category
- Market Basket Item

Professional and Technical Services (Code 400)
- Inservice Training Professional Services
- Legal Services
- Audit Services

Communications (410)
- Long Distance Telephone
- Local Telephone
- Postage

Insurance (415)
- Property Insurance
- Liability Insurance

Travel (420)
- Intradistrict Administrative Travel
- Outside of District Administrative Travel

Utilities (430)
- Electricity
- Heating Fuel
- Other Utilities

Other Services (440)
- Equipment Repair and Maintenance Service

Supplies, Materials and Media (450)
- Teaching Supplies
  - Tablets
  - Copying Paper
  - Elementary Workbook
- Office Supplies
  - Legal Pads
  - Copying Paper
  - Envelopes
- Maintenance and Janitorial Supplies
  - Paper Towels
  - Toilet Paper
  - Floor Compound
  - Disinfectant
- Textbooks
  - Textbooks
  - Teacher's Manual

Equipment (510)
- Computer
- VCR
- VCR Camera
- Copier

Nonpersonnel District Expenditure Weights

The nonpersonnel differential must first involve an accurate estimate of the expenditure patterns of each school district. Just as each district had it's own unique pattern of household expenditures, each school district has a unique pattern of nonpersonnel expenditures. Some districts must devote a larger than normal share to utilities costs and travel while others tend to spend more on teaching supplies, equipment or professional/technical services. The expenditure pattern is a function of local choice and of necessity dictated by the climate, social values, economic conditions and funding levels.

The unique district expenditure weights allow the reverse pricing concept to be used on the nonpersonnel side as well as on the household side of the district differential. Essentially, reverse pricing is a method of computing differentials which respects the local expenditure pattern but prices it out as if the local district were located in Anchorage. It is a concept which assumes each district pays Anchorage prices for the exact mix of personnel, buildings, good and services which it currently buys in its local area. Readers should refer to the discussion of reverse pricing in Chapter II. Consistency in methodology is critical to the credibility and results of the study so the reverse pricing concept is used for both personnel and nonpersonnel differentials.

District expenditure weights for FY 1988 were used. Since the study was being done well in advance of FY 1988 audit reports, each district was asked in May 1988 to estimate their spending by budget object code for the nearly completed fiscal year. These estimates were considered to be more accurate than the only other alternative which was District Budget Reports done prior to the fiscal year and which include estimated planned expenditures for FY 1988. The results provided by districts in the survey should closely resemble FY 1988 audits since the fiscal year was nearly complete at the time of the survey.

FY 1988 was selected because it was the most recent available data. It also was the second year following the severe budget cuts of FY 1987. Though a complete set of audit reports was available for FY 1987, atypical expenditure patterns in some districts caused by the cutbacks would not have been a good basis for differential weighting. It was assumed that by FY 1988 expenditure patterns would more closely resemble future patterns than FY 1987 data.

In summary, actual district survey results were used for the expenditure weights. In the small proportion of the 01 fund budget not covered by the

eight major categories, the extra weight was distributed proportionally among the eight categories. This means that the portion of the budget for which there was no differential work done received a differential equal to the average for that district.

In the case of the four districts which did not reply - Pelican, Yupiit, Tanana and King Cove - nonpersonnel as well as personnel expenditure weights of the closest most similar district were assigned.

Table III-2 details the nonpersonnel expenditure weights for each of the eight major categories by district. Each district's weights add to 100%, accounting for all of the nonpersonnel market basket.

Table III-2

District Nonpersonnel Expenditure Category Weights

(% of Nonpersonnel Budget Spent on Each Expenditure Category)

District	Prof & Tech Services	Communi-cations	Insurance	Travel	Utilities	Other Services	Supplies Mat. & Media	Equipment
Southern Southeast								
Annette Island	0.15	0.05	0.20	0.14	0.11	0.00	0.27	0.07
Craig	0.27	0.03	0.06	0.13	0.20	0.03	0.25	0.03
Klawock	0.15	0.04	0.12	0.07	0.29	0.04	0.24	0.04
Hydaburg	0.11	0.02	0.23	0.06	0.29	0.01	0.20	0.07
Southeast Island	0.14	0.05	0.12	0.03	0.36	0.03	0.22	0.05
Urban Southeast								
Ketchikan	0.05	0.03	0.12	0.02	0.31	0.09	0.29	0.10
Wrangell	0.18	0.06	0.13	0.06	0.27	0.07	0.21	0.03
Petersburg	0.02	0.02	0.11	0.04	0.29	0.06	0.25	0.20
Sitka	0.10	0.03	0.07	0.17	0.11	0.15	0.19	0.17
Juneau	0.17	0.03	0.05	0.02	0.24	0.07	0.29	0.14
Central and Northern Southeast								
Kake	0.25	0.03	0.12	0.05	0.25	0.11	0.14	0.05
Chatham	0.14	0.03	0.11	0.07	0.27	0.06	0.21	0.10
Hoonah	0.12	0.04	0.03	0.04	0.44	0.07	0.19	0.07
Pelican*	NP	NP	NP	NP	NP	NP	NP	NP
Other Southeast								
Haines	0.14	0.03	0.00	0.02	0.39	0.10	0.26	0.06
Skagway	0.08	0.02	0.09	0.02	0.22	0.23	0.28	0.05
Yakutat	0.13	0.05	0.10	0.07	0.40	0.05	0.19	0.02
Prince William Sound								
Cordova	0.08	0.03	0.05	0.04	0.42	0.10	0.21	0.06
Chugach	0.14	0.04	0.16	0.19	0.19	0.03	0.20	0.04
Valdez	0.04	0.03	0.09	0.02	0.41	0.06	0.35	0.02
Copper River	0.17	0.03	0.15	0.04	0.23	0.04	0.20	0.13
Anchorage Urban Influence Area								
Anchorage (Base District)	0.07	0.04	0.06	0.02	0.29	0.16	0.31	0.04
Matanuska-Susitna	0.05	0.05	0.17	0.02	0.32	0.04	0.31	0.02
Kenai Peninsula	0.02	0.02	0.12	0.02	0.23	0.41	0.15	0.03
Kodiak	0.12	0.04	0.00	0.03	0.34	0.04	0.34	0.08

Table III-2 continued

District Nonpersonnel Expenditure Category Weights

(% of Nonpersonnel Budget Spent on Each Expenditure Category)

District	Prof & Tech Services	Communications	Insurance	Travel	Utilities	Other Services	Supplies Mat. & Media	Equipment
Alaska Peninsula and Aleutian Islands								
Adak	0.23	0.02	0.11	0.05	0.17	0.08	0.21	0.13
Pribilofs	0.21	0.02	0.13	0.10	0.21	0.02	0.20	0.10
Aleutian (Region)East	0.12	0.04	0.12	0.18	0.12	0.19	0.13	0.10
Unalaska	0.08	0.03	0.17	0.04	0.32	0.06	0.18	0.12
Dillingham	0.11	0.05	0.12	0.04	0.35	0.04	0.26	0.01
Bristol Bay	0.24	0.02	0.17	0.05	0.24	0.02	0.15	0.10
Lake and Peninsula	0.04	0.02	0.18	0.19	0.17	0.03	0.25	0.11
Southwest	0.10	0.03	0.18	0.14	0.32	0.04	0.17	0.02
Yukon and Kuskokwim Delta								
Lower Kuskokwim	0.04	0.05	0.13	0.09	0.24	0.03	0.34	0.09
Yupiit*	NP	NP	NP	NP	NP	NP	NP	NP
Kashunamiut	0.14	0.03	0.20	0.08	0.31	0.05	0.13	0.05
Lower Yukon	0.02	0.02	0.09	0.09	0.32	0.01	0.36	0.08
St. Mary's	0.04	0.04	0.25	0.10	0.39	0.04	0.08	0.06
Interior Remote								
Kuspuk	0.09	0.03	0.13	0.10	0.23	0.04	0.19	0.18
Iditarod	0.10	0.05	0.15	0.09	0.29	0.06	0.23	0.04
Galena	0.12	0.05	0.23	0.06	0.36	0.03	0.13	0.02
Yukon-Koyukuk	0.09	0.04	0.10	0.14	0.23	0.03	0.25	0.11
Yukon Flats	0.12	0.03	0.14	0.07	0.31	0.15	0.15	0.02
Tanana*	NP	NP	NP	NP	NP	NP	NP	NP
Interior Road System								
Alaska Gateway	0.05	0.19	0.06	0.07	0.19	0.07	0.19	0.17
Delta/Greely	0.08	0.04	0.20	0.02	0.28	0.17	0.20	0.00
Nenana	0.12	0.05	0.25	0.06	0.22	0.06	0.22	0.03
Railbelt	0.08	0.03	0.22	0.03	0.17	0.12	0.26	0.08
Fairbanks	0.10	0.03	0.10	0.01	0.25	0.32	0.14	0.04
Arctic								
North Slope	0.13	0.04	0.03	0.09	0.35	0.08	0.24	0.04
Northwest Arctic	0.10	0.03	0.16	0.09	0.37	0.03	0.18	0.05
Nome	0.04	0.02	0.15	0.04	0.56	0.05	0.13	0.01
Bering Straits	0.06	0.04	0.09	0.10	0.32	0.11	0.23	0.05

*Not provided by district.

Collection of Price Data

Two methods were used for the collection of comparative price data, a survey of district expenditures and a vendor survey.

School districts were provided a survey which they filled out describing the market basket items they purchased, in what quantities, prices paid for both purchase and shipping, and which vendors they most commonly used. This portion of the district survey was comprehensive and took concerted effort for districts to complete. In total, 51 of the 55 districts in existence in FY 1988 answered the survey, most of them with sound data. In cases where districts answers were incomplete or when they clearly were not using typical item costs, substitute data was used from the vendor survey, the closest most similar district or average costs for district groupings.

In general, school districts throughout the state showed some very similar patterns for many of their major nonpersonnel expenditures. In the services, for example, 35 districts used just four accounting firms for their audits. Also, four legal firms did the legal work for 38 of the 51 reporting districts. Two insurance agencies service 32 districts and two airlines - Alaska and Mark Air - provide interdistrict routes for nearly all districts.

For supplies and equipment a similar pattern emerged. Seven office supply companies are the vendors for 35 districts while just five companies are janitorial supply vendors to 37 districts. Teaching supply vendors are even more concentrated with five firms supplying 40 districts. And finally, Northwest Textbook Depository supplies textbooks and workbooks to all of the reporting districts.

More districts than those shown above are serviced by these dominant vendors. Four districts did not report and several provided incomplete information on their vendors.

The fact that most districts used the same vendors for most categories places much more importance on the vendor survey data as the basis for nonpersonnel prices. This provided an unexpected opportunity for setting standards for nonpersonnel differential items. By identifying these fairly standard vendor use patterns, the study team was able to develop standard costs and shipping patterns for most categories of nonpersonnel goods and services. While some districts use other vendors and pay prices which may vary from the standards, all districts have the choice of purchasing from the vendors used by most districts. When the standards are used as the price differentials, districts which make other choices are neither penalized for efficiency nor rewarded for inefficient purchasing practices.

The survey of school district vendors was done to determine current prices, typical shipping methods, quantity discounts and school district purchasing practices from the vendor's viewpoint. The survey was conducted primarily by telephone and involved vendors answering a series of questions about prices, rates, typical quantities purchased, shipping practices and costs, and travel patterns for professional assignments. Vendors were also asked to provide the study team with catalogs, rate sheets and other material used in assessing school expenditures on each of the 30 market basket items. The survey was conducted by staff economists on the study team.

Results of the vendor survey and the district nonpersonnel cost survey are discussed in the next section. Further, the results play a role in determining the methodology for each of the 30 market basket items.

Table III-3 shows the price differentials for each major category in each district. A detailed explanation of how prices were determined for all 30 items and 8 major categories follows Table III-3.

Table III-3

District Nonpersonnel Price Differentials

(Anchorage District Prices = 1.00)

District	Prof & Tech Services	Communication	Insurance	Travel	Utilities	Other Services	Supplies Mat. & Media	Equipment
Southern Southeast								
Annette Island	1.12	1.29	1.38	1.35	1.83	1.03	0.91	1.00
Craig	1.08	1.14	1.40	1.36	1.85	1.14	0.92	1.01
Klawock	1.08	1.46	1.30	1.41	2.00	1.14	0.91	1.01
Hydaburg	1.07	1.10	1.13	1.38	1.87	1.15	0.81	1.01
Southeast Island	1.07	1.19	1.26	1.86	1.81	1.01	0.94	1.00
Urban Southeast								
Ketchikan	1.00	1.05	1.00	1.31	1.06	1.00	0.92	1.00
Wrangell	1.10	1.22	1.37	1.34	0.96	1.04	0.93	1.00
Petersburg	1.07	1.31	1.37	1.30	1.00	1.06	0.94	1.00
Sitka	1.07	1.16	1.00	1.21	0.96	1.01	0.92	1.01
Juneau	1.00	1.16	1.00	1.00	0.96	1.00	0.93	1.01
Central and Northern Southeast								
Kake	1.09	1.04	1.12	1.19	1.94	1.20	0.93	1.01
Chatham	1.10	1.13	1.35	1.70	1.37	1.15	0.93	1.01
Hoonah	1.09	1.14	1.25	1.30	1.46	1.09	0.91	1.01
Pelican*	NA	NA	NA	NA	NA	NA	NA	NA
Other Southeast								
Haines	1.08	1.15	1.00	1.06	1.12	1.15	0.92	1.01
Skagway	1.08	1.05	1.36	1.21	1.21	1.15	0.93	1.01
Yakutat	1.07	1.41	1.29	1.10	1.28	1.14	1.06	1.02
Prince William Sound								
Cordova	1.10	1.15	1.24	1.14	1.73	1.17	1.05	1.02
Chugach	1.04	1.29	1.32	2.20	1.25	1.08	1.05	1.01
Valdez	1.09	1.08	1.34	1.16	1.23	1.18	1.06	1.01
Copper River	1.06	0.90	1.32	1.12	1.19	1.11	1.05	1.01
Anchorage Urban Influence Area								
Anchorage (Base District)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Matanuska-Susitna	0.99	1.08	1.00	1.01	0.97	1.00	1.06	1.00
Kenai Peninsula	1.01	1.19	1.00	1.03	0.96	1.00	1.06	1.00
Kodiak	1.06	1.43	1.00	2.23	1.17	1.14	1.05	1.02

Table III-3 continued

District Nonpersonnel Price Differentials

(Anchorage District Prices = 1.00)

District	Prof & Tech Services	Communication	Insurance	Travel	Utilities	Other Services	Supplies Mat. & Media	Equipment
Alaska Peninsula and Aleutian Islands								
Adak	1.21	1.46	1.31	1.99	1.17	1.74	1.06	1.04
Pribilofs	1.40	1.56	1.32	2.47	1.28	1.93	1.04	1.04
Aleutian (Region) East	1.20	1.02	1.39	1.68	1.28	1.69	1.06	1.03
Unalaska	1.24	1.89	1.30	2.10	1.18	1.81	1.07	1.04
Dillingham	1.16	1.49	1.31	1.42	1.31	1.35	1.05	1.02
Bristol Bay	1.16	1.31	1.38	1.46	1.64	1.36	1.06	1.02
Lake and Peninsula	1.15	1.53	1.34	1.77	1.34	1.35	1.06	1.02
Southwest	1.16	1.37	1.40	1.19	1.40	1.29	1.05	1.02
Yukon and Kuskokwim Delta								
Lower Kuskokwim	1.14	1.44	1.37	2.31	1.97	1.01	1.05	1.02
Yupiit*	NA	NA	NA	NA	NA	NA	NA	NA
Kashunamiut	1.14	1.66	1.19	1.66	1.45	1.50	1.06	1.02
Lower Yukon	1.09	1.59	1.36	2.40	1.47	1.40	1.05	1.02
St. Mary's	1.13	1.60	1.38	1.58	1.38	1.40	1.05	1.02
Interior Remote								
Kuspuk	1.10	1.43	1.40	1.52	1.32	1.33	1.04	1.02
Iditarod	1.11	1.32	1.40	1.36	1.26	1.21	1.04	1.02
Galena	1.10	1.66	1.39	1.47	1.40	1.34	1.07	1.02
Yukon-Koyukuk	1.03	1.21	1.37	1.34	1.25	1.29	1.06	1.02
Yukon Flats	1.09	1.46	1.33	2.08	1.31	1.38	1.08	1.02
Tanana*	NA	NA	NA	NA	NA	NA	NA	NA
Interior Road System								
Alaska Gateway	1.11	1.16	1.32	1.29	1.20	1.11	1.06	1.01
Delta/Greely	1.08	1.34	1.32	1.35	1.06	1.05	1.07	1.01
Nenana	0.97	1.70	1.37	1.38	1.28	1.04	1.07	1.01
Railbelt	1.08	1.00	1.35	1.20	1.12	1.09	1.06	1.01
Fairbanks	0.97	1.11	1.00	1.20	1.00	1.00	1.08	1.00
Arctic								
North Slope	1.21	1.46	1.20	1.93	1.35	1.70	1.08	1.03
Northwest Arctic	1.15	1.46	1.29	1.77	1.85	1.48	1.06	1.02
Nome	1.19	1.30	1.37	1.58	1.09	1.48	1.08	1.03
Bering Straits	1.12	1.38	1.38	2.37	1.85	1.35	1.07	1.03

*Not available. Based on data provided by districts.

Methodology for Expenditure Category Pricing

Professional and Technical Services (Budget Code 400)

The market basket for professional and technical services consists of legal service fees and expenses, audit fees and expenses and inservice training contract services. This major nonpersonnel budget category accounts for 5% to 20% of most district's nonpersonnel budget.

Legal Services

Hourly rates for lead attorneys were collected from the school district survey and verified by the four major legal firms which account for most school district work throughout the state. Rates for lead attorneys were fairly consistent and the most common rate paid was $135 per hour, regardless of district. These firms are located in the state's regional centers, especially Anchorage, and their lawyers travel to outlying districts. Interviews with these firms revealed that about 1/3 of all professional time for outlying districts is spent onsite at the district offices and that 2/3 is spent at the urban offices of the legal firm. Interviews further established a typical legal assignment done onsite lasted a full day at the $135 hourly rate. Travel was priced at the full fare from the firm's office to the location of each district's office and per diem set at $100. The actual hourly rate paid was used unless it was exceptionally high or low. In those cases the $135 standard was used.

The method for calculating the cost differential for legal services assigned a constant $135 per hour to 2/3 of all legal expenditures, meaning all districts paid the same for this portion. For the 1/3 of services performed onsite, the price differential was the cost of an 8-hour day at $135 ($1,080) plus air fare and one day's per diem ($100). Therefore the total legal differential averaged the 2/3 at Anchorage prices and the 1/3 at onsite prices for an overall legal services differential.

If districts had used local legal services exclusively, their differential was 1.00. Legal cost differentials ranged up to 1.33 for the most remote and expensive to reach district, the Pribilofs.

District expenditure weights for legal services varies dramatically. Twenty-one districts spend less than 1% of their nonpersonnel funds for legal services. Thirty-nine districts spend less than 3%. Copper River and Hydaburg at the other extreme each spent 8% on legal services.

Audit Services

Four audit firms were interviewed representing the audits of nearly three-quarters of all districts. In addition, the district survey asked the cost of the most recent annual audit (FY 1987) and the expected cost of the FY 1988 audit report. This audit cost data provided by the districts varied widely depending

on the type and size of district, the caliber of inhouse accounting personnel and on specific circumstances occurring in each district.

Spending on audit services varied from 0.13% (Anchorage) to 8% of the total nonpersonnel FY 1988 budget for a small Southeast Alaska single site district. The majority of districts pay from 1% to 4% of their nonpersonnel budget for audit services.

For the majority of districts, however, audit costs fell into general ranges reflecting district size. But the sizable number of exceptions outside these ranges meant that actual audit costs were not a good differential measure. For example, two small districts similar in size and type had audit costs which differed by over 300%. Therefore, an alternative to actual costs paid was necessary.

Interviews with leading school district audit firms established typical lengths of audit assignments based on the size of the district budget. Then travel to the district office and per diem were added to account for the expense of audit firm personnel in the field. Districts were grouped into four size categories based on budget size. Then standard audit costs for each category were estimated by the firms based on professional time and the average hourly rate for school audits.

Audit Cost Categories for Districts

District Class	Budget	Professional Time		Base Fee
		Total	Onsite	(@ $60)
Small	<$3 m.	140 Hrs	5 Days	$ 8,400
Medium	$3-10 m.	200 Hrs	10 Days	12,000
Large	>$10 m.	300 Hrs	15 Days	18,000
Borough	Negotiated including travel			40,000

These are the amounts districts in each of these size categories could expect to pay for a typical audit. For those districts not using local firms, travel to the district office and per diem for the specific number of onsite work days was added to the base cost. The exception is borough district audits which are customarily negotiated at a fixed fee which includes travel, per diem and other expenses. A typical borough audit runs approximately $40,000, according to the accounting firms, a figure assigned to all borough districts. Smaller districts are compared only to their own budget size category base price, not to the price of a borough audit in Anchorage.

Again, using these standards districts are neither penalized for efficiency and strong inhouse accounting capability nor rewarded for poor price shopping, internal inefficiencies or unusual one-time-only costs.

Using the reverse pricing technique, the base price for each district was the amount appropriate for its budget size. This was then compared to the same amount plus the travel and per diem for that district. Audit differentials were modest and ranged from 1.00 to 1.22 but most fell into the 1.08 to 1.15 category.

Inservice Training Services

Inservice training contracting practices and fees varied widely throughout the state, according to responses in the district nonpersonnel cost survey. Further, district expenditures on inservice training contractors ranged from nothing for five districts to a high of 10% (Pribilofs) of the FY 1988 nonpersonnel budget. However, some of these districts which paid nothing to contractors still conducted inservice training using inhouse or agency professionals for which the cash cost was nothing. Larger urban districts identified at least one out-of-state vendor as being among their three most commonly used inservice contract vendors. This is used as a base for establishing a cost standard for this budget item.

Due to the variation in daily professional rates - apparently due to local choice - a standard was considered the fairest measure of inservice training cost differentials. The district surveys, while revealing a wide variation in rates paid, did show the rate of $250 per day was by far the most common for contract inservice training professionals. The surveys also showed that a typical training assignment involved three days of professional time.

The differential is based on the use of an out-of-state expert from a common point (Chicago) to each of the districts including the base districts used in this calculation - Anchorage, Juneau, Fairbanks and Ketchikan. Therefore, the base cost becomes the cost of air fare to each base location (which is approximately the same from Chicago) plus per diem and $250 per day in professional fees for three days. Total cost for base districts is $2,060. For other districts, the additional cost of air fare from the closest base location is added. For the more remote districts where additional travel time is significant, one day of per diem ($100) is added.

Inservice cost differentials varied from 1.00 for large urban districts to the range of 1.20 to 1.42 for the most remote districts in the arctic and Western Alaska. The highest costs are in the Aleutian Chain area.

Professional and Technical Services Summary

Costs of these three items - legal, inservice and audit - were weighted proportionately, based on their respective expenditure weights in each district. The resulting price differential was then applied to each district's total expenditure weight for professional and technical services (code 400) as reported by the district in their survey.

The overall professional and technical services differential varied from slightly less than the base of 1.00 for Fairbanks, Nenana and MatSu to 1.21 for Adak and the North Slope and 1.40 for the Pribilofs. Over half of all professional and technical service differentials were under 1.10.

Total district expenditure weights for the code 400 category, professional and technical services ranged from just 2% for the Kenai Peninsula to 20% to 26% for five small rural districts which acquire virtually all of their professional services work from vendors outside the district. Nearly half of all districts - most of them small - spend between 10% and 20% of their nonpersonnel budgets on professional and technical services. Anchorage the base district spends 7%, Fairbanks, 10%.

Communications (410)

The market basket for communications consists of postage, long distance and local telephone charges. Overall the communications budget is relatively consistent from district to district. The expenditure weight varies from 2% to 6% for all but one district, Alaska Gateway, which has a satellite communications system. Anchorage, the base district spends a very typical 4% on communications.

The expenditure weights used for each of the items were those provided by the districts in their survey responses. The weight of communications expenditures on other items was distributed proportionately among the three market basket items. In cases where communications weights were missing, those from the closest most similar districts were used.

Long Distance Telephone Charges

In most Alaska districts, long distance charges are the most significant of the three communications market basket items with weights running from 1% to 3% of the typical nonpersonnel budget. In fact, the most extreme case was just 3.1%. Districts were asked for the most common calls for both intradistrict (in the case of multisites) and out-of-district long distance. Because of the complexity of calculating multisite intradistrict calls and lack of detailed district survey responses on this question, all long distance expenditures were priced at out-of-district rates. Normally, intradistrict calling was a small share of total long distance charges.

Long distance out-of-district calling patterns were very consistent. Most calls went to Juneau and Anchorage with Fairbanks being the third most frequently called instate location. Fairbanks is the regional center for interior and northern Alaska and the site of the University of Alaska main campus. Therefore, the standard district market basket became one call to each of three location - Anchorage, Juneau and Fairbanks. The cost of calling each of these from the district office of each district was priced at daytime weekday rates for a 10-minute call. The average price of these calls became the price differential.

For the three urban locations, the price was the cost of calling the other two and this sum was divided by three. This takes into account the urban advantage of local calling in one of the three locations.

Long distance differentials ranged from 1.00 to 1.98 (Adak) with half of all districts above 1.50.

Local Phone Service

Local phone expenditures were under 2% of the nonpersonnel budget in all but nine districts and no district exceeded 4.2% (MatSu). Anchorage spent 3.2% on local phone service. Half of all districts spent less than 1% on local phone service.

The local phone market basket was difficult to determine because of the variety of systems in use throughout the state. In order to have some basis for cost comparison local phone companies were consulted and a very common system was suggested. A three-trunk rotary roll-over business phone system monthly charge was selected as the basis for local phone cost comparisons. This system is one that might be used in small to medium sized district offices. Then all local phone companies were surveyed for their rates for this system.

No uniformity was apparent and nearly half of the district paid less than Anchorage prices for this system. In fact, if any trend was apparent it was that urban prices for business phone systems were higher. Local phone differentials ranged from 0.60 (Skagway) to 2.27 (Galena, Yukon-Koyukuk and Unalaska).

Postage (and postal shipping)

Postage budgets are small, averaging less than 1% of the nonpersonnel budget with the highest expenditure weight being only 1.2-1.4% (Annette Island, Southeast Island, North Slope). This indicates high use of parcel post in these districts.

Two methods were used to calculate the postage differential - one for multisite and the other for single site districts. For single site districts, sixty percent of all postage was considered stamps and priority mail of less than two pounds in weight. The price differential for this half is 1.00 for all districts since the unit cost is the same.

The remaining forty percent of the postage budget was split 20%-20%. The cost of sending two four pound packages - one via parcel post and the other by priority mail - to Juneau became the price for one 20% share. The cost of shipping the same two packages to parcel post zone 8 became the price for the other 20% share. Postal shipping in excess of two pounds is charged at different rates depending on the distance from the originating point. This

distance from the originating point is expressed in terms of parcel post zones. Each district has its own zones and the higher the zone number the longer the distance.

For multisite districts the methodology was the nearly the same. Since intradistrict postage was a factor, the 60% portion was split into two parts. Thirty percent was allocated for normal out-of-district postage of stamps and parcel post under two pounds. The other 30% was considered intradistrict postage. The rate for this intradistrict portion of the budget was the cost of parcel post and priority mail over two pounds (again the four pound packages). These four pound packages were sent from the district office to zones 2 and 3 within each multisite district. Finally, the remaining 40% was priced exactly as in the single site example.The multisite differential was the weighted average of the three parts - 30% normal, 30% intradistrict over two pounds and 40% out of district over two pounds.

Postage differentials were negligible and ranged from 0.94 to 1.13 with most districts clustered around 0.97-1.03.

Insurance (415)

District nonpersonnel expenditure weights for insurance varied considerably from 0% for two districts reporting no insurance expenditures (Kodiak and Haines) to a high of 25% of the total nonpersonnel budget for St. Mary's and Nenana. Eight districts, all of them small rural ones, reported spending between 20% and 25% of the nonpersonnel budget on insurance.

Urban district insurance expenditure weights also vary from 6% for Anchorage to 10% for Fairbanks and 17% for Matanuska-Susitna. Some districts - Juneau is an example - have either their property or liability insurance covered by their local government.

Property insurance rates were quoted by the two companies which insure the majority of districts. Essentially, three rates prevail for Alaska school districts - urban, remote sites with good condition buildings and remote sites with poor condition buildings. The urban rate is much lower than the remote rates but the remote rates are only about 10% apart. Districts were divided into the three groups based on the urban - remote criteria and the condition of remote district buildings was taken from the district survey of facilities which rated buildings on a four-point condition scale. Each rate assumed the same deductible ($100,000).

Then the rates were adjusted to avoid double compensation for facilities costs. The foundation formula already compensates for the inefficiency of small site districts (see discussion in Chapter IV) by having a declining formula the size of funding communities increases. Unless the unit prices of facilities-related

costs are indexed, the foundation formula plus the differential result in mathematically exceptional funding levels for small districts.

The adjustment index is the number of square feet per student. The unit price of insurance is divided by this index to come out with the actual property insurance differential used in this study.

Liability insurance, though included in the expenditure weights of school districts, is given the base differential because liability rates are not sensitive to geographic location.

After adjustment for student density, insurance price differentials range from the base 1.00 for several urban districts to a high of 1.40 for four rural districts - Craig, Kuspuk, Iditarod and Southwest. Twenty-nine other districts showed total insurance differentials of 1.30 to 1.39.

Travel (420)

The travel differential is limited to administrative and professional travel and does not include either student transportation or extra curricular travel. Neither of these categories are funded by the school operating fund (01 fund) under study in this report. Questions concerning extra curricular travel were asked on the district survey and an attempt was made to develop a differential since some 01 funds were used for it in some districts. However, figuring the destination, number of passengers, rates and frequency of each district's basketball team travel quickly became overwhelmingly complicated and the attempt was scrubbed.

Administrative and professional travel consumes from 2% (Skagway and Anchorage) to 19% (Lake and Peninsula and Chugach) of the nonpersonnel budget. However, only ten districts spent more than 10% and nearly half (24) districts spent under 5% on this major nonpersonnel expenditure category.

In their survey responses districts provided the most common destinations and the percentage of their total travel to each point for both intradistrict and out-of-district travel.

Out of District Travel

The out-of-district travel patterns were extremely consistent and it quickly became clear that virtually all districts travel primarily to Anchorage and Juneau. Air fare to Anchorage and to Juneau from the central office of each district was researched and priced. Then a weighted ticket price was computed based on the frequency of trips to the two locations. For example, if a district went to Anchorage three times as often as to Juneau, the two ticket prices were weighted 75% and 25%, respectively. Then a typical school business trip to each of these locations was estimated to consume three days so per diem of $300 was added to the price of the air ticket to each of these locations. The

weighted air fare for the two locations and the per diem was added together to find the total cost of the out-of-district travel market basket. For Juneau and Anchorage only one air fare and one three-day per diem amount was included. Therefore, the Anchorage base district amount was the value of one trip and all other districts except Juneau were assigned the value of two trips.

Intradistrict Travel
For multisite districts, air fares for the three most common travel routes as identified by the districts on their surveys were priced. In cases where routes were not identified, the three most logical ones were selected. Then mileage on all intradistrict routes was researched and the average cost per round trip mile was computed. This was compared to the average round trip cost per mile ($0.38) paid by the Anchorage district for intradistrict travel and the differential computed. A number of different rates existed for the Anchorage district depending on the bargaining unit and other factors. The $0.38 rate was selected as representative of the typical Anchorage intradistrict travel rate.

Travel Summary
The final travel differential considered the price differential of both out-of-district travel and intradistrict and then used the district expenditure weights for the two travel categories.

Overall travel differentials ranged from 1.00 for the base district and Juneau to over 2.00 for Bering Strait, Adak (1.99), Kodiak, Lower Kuskokwim, Yukon Flats and Pribilofs (highest at 2.47).

Intradistrict differentials tend to be more extreme with 11 multisite districts having differentials over 1.90 and two topping 3.00. They are Chugach (3.01) and Chatham (3.00).

Utilities (430)
Utilities are perhaps the most complex and difficult nonpersonnel costs to include in district differential calculations. The same was true of utilities in the case of household costs of living. Merely comparing the price of a gallon of fuel or a kilowatt of electricity does not consider the real variables of differences in building type and quality. It does not consider the cost per student of heating buildings which do not have dense student populations. It also does not consider the difference in burning efficiency of different fuels and heating equipment.

Additional problems affect the pricing of utilities. The unit price of fuels, electricity and water/sewer are often negotiated on a year to year basis. Because of this, utility and fuel costs for any single district can vary significantly from one year to the next, especially in remote locations where utility costs are a larger portion of the nonpersonnel budget. These prices may or may not be related to the going market price in various parts of the state.

Thus, taking the specific price for a district for FY 1988 may not be fair to that district. An analysis of fuel prices shows that some districts have done an excellent negotiating job with suppliers and have significantly lower costs than neighboring districts. Others pay higher prices than nearby districts.

In the districts with the highest electricity prices, the main cost variable is fuel oil for diesel generators. These prices vary from year to year depending on market conditions and business practices of the utility.

Another issue is districts which provide utilities for subsidized staff housing. These costs show up in the nonpersonnel instead of the personnel budget where they might better be placed. This was handled by including district-maintained housing square feet in each district's total building volume. This prevents inflating the utilities cost per square foot in districts which provide housing utilities.

Many districts pay lump sums for water/sewer and solid waste so no unit prices are available for comparison in these cases.

Finally, utilities are the single area in which the school foundation formula itself must be taken into account. The foundation formula is based on instructional units, not on a standard number of students or on the size of the physical plant. In fact, the instructional unit formula is a graduated scale allocating less units per student as the number of students increases in any funding community. Therefore, districts with small communities already receive what amounts to an efficiency differential. Districts which must provide full programs but which have low student density and poor building efficiency are compensated by the foundation formula. In virtually all cases, the foundation formula provides significantly more funding than the differential.

It is simply much less efficient to provide education in an REAA with 10 sites and no school larger than 200 students. Per student, it takes more building space, equipment and personnel of all kinds to do so when compared to the efficiency of the major urban districts. The school foundation formula compensates for that additional cost by allocating money by instructional unit, not by ADM. Therefore, even without a geographic differential, the smaller less efficient districts receive a higher budget allocation per ADM. In addition, these districts usually receive a geographic differential because of the higher unit prices they must pay for personnel and nonpersonnel operations. Mathematically, it is important to adjust the utilities differentials to avoid double remuneration for operating inefficiencies. This is done so by dividing utility costs by square feet per student. (See discussion of foundation formula impacts in Chapter IV.)

The utilities methodology developed for this report considers all of the above issues - unit price problems, fairness in pricing, efficiency differences and the impact of the foundation formula itself.

Utilities expenditure weights range from 11% (Sitka and Annette Island) to 56% (Nome) of the nonpersonnel budget. Sitka has very reasonable local utility rates and a mild climate while Nome has an exceptionally large number of square feet to maintain in a harsh climate. Some coastal districts with marine climates (Yakutat, Hoonah and Cordova) have utilities expenditures in the low 40% range. This high percentage is created by their utility unit costs being high but the costs of other nonpersonnel items being reasonably low. Twenty-one districts spend 30% or more and the Anchorage base district spends 29% of its nonpersonnel budget on utilities.

Fuels

To solve the fairness problem, districts were grouped into five categories depending on the per gallon price paid for heating fuel (oil). Though the Anchorage base district heats with gas almost all other districts use heating oil. The reverse pricing method requires that the actual market basket of another district be priced in the base district. Therefore, if that district buys oil in Nome, for example, the Anchorage price of oil, not gas, is the base price for comparison. The basis for comparison is the average price districts in each group reported paying for fuel oil.

The five groupings were based on the per gallon price of heating oil as reported by the districts. The price categories were $0.70 and under, $0.71-$0.85, $0.86-$0.94, $0.95-$1.12, and over $1.12 per gallon. Then the average price within each group was assigned to the districts in that group. In order, the group averages were $0.69, $0.74, $0.92, $1.07 and $1.28. The urban base group included Anchorage, Kenai Peninsula, MatSu, Fairbanks Juneau, Sitka and Ketchikan. On average, Alaska's major urban districts paid $0.69 per gallon for fuel oil during FY 1988.

In multisite districts where different prices were paid at different sites, prices were weighted based on the square feet of buildings at each site.

The next step is to compensate for the foundation formula effect of already paying for inefficiencies in operations. The price per gallon is then divided by the average number of square feet per student for each of the five groups. This reduces the price by approximately the same factor for which the foundation formula compensates for facility inefficiencies. The base group index created by this calculation is then divided into the same index for each of the four other groups. The result is the differential for heating fuel.

Expenditure weights for fuel were taken from the district survey results for FY 1988.

Electricity
The five fuel price groups of districts remain the same for the electrical power groupings. The rationale for retaining the fuel groupings is that fuel prices drive electrical costs in areas of high kilowatt cost where the differential is most important to districts. On the other hand, the source of electrical generating power in the base group with the lowest prices tends not to be fuel oil but rather gas, hydro and coal. The average school district kilowatt hour cost is calculated for each of the five groups. This average is then assigned to each district in their respective group.

Next, the cost per kilowatt is divided by the same adjustment factor as used for heating fuel - square feet per student. This index ($ per Kilowatt divided by sq.ft. per student) is compared to the index of the base group and the differential calculated.

Kilowatt costs are taken from the district survey results. In multisite districts prices paid at different sites were weighted by square feet of buildings at each site.

Other Utilities
These include water, sewer and solid waste disposal. A slightly different method was used for the other utilities differential due to little unit cost data available for these items Because of the lack of unit cost, no district groupings were done. Instead, each district's total cost for other utilities was divided by the total square feet of buildings in the district. This number - $ of other utilities per sq. ft. - was then divided by the standard efficiency factor of square feet per student. The resulting other utilities index for each district was then compared to Anchorage's index and the differential calculated.

Utility Summary
Nonpersonnel budget expenditure weights for each of the three utilities categories were taken from the district survey. The price differentials for each of these was produced by the methods described above. Though districts were assigned group average price differentials for fuel and utilities, each districts unique expenditure pattern was used for expenditure weights. The final result is a weighted total utility price differential.

Other Purchased Services (440)
Equipment repair services for copiers, typewriters and computers are the market basket in this category. Hourly service rates were identified from the district surveys and by surveying repair service vendors. The most common rates were selected and applied to all districts. Rates vary little among districts as the real variable is travel costs.

Copier and typewriter repair services are normally done onsite. The typical repair trip involves a repairperson traveling to a number of sites (3 is assumed for the purposes of the study) on a single trip. This way travel costs are shared among locations and it becomes financially feasible for the more remote districts to have equipment repaired and maintained. Shared travel costs were researched and calculated for each district not using local service vendors. The differential for these services is simply the travel expenses necessary for onsite repairs compared to service without travel.

Computer repair and maintenance were assumed to be at central locations so shipping costs from each district to a major regional center were added to the urban hourly rate for computer servicing.

Expenditure weights for other purchased services have one of the widest ranges among major categories. Ten districts spend less than 3% of their nonpersonnel budget here while 13 spend between 10% and 41%. Kenai Peninsula and Fairbanks spend the highest percentage in 1988, possibly to avoid the higher cost of purchasing new equipment.

Price differentials for equipment repair and maintenance services also vary widely because of the transportation costs to remote districts. Thirty-two districts have differentials below 1.20 while six are above 1.50 topped by the 1.93 paid by the Pribilof district.

Supplies, Materials and Media (450)

A market basket of twelve items for teaching supplies (3), janitorial supplies (4), office supplies (3) and textbooks (2) was created for this major expenditure category. Teaching supplies in the market basket were the common ruled newsprint tablet, art construction paper and the most common elementary workbook. Janitorial supplies were floor finisher, disinfectant, toilet paper and paper towels. Office supplies were copying paper, legal pads and envelopes. Finally, the textbook basket was a class' worth of a common elementary text plus the teachers manual for that text.

Vendors for these items were often the same ones for most districts so districts were assigned the most common vendor. Then the items were priced and shipped from the vendor to each district via the most commonly used transportation mode. The quantities shipped were identical and consisted of a case of each item. The specific shipping weights of these cases were researched. For example, 20 textbooks and the teacher's manual weighs 63 1/4 pounds.

The total costs were then compared to FOB Anchorage prices for the same items in the same quantities from the same vendors, the difference being the differential. Readers should remember that the reverse pricing method measures the market basket purchased in the district and then identifies what

the Anchorage price would be. That is why the same quantity is priced in both the district and in Anchorage. This prevents comparisons of Anchorage district purchasing practices with those of small districts. In reality though, the FOB Anchorage price from the vendors which supply most outlying districts are nearly the same as those secured from Anchorage vendors by the Anchorage district bid process. This is likely due to the common discounts school districts are given by vendors.

Expenditure weights for supplies, materials and media are fairly uniform among districts. Forty-three spend between 15% and 30% of their nonpersonnel budget in this category and over half spend between 20% and 30%. The extremes were 8% (Unalaska) and 36% (Lower Yukon). Anchorage spent 31% in FY 1988.

Price differentials for supplies, materials and media are quite modest and ranged from less than 1.00 for several Southeast districts which benefit from low freight costs to just 1.08 for the most northern remote areas. The reason for the limited differential is that most items in this category are shipped via parcel post. Those rates are very reasonable and do not vary much throughout the state. A second reason is that most districts buy from the same vendors at the same prices.

Equipment (510)

This market basket consisted of the most commonly purchased model and brand of copier (Ricoh 70-60), projector (Bell & Howell), VCR (Panasonic PV4700) and VCR camera (Panasonic PV400). They were priced and shipped from the most common vendors for each item via the most common type of transportation used in each district. Freight and parcel post rates were researched and applied to each piece of equipment according to its shipping weight. In total, this market basket weighed 844.5 pounds, most of it being the copier.

The total cost was then compared to the same items FOB Anchorage from the same vendors. Again, the costs paid by districts outside of Anchorage are not much different than what Anchorage pays using their inhouse purchasing system which buys as much as possible from Alaska vendors. This is probably because school districts as a group already receive substantial discounts on many new equipment items.

Equipment expenditure weights vary from 1% (Nome) to 20% (Northwest Arctic) of district nonpersonnel budgets. Fifteen districts spend between 10% and 20% but the most common range is the 1% to 5% spent by 23 districts.

Equipment price differentials are nearly nonexistent and range only from 1.00 to 1.04. First, most districts pay the same prices for the same equipment. Then, equipment is very expensive compared to its shipping weight. For example a

$400 VCR has a shipping weight of just 10 pounds and at parcel post rates to anywhere in Alaska the total cost difference is insignificant.

Calculation of District Nonpersonnel Differentials

Nonpersonnel differentials were calculated using exactly the same procedure used in calculating household cost of living differentials. First, the expenditure weights for the nonpersonnel items in each district are identified from the *School District Survey*, Budget Summary Update section. Each district identified the amount of spending on each of the eight major expenditure categories and on most of the subcategories under each of these eight. Then the percent of the total was calculated for each item. This percentage becomes the expenditure weight for that category. For example, if a district spends 30% of its nonpersonnel budget on utilities, the utility expenditure weight is 30%, and so on for each of the eight major categories. Expenditure weights total to 100% to represent all the nonpersonnel spending for that district. These weights are detailed in Table III-2 in this chapter.

Next, the price differentials for each nonpersonnel budget category as compared to the base district are taken from the research just described above. These price differentials are contained in Table III-3 earlier in this chapter. Then the expenditure weight is multiplied by the price differential and the product becomes that category's contribution to the district differential. For example, a district spending 3% of its nonpersonnel budget on equipment repair and maintenance and paying a repair service price differential of 1.34 receives a contribution of 4.02 (3% x 1.34) to the total nonpersonnel differential. The sum of the contributions of all eight nonpersonnel expenditure categories is the total district nonpersonnel differential. The total nonpersonnel differentials vary from 1.00 to Anchorage to 1.15 for Kodiak to a high of 1.53 in the Bering Straits district.

Table III-4 shows the products of multiplying weights and prices for each category. The sum of these eight products is the nonpersonnel differential for each district.

Table III-4

District Nonpersonnel Differential Sums

(Sum of eight categories = District Differential)

District	Prof & Tech Services	Communi-cation	Insurance	Travel	Utilities	Other Services	Supplies Mat. & Media	Equip.	Total Differential
Southern Southeast									
Annette Island	0.17	0.07	0.28	0.19	0.20	0.00	0.25	0.07	1.23
Craig	0.29	0.03	0.09	0.17	0.36	0.04	0.23	0.03	1.25
Klawock	0.16	0.06	0.16	0.10	0.57	0.04	0.22	0.04	1.35
Hydaburg	0.12	0.02	0.26	0.09	0.53	0.01	0.17	0.07	1.27
Southeast Island	0.15	0.06	0.16	0.06	0.65	0.03	0.20	0.05	1.36
Urban Southeast									
Ketchikan	0.05	0.03	0.12	0.03	0.33	0.09	0.26	0.10	1.00
Wrangell	0.19	0.07	0.18	0.08	0.26	0.07	0.19	0.03	1.08
Petersburg	0.02	0.03	0.15	0.06	0.29	0.06	0.23	0.20	1.05
Sitka	0.10	0.03	0.07	0.21	0.11	0.16	0.18	0.17	1.03
Juneau	0.17	0.04	0.05	0.02	0.23	0.07	0.26	0.14	0.98
Central and Northern Southeast									
Kake	0.27	0.04	0.14	0.06	0.49	0.13	0.13	0.05	1.30
Chatham	0.16	0.03	0.15	0.13	0.37	0.07	0.19	0.10	1.21
Hoonah	0.13	0.05	0.04	0.05	0.64	0.08	0.18	0.07	1.24
Pelican*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other Southeast									
Haines	0.15	0.04	0.00	0.02	0.44	0.12	0.24	0.06	1.07
Skagway	0.09	0.03	0.13	0.02	0.27	0.26	0.26	0.05	1.11
Yakutat	0.13	0.07	0.14	0.07	0.51	0.05	0.21	0.02	1.19
Prince William Sound									
Cordova	0.09	0.04	0.07	0.04	0.72	0.12	0.22	0.06	1.37
Chugach	0.14	0.05	0.22	0.42	0.24	0.03	0.21	0.04	1.36
Valdez	0.04	0.03	0.12	0.02	0.50	0.07	0.37	0.02	1.17
Copper River	0.18	0.03	0.19	0.04	0.28	0.05	0.22	0.14	1.12
Anchorage Urban Influence Area									
Anchorage (Base District)	0.07	0.04	0.06	0.02	0.29	0.16	0.31	0.04	1.00
Matanuska-Susitna	0.05	0.06	0.17	0.02	0.31	0.04	0.33	0.02	1.01
Kenai Peninsula	0.02	0.03	0.12	0.02	0.22	0.41	0.15	0.03	1.01
Kodiak	0.13	0.05	0.00	0.08	0.40	0.05	0.35	0.09	1.15

Table III-4 continued

District Nonpersonnel Differential Sums

(Sum of eight categories = District Differential)

District	Prof & Tech Services	Communication	Insurance	Travel	Utilities	Other Services	Supplies Mat. & Media	Equip.	Total Differential
Alaska Peninsula and Aleutian Islands									
Adak	0.28	0.02	0.15	0.10	0.20	0.14	0.22	0.13	1.25
Pribilofs	0.30	0.04	0.17	0.24	0.27	0.04	0.21	0.11	1.38
Aleutian (Region) East	0.14	0.04	0.16	0.30	0.15	0.33	0.14	0.11	1.37
Unalaska	0.10	0.06	0.22	0.08	0.38	0.11	0.19	0.13	1.27
Dillingham	0.13	0.08	0.16	0.06	0.46	0.05	0.28	0.01	1.24
Bristol Bay	0.27	0.03	0.23	0.07	0.40	0.03	0.16	0.10	1.31
Lake and Peninsula	0.05	0.03	0.24	0.34	0.23	0.04	0.26	0.12	1.31
Southwest	0.12	0.04	0.25	0.16	0.45	0.05	0.18	0.02	1.27
Yukon and Kuskokwim Delta									
Lower Kuskokwim	0.04	0.07	0.18	0.20	0.47	0.03	0.35	0.09	1.43
Yupiit*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kashunamiut	0.16	0.05	0.24	0.13	0.45	0.08	0.14	0.05	1.31
Lower Yukon	0.03	0.03	0.13	0.20	0.48	0.01	0.38	0.09	1.35
St. Mary's	0.04	0.06	0.34	0.16	0.53	0.05	0.09	0.07	1.35
Interior Remote									
Kuspuk	0.10	0.05	0.18	0.15	0.31	0.05	0.20	0.19	1.23
Iditarod	0.11	0.06	0.20	0.12	0.37	0.08	0.24	0.04	1.22
Galena	0.14	0.08	0.32	0.09	0.50	0.04	0.14	0.02	1.33
Yukon-Koyukuk	0.09	0.05	0.14	0.19	0.29	0.04	0.26	0.11	1.18
Yukon Flats	0.13	0.05	0.19	0.15	0.41	0.21	0.17	0.02	1.32
Tanana*	NA	NA	NA	NA	NA	NA	NA	NA	NA
Interior Road System									
Alaska Gateway	0.06	0.22	0.08	0.09	0.23	0.08	0.20	0.17	1.14
Delta/Greely	0.09	0.06	0.27	0.03	0.30	0.18	0.21	0.00	1.14
Nenana	0.12	0.08	0.34	0.08	0.29	0.06	0.23	0.03	1.22
Railbelt	0.08	0.03	0.30	0.04	0.20	0.13	0.28	0.08	1.14
Fairbanks	0.10	0.03	0.10	0.02	0.25	0.32	0.15	0.04	1.01
Arctic									
North Slope	0.15	0.06	0.04	0.18	0.47	0.14	0.25	0.05	1.34
Northwest Arctic	0.11	0.04	0.20	0.16	0.69	0.04	0.20	0.05	1.49
Nome	0.05	0.03	0.21	0.06	0.61	0.07	0.14	0.01	1.18
Bering Straits	0.07	0.05	0.13	0.23	0.60	0.15	0.25	0.05	1.53

*Not available. Based on data provided by districts.

IV. Analysis of Selected District Statistics

IV. Analysis of Selected District Statistics

(Selected Fiscal, Enrollment, Personnel and Facilities data for FY 1988)

Introduction

Though not required as part of the project contract, this chapter is included to provide an analysis of district data taken from the District Statistics pages of Volume II, *District Profiles*. Fiscal, enrollment, personnel and facilities data are presented and analyzed, primarily by using ratios per Average Daily Membership (ADM). These data and others can be found on the next to last page of each district profile in Volume II.

Districts are grouped geographical for ease of reference and comparison. However, the serious reader might find some of the most relevant comparisons by viewing districts of similar enrollment and of similar type - multisite, single site, remote, urban, districts under 200 students, 200-400 students, and so forth.

The source of most data used in this chapter is the *School District Survey* done as part of this study. School districts reported their FY 1988 school foundation fund budget on the survey. From this data, all fiscal comparisons by ADM are generated. ADM and instructional unit data was taken from Alaska Department of Education reports. Personnel (both certificated and classified) data came from the *School District Survey*, Personnel Inventory section and the instructional space information was derived from the Facilities Inventory section of the same survey.

The ADM comparisons are not intended to be a comparative measure of efficiency of operation. Instead, the purpose of these data is to show the significant differences among districts of differing types and sizes as well as striking similarities among similar districts. Some of the data also show the impacts of local choice on budget levels. A second purpose of this chapter is to allow districts to assess their own operations relative to those of similar districts.

Budget Analysis per ADM (See Table IV-1)

Total School Foundation Budget per ADM

Expenditures per ADM are affected by a number of factors - available revenue, local contributions, climate, quality and size of facilities, student concentration/dispersion, effectiveness of salary negotiations, district purchasing policies, administrative structure of the district and other sources of funding.

Per ADM total budget expenditures are lowest in the Anchorage base district at $4,591 followed next by MatSu ($4,815) and Sitka ($5,061). The next largest urban school districts - Kenai Peninsula, Juneau and Ketchikan - all spend under $5,300. At the other end of the scale is the North Slope district with $19,477 per ADM. However, only one-third of the North Slope budget is from the state foundation fund and two-thirds from other sources, primarily local contributions. In the case of North Slope the high expenditure level is in part due to local choice.

The Aleutian Region ($19,202), Yukon Flats ($16,638) and Lake and Peninsula District ($16,093) are the only other districts spending over $15,000 per ADM and they are very small - 105, 346 and 361 ADM, respectively - compared to the 1,252 ADM of the North Slope.

Eleven more districts have ADM expenditures above $12,000, nearly all of them in the remote areas of Western and Interior Alaska. Chugach, in Prince William Sound, is the exception. One of the smallest districts with an ADM of 107, the Chugach budget per ADM is $13,355. Clearly, the very small districts are financially inefficient, even in areas with only moderate cost differences. Some of the more obvious candidates for merger with nearby districts - at least from a cost efficiency standpoint - are Hydaburg (109 ADM at $9,330 per), Chugach (107), St. Mary's (112 ADM at $14,438 per) and Aleutian Region (105) which will be merged with Sand Point and King Cove in FY 1990. Yupiit and Tanana also appear to be located so that mergers with nearby larger districts would likely result in significant savings. However, neither district submitted surveys so detailed data is not available to confirm what appears to be true based on district size and geography.

Personnel Expenditures per ADM

Personnel expenditures per ADM show more consistency than nonpersonnel expenditures. Major urban districts - Ketchikan, Sitka, Juneau, Anchorage, MatSu, Kenai Peninsula, and Fairbanks - all spend less than $5,000 per ADM on total personnel costs. Highest of this group is Fairbanks at $4,859. Anchorage is lowest, $4,023. An additional 12 districts spend less than $6,000 per ADM on personnel.

Conversely, North Slope personnel costs of $15,163 per ADM are 35% higher than those of any other district. Only three other districts - Aleutian Region, Yukon Flats and Lake and Peninsula - spend over $10,000 per ADM in total personnel costs.

Nonpersonnel Expenditures Per ADM

This statistic demonstrates the efficiency of larger urban districts compared to remote multisites. The least spent per ADM is, of course, at Anchorage ($568) but other urban districts are not far off with MatSu ($664), Ketchikan ($978), Juneau ($757), Sitka ($903) and Fairbanks ($915) spending under $1,000 per ADM. Kenai, which is a multisite district with both large and small funding communities spends $1,020 which is $105 more than Fairbanks.

Nineteen more districts spend between $1,000 and $2,500 per ADM on nonpersonnel costs. These are the smaller urban areas such as Kodiak and Valdez, most of Southeast Alaska and the smaller districts with road access to regional centers.

Those districts with the highest nonpersonnel costs per ADM are of course the remote districts in the West, Interior and North. The Aleutian Region was the leader at nearly $8,000 per ADM followed by Yukon Flats ($6,163). Other districts with over $5,000 per ADM in nonpersonnel costs were Yukon-Koyukuk, St. Mary's and Lake and Peninsula. The Pribilof, Iditarod, North Slope and Bering Straits districts had nonpersonnel costs between $4,000 and $5,000 per ADM.

State and Other Funding per ADM

State foundation funding is highest per ADM in the remote multisite districts. Chugach, Aleutian Region, Lake and Peninsula, Kuspuk, Iditarod and Yukon Flats received between $10,000 and $15,000 in foundation funding. Five other remote districts received over $9,000.

Annette Island had only $2,151 per ADM in state funding but recovered $5,168 per ADM from other sources, primarily due to its reservation status under federal law. Anchorage, Juneau, Ketchikan, Fairbanks, Valdez, MatSu, Kenai Peninsula and Adak (military) received $3,500 or less. Again, these per ADM cost statistics are really a measure of both the foundation formula which grants more funding per student to smaller funding communities and the existing geographic differential.

Three districts have more than half their funding from other sources including local and PL 874 money. North Slope tops the list with over $13,000 (compared to a relatively moderate $6,167 from the State), Valdez ($6,311 from other sources vs. $3,479 State) and Annette Island. Those districts with the strongest tax base in relation to the population - North Slope and Valdez - are the biggest contributors to their own school systems.

As a group, the remote Western and Interior districts have fairly substantial per ADM income from other sources ranging from $3,000 to $6,000.

Districts with the least per ADM income from other sources are small districts but ones which are not at all remote. Skagway ($379 per ADM), Nenana ($475), Copper River ($512), Railbelt ($577), Petersburg ($901), Craig ($885) and Hydaburg ($883) are the most obvious cases of lean local contributions.

TableIV-1

District Statistics For School Foundation(01 Fund)
FY 1988

Per Average Daily Membership (ADM)

District	Total Budget Per ADM	Personnel $ per ADM	Nonpersonnel $ Per ADM	State Funding $ Per ADM	Other Funding $ Per ADM
Southern Southeast					
Annette Island	7,319	5,475	1,845	2,151	5,168
Craig	6,784	5,236	1,547	5,898	885
Klawock	7,384	5,985	1,399	5,960	1,423
Hydaburg	9,330	5,690	3,639	8,447	883
Southeast Island	11,739	8,313	3,427	9,154	2,585
Urban Southeast					
Ketchikan	5,176	4,198	978	3,489	1,687
Wrangell	5,889	5,035	854	4,623	1,265
Petersburg	5,530	4,342	1,188	4,612	901
Sitka	5,061	4,159	903	3,803	1,259
Juneau	5,320	4,562	757	3,469	1,850
Central and Northern Southeast					
Kake	9,454	6,351	3,104	6,059	3,395
Chatham	9,211	6,937	2,274	6,674	2,538
Hoonah	6,682	5,440	1,242	5,638	1,045
Pelican*	NP	NP	NP	NP	NP
Other Southeast					
Haines	7,064	5,484	1,580	5,395	1,669
Skagway	6,465	4,868	1,598	6,087	379
Yakutat	8,761	6,856	1,905	6,116	2,655
Prince William Sound					
Cordova	6,999	5,708	1,091	4,928	2,071
Chugach	13,355	9,222	4,134	11,959	1,396
Valdez	9,786	8,137	1,649	3,475	6,311
Copper River	8,316	5,998	2,320	7,804	512
Anchorage Urban Influence Area					
Anchorage (Base District)	4,591	4,023	568	3,149	1,442
Matanuska-Susitna	4,815	4,150	664	3,519	1,296
Kenai Peninsula	5,369	4,349	1,020	3,604	1,765
Kodiak	6,396	5,282	1,109	5,202	1,194

Enrollment, Personnel and Facility Analysis (See Table IV-2)

Table IV-2 shows a variety of comparative measures in terms of enrollment, personnel and facilities. The 1st count ADM for FY 1988 is as of October 1987. Total enrollment correlates very closely with many of the ratio analyses in both Table IV-1 and IV-2. As shown in the fiscal data, small enrollments usually mean high cost per ADM but high revenue as well because of the structure of the foundation formula.

ADM per Instructional Unit and the School Foundation Formula
An analysis of enrollment and instructional units demonstrates the effect of the foundation formula on school funding. The instructional unit is the funding unit worth about $60,000 before adjustment for the district differential. Given the highest differential currently in the statute (1.46 for Yukon Flats) the maximum value of an instructional unit is about $88,000.

Then the foundation formula has a declining scale based on the size of each funding community. As a result, a small funding community receives more dollars per ADM than a large funding community. The intent of the graduated foundation formula is to compensate districts for the inefficiencies of lower student density. Obviously, it is more expensive to provide education for a district of 10 communities each with 200 students than a single community with 2,000 students.

Exactly how much more it does cost is complicated by the fact that the foundation formula and the differential attempt to compensate for the same thing - higher cost. While the foundation formula is intended to compensate for higher costs due to lack of efficient density, the differential is intended to compensate for higher costs due to prices, not inefficiency. However, it is nearly impossible to separate these two causes of the same effect - higher costs. Does it cost more to provide education in Lower Kuskokwim because of inefficiency or because of higher prices?

The method selected for separating the efficiency issue from the price issue is called reverse pricing. Reverse pricing is discussed in detail in chapter II, the chapter on the personnel differential. Essentially, this concept calls for placing each district in Anchorage as is, with all its inefficiencies. Then the identical goods and services normally purchased at the home site are purchased at Anchorage. The difference in prices becomes the differential. This method avoids attempting to operate and price every school district operation as if it were a microslice of the Anchorage district, an impossible comparison.

The ADM per instructional unit for FY 1988 measures the combined effect of compensating for both price and inefficiency. The results are revealing in the extreme.

TableV-1 continued

District Statistics For School Foundation (01 Fund) FY 1988

Per Average Daily Membership (ADM)

District	Total Budget Per ADM	Personnel $ per ADM	Nonpersonnel $ Per ADM	State Funding $ Per ADM	Other Funding $ Per ADM
Alaska Peninsula and Aleutian Island					
Adak	7,140	4,904	2,237	3,210	3,931
Pribilofs	12,014	7,375	4,639	8,533	3,481
Aleutian (Region) East	19,202	11,269	7,932	15,280	3,921
Unalaska	9,349	6,649	2,700	6,362	2,987
Dillingham	7,838	6,210	1,627	5,920	2,618
Bristol Bay	10,478	6,685	3,793	6,510	3,968
Lake and Peninsula	16,093	10,519	5,574	12,242	3,851
Southwest	13,588	9,684	3,905	9,791	3,798
Yukon and Kuskokwim Delta					
Lower Kuskokwim	12,252	8,656	3,596	9,764	2,488
Yupiit*	NP	NP	NP	NP	NP
Kashunamiut	10,989	7,683	3,306	7,980	3,009
Lower Yukon	12,351	8,394	3,957	6,721	5,630
St. Mary's	14,438	9,192	5,247	11,769	2,669
Interior Remote					
Kuspuk	14,780	9,989	4,791	10,528	4,252
Iditarod	13,579	9,305	4,274	10,495	3,085
Galena	12,522	9,222	3,301	6,476	6,047
Yukon-Koyukuk	13,731	8,615	5,116	9,891	3,841
Yukon Flats	16,638	10,475	6,163	13,566	3,071
Tanana*	NP	NP	NP	NP	NP
Interior Road System					
Alaska Gateway	10,432	7,127	3,306	8,456	1,977
Delta/Greely	5,896	4,879	1,017	4,814	1,082
Nenana	8,803	6,617	2,186	8,328	475
Railbelt	9,408	7,012	2,396	8,831	577
Fairbanks	5,774	4,359	915	3,561	2,213
Arctic					
North Slope	19,477	15,163	4,314	6,167	13,310
Northwest Arctic	10,165	7,225	2,940	7,187	2,979
Nome	7,565	5,807	1,758	6,096	1,469
Bering Straits	12,535	8,472	4,063	8,707	3,827

Source: School District Survey, Alaska School District Profiles and Differential Study
*Not provided.

The Chugach district has the lowest ADM per instructional unit, 4.0 students per IU. This compares to the Anchorage ADM per IU of 12.4 students. This means the combined effect of the formula and the differential is a factor of 3.10. Since Chugach's FY 1988 geographic differential was only 1.11, the effect of the foundation formula alone gave Chugach an inefficiency cost differential of 2.79 before the geographic differential was applied.

This is not to say it is not three times as expensive per student to provide education in the Chugach district. What it does say is the mathematics of the foundation formula have potential dramatic effects on school funding levels independent of the geographic differential. Some other districts with extreme foundation formula impacts are Lake and Peninsula (ADM per IU of 5.1), Yukon Flats (5.7) Southeast Island (5.8), Southwest (5.9), Hydaburg and Yukon-Koyukuk (both 6.4),

A less extreme example might be the Railbelt district with an ADM per IU of 8.1 students, compared to Anchorage's 12.4. In FY 1988 Railbelt's geographic differential was 1.23. After subtracting for this, the impact of the foundation formula was 1.25.

The foundation formula also works in more urban situations. The Kenai Peninsula district,with most of its students in large urban schools, also includes several smaller sites scattered about the peninsula. The district receives no geographic differential to compensate for prices because prices on the Kenai are about the same as in nearby Anchorage. But the foundation formula provides the district with an efficiency differential of 1.16 because of the small funding communities included in this largely urban district.

In summary, the impact of the foundation formula is usually much greater than the impact of the price differential. Ironically, the one with lesser impact is the subject of this study and is calculated in great detail, the result of nearly eight months of professional work by a team of up to six economists and education experts. The more significant of the two, the foundation formula, is based on a resource cost model utilized by Dr. Nat Cole, an associate in this current study, in the mid-1980's using education professionals throughout Alaska. These professionals defined the items necessary to provide a unit of instruction in all areas of the state and the cost model estimated the necessary expenditures. The foundation compensates for inefficiency due to lower student density.

The final result of this analysis is that this differential study could not ignore the effects of the foundation formula on funding levels. In unaltered form, the results of this study would have calculated the total combined cost difference from both inefficiency and prices. Instead, the results of the *Alaska School District Profiles and Differential Study* were reduced by an efficiency factor (sq. ft. per student) to allow the foundation formula to continue

compensating for inefficiency. This study now limits compensation to differences in prices, its proper role given the effects of the foundation formula.

Personnel Per 100 ADM

Table IV-2 shows ratios of foundation funded certificated, classified and total personnel per 100 ADM. Again the efficiency of the larger urban district becomes apparent. Nine districts including all the major urban centers have 10 or less total personnel per 100 ADM. Juneau is lowest at 8.9, Anchorage third lowest at 9.3 foundation funded personnel per 100 ADM.

Eight districts have 20 or more total personnel per 100 ADM. They are all remote multisite districts and range up to 30 for the North Slope district which spends nearly $20,000 per student on personnel. Yukon Flats and Lake and Peninsula have 25. The major difference is not so much urban and remote. The real difference is between single and multiple site districts. Such small location as Hoonah (11.2), Nome (9.2), Dillingham (12.3) have personnel ratios close to the urban 10. But virtually all districts with more than a few sites average 18 or more personnel per 100 ADM.

Just four districts have more classified than certificated personnel per 100 ADM - North Slope (13 certificated vs. 17 classified), Yukon Flats (12 vs. 13), St. Mary's (11 vs. 12) and Lower Kuskokwim (10 vs. 11). In major urban areas, by contrast, the ratio of certificated to classified is typically 2 to 1. Anchorage (6 certificated vs. 3 classified), Juneau (6 vs. 3) and Fairbanks (7 vs. 3) and the Kenai Peninsula (7 vs. 3) are typical of the urban pattern.

This pattern may be a reflection of three factors. Districts with the most severe climates - and therefore high maintenance and operations activity - tend to have larger numbers of classifieds per 100 ADM. These same districts also generally have more building space per student because of lower student density. Classified local employment is also an important issue in districts where the school system is a major employer.

The extremes of certificated personnel per 100 ADM are from 6.2 (Juneau and Anchorage) to the range of 12 to 15 (Yakutat, Chugach, Lake and Peninsula, Kuspuk, Galena and North Slope.

Extremes of classified are more dramatic. Lowest is Skagway with 2.1 classifieds per 100 ADM followed by Ketchikan and Sitka, both 2.4. Leading classified employers are the North Slope district at 17.1 followed by six districts with 11 to 12 classified personnel per 100 ADM. These are Southeast Island, Lake and Peninsula, Lower Kuskokwim, St. Mary's, Iditarod and Yukon Flats. Clearly, districts with multiple sites must allocate a much more significant portion of their personnel budget for maintenance and janitorial personnel.

Instructional Space per ADM

A measure of the physical plant maintained by districts is the amount of building space used for instruction on a per student basis. Information on the *School District Survey* included the gross square feet of building space for instruction. This allowed a per ADM facility measure to be calculated.

The base district, Anchorage, is the most efficient urban district in terms of instructional space, providing 131 square feet per ADM. Juneau (141), Fairbanks (143) and MatSu (148) also exhibit the efficiencies of high student density. Even small single site districts provide education in the range of 170 to 220 gross square feet per ADM. Nome is an exception among single sites with 338, due to maintaining a former regional school facility.

The multisite districts again show the extra cost of providing education in areas of low student density. Twelve districts provide more than 275 square feet per ADM, most of those being the remote multisite districts. Two of these districts providing the most space appear to do so as a local choice. Valdez provides 303 and North Slope 414 square feet per ADM. Overall, the typical remote multisite districts maintain about twice the instructional space per ADM as the major urban districts.

Table IV-2

District Enrollment, Personnel And Facilities Statistics FY 1988

District	1st Count ADM	Total Inst. Units	Funding Comm.	Certificated Pers Per 100 ADM	Classified Pers Per 100 ADM	Total Pers Per 100 ADM	Instr Space GSF per ADM
Southern Southeast							
Annette Island	415	40	1	8.7	4.0	12.6	239
Craig	213	23	1	9.4	3.1	12.5	NP
Klawock	170	20	1	11.5	6.5	17.9	168
Hydaburg	109	17	1	10.8	5.9	16.8	154
Southeast Island	465	80	16	11.5	11.1	22.6	112
Urban Southeast							
Ketchikan	2,531	208	1	7.0	2.4	9.4	176
Wrangell	507	46	1	8.1	3.2	11.3	209
Petersburg	630	58	1	7.4	2.8	10.9	165
Sitka	1,617	133	1	6.8	2.4	9.2	171
Juneau	4,493	373	1	6.2	2.7	8.9	142
Central and Northern Southeast							
Kake	180	22	1	11.0	6.1	17.1	264
Chatham	316	50	9	11.3	8.3	12.2	269
Hoonah	240	26	1	7.6	3.6	11.2	296
Pelican*	NP	NP	NP	NP	NP	NP	NP
Other Southeast							
Haines	366	38	2	9.7	3.5	13.1	255
Skagway	142	17	1	10.6	2.1	12.7	261
Yakutat	134	17	1	13.2	7.0	20.1	384
Prince William Sound							
Cordova	429	40	1	8.0	4.1	12.1	208
Chugach	107	21	4	12.2	10.3	22.4	244
Valdez	693	57	1	9.4	6.1	15.5	303
Copper River	536	67	7	9.6	4.6	14.1	222
Anchorage Urban Influence Area							
Anchorage (Base District)	38,734	3,115	3	6.2	3.1	9.3	131
Matanuska-Susitna	8,606	686	7	6.5	3.5	10.0	148
Kenai Peninsula	8,003	744	19	7.1	2.8	9.8	209
Kodiak	2,285	218	8	7.1	4.8	12.0	184

TableIV-2 continued

District Enrollment, Personnel And Facilities Statistics FY 1988

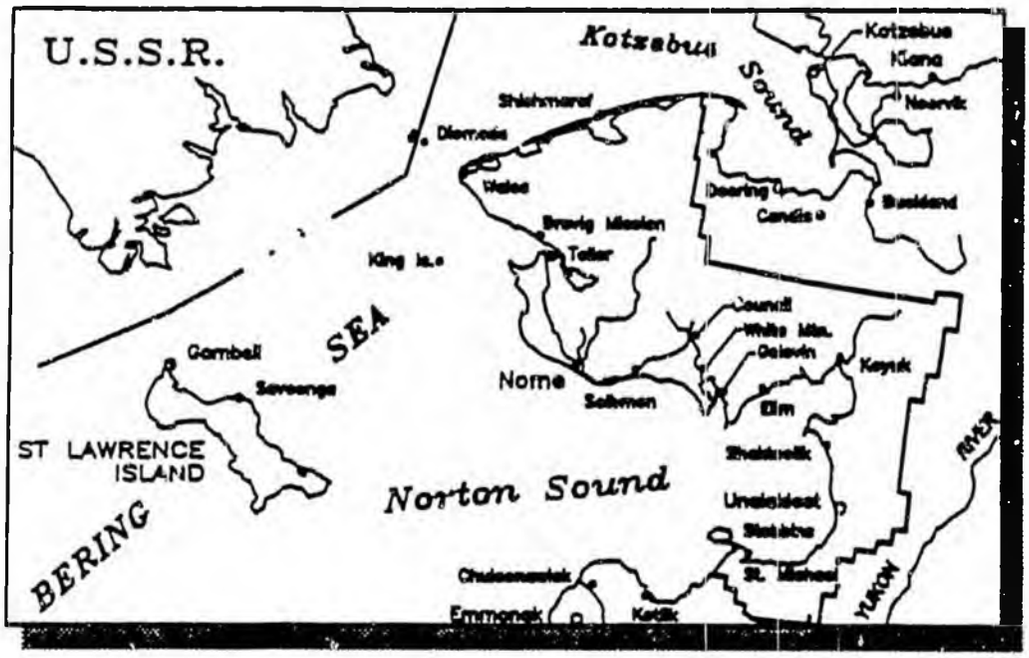
District	1st Count ADM	Total Inst. Units	Funding Comm.	Certificated Pers Per 100 ADM	Classified Pers Per 100 ADM	Total Pers Per 100 ADM	Instr Space GSF per ADM
Alaska Peninsula and Aleutian Island							
Adak	604	52	1	7.8	3.1	10.9	127
Pribilofs	152	24	2	10.0	6.1	16.1	266
Aleutian (Region) East	105	24	6	11.5	7.9	19.3	361
Unalaska	153	19	1	10.0	3.5	13.5	292
Dillingham	463	43	1	9.3	3.3	12.6	210
Bristol Bay	245	29	2	10.7	5.4	16.1	283
Lake and Peninsula	347	68	14	13.5	11.4	24.8	534
Southwest	480	82	10	13.6	5.9	19.6	242
Yukon and Kuskokwim Delta							
Lower Kuskokwim	2,606	372	22	9.9	11.0	20.9	174
Yupiit*	NP	NP	NP	NP	NP	NP	NP
Kashunamiut	169	22	1	10.7	4.7	15.4	118
Lower Yukon	1,282	168	11	10.1	9.2	19.4	239
St. Mary's	112	17	1	11.2	12.4	23.5	395
Interior Remote							
Kuspuk	375	61	8	12.0	7.5	19.5	321
Iditarod	399	64	9	11.1	10.9	22.0	265
Galena	151	19	1	15.4	6.0	21.3	323
Yukon-Koyukuk	545	85	11	10.6	9.3	19.8	215
Yukon Flats	361	63	11	11.8	12.8	24.6	365
Tanana*	NP	NP	NP	NP	NP	NP	NP
Interior Road System							
Alaska Gateway	502	69	7	8.7	6.2	14.9	239
Delta/Greely	930	80	1	6.9	3.1	10.0	146
Nenana	201	24	1	9.2	6.0	15.2	174
Railbelt	364	45	4	9.6	5.0	14.6	284
Fairbanks	13,195	1,057	5	6.8	2.7	9.5	143
Arctic							
North Slope	1,252	137	8	12.8	17.1	30.0	414
Northwest Arctic	1,540	181	NP	9.2	7.5	16.7	NP
Nome	725	63	1	7.4	2.5	9.2	338
Bering Straits	1,259	186	15	10.8	9.5	20.2	200

Source: School District Survey and Alaska Department of Education.
*Not provided

Appendix

Sample School District Profile as contained in Volume II District Profiles

BERING STRAITS SCHOOLS



Central Office:
Unalakleet

District Size:
24,240 sq. mi.

Scale in Miles
0 50 100

LOCATION:

The district is located in the Bering Straits/Norton Sound subregion of the state. It includes the villages on Seward Peninsula and Norton Sound as well as on St. Lawrence, St. Michael and Little Diomede Islands. The entire district lies just south of the Arctic Circle and extends west to the U.S./U.S.S.R. boundary.

BOUNDARIES:

The district contains the area within the Bering Straits Native Corporation boundaries, exclusive of Nome City.

ELECTION DISTRICT:

House District 23; Senate District L

Regional Corporation: Bering Straits Native Corporation.

FUNDING COMMUNITIES:

Brevig Mission, Koyuk, Stebbins, Diomede, Savoonga, Teller, Elim, Shaktoolik, Unalakleet, Gambell, Shishmaref, Wales, Golovin, St. Michael, White Mountain

Extremes: The district extends from Shishmaref in the north to Stebbins in the south and from Gambell in the east to Unalakleet in the west. Gambell, 348 air miles from Unalakleet via Nome, is the furthermost site from the district headquarters.

GOVERNANCE:

Bering Straits Schools is an REAA within the Unorganized Borough. All of the school site villages are 2nd class cities, organized in the late 1960's and early 1970's.

LAND STATUS:

The district includes the 2.69 million acre Bering Land Bridge National Monument. Village entitlements under ANCSA total 1.8 million acres. Elim and the villages on St. Lawrence Island have Indian Reservation status, with fee simple title to an additional 1,433,932 acres of land.

LIFESTYLE/EMPLOYMENT:

The villages of the district have a mixed subsistence/cash economy. Major Industries: Government service (federal, state and local) is the largest industry in the area, accounting for the bulk of paid employment throughout the year. Self-employment opportunities, generally part-time and/or seasonal, are generated by commercial fishing, trapping and Native arts and crafts. The district contains 14 reindeer herds with approximately 20,000 animals which provide a source of employment in some communities. Employers: The school district is the largest single employer in the area. Other significant public employers are the local cities and the Bureau of Land Management (summer firefighting). Private employers include village stores, village native corporations and local transportation companies.

SUBSISTENCE:

The Bering Straits area is one of the most traditional subsistence areas in the state, with subsistence products providing much of the annual food consumption. For example, Department of Fish and Game data indicate subsistence harvests for St. Lawrence Island communities amounting to around 1,000 pounds per capita annually. Major subsistence harvests for the area are walrus, seal, fish of various species and crab. Polar bear and whale are harvested in some communities.

AVERAGE INCOME:

(1985 data): The annual average adjusted gross income (AGI) per wage earner for the district is $14,386, about half the state average of $28,693. Reported average AGI's for the communities of St. Michael and Unalakleet, with economies based on commercial fishing, are between $5,000 to $6,000 higher than other district communities. Unalakleet's average AGI of $20,665 is the highest in the district while Diomede's average AGI of $8,266 is the lowest. By contrast, Nome, which is in the region although not a part of the school district, has an average AGI of $26,619.

UNEMPLOYMENT:

Unemployment for the Nome Census Area was 12.3% as of April, 1988, compared to a 9.9% state average. However, the reported figure is derived largely from Nome data; unemployment rates for villages in the census area are undoubtedly much higher.

POPULATION:

Total: District population is 4,639 (as reported by communities in 1988 for revenue sharing purposes).

Ethnicity: District full-time residents are primarily Alaskan Natives. The Native population ranges from 100% at Diomede to 87% in Teller (1980 U.S. Census data).

Community Size: The largest community in the school district is Unalakleet with 759 persons reported. Other large villages are Savoonga (487) and Gambell (494). Golovin, with 139 residents, is the smallest school site.

TRANSPORTATION

Air: All communities can be reached by chartered aircraft from either Nome or Unalakleet. Diomede, which has no airport, can be reached by seaplane, weather permitting. Most of the larger communities are serviced by regularly-scheduled mail/passenger service from Nome.

Water: All communities are accessible by water. Barge access is generally possible at least part of the year, except at Diomede, where restrictive ice conditions, fog and/or choppy seas often prohibit barge delivery. Few of the area's villages have dock facilities, so freight must be lightered on the beach and transported up to several miles to the village. Skiffs and small boats are used for coastal and river traffic during the summer.

Road System: The district's only road is the 72 mile gravel highway from Nome to Teller. Land travel within communities is by snow machine in winter and three-wheeler in summer.

CLIMATE :

Climate Type: The region's climate is transitional, with less temperature variation than continental and less cloudiness, lower precipitation and less humidity than maritime.

Temperatures: Winter mean monthly temperatures throughout the region vary slightly between minus 5° and minus 15°. Summer mean monthly temperatures are in the low 60's for the region's mainland communities and in the low 50's for island communities.

Precipitation: Maritime influences affect the region's precipitation rates, which range from a high of 18.9" per year in the Norton Sound communities to a low of 7.2" at St. Michael. Snowfall varies from a low of 32" annually at Shishmaref to a high of 98.2" at Gambell.

Annual Heating Degree Days: The average heating degree days per year measure for the district is 15,009.55, which compares with a statewide average of 10,896.

TOPOGRAPHY:

The Bering Straits region encompasses all watersheds draining into Norton Sound and the Bering Sea.

Rivers: The Bering Straits region is criss-crossed by rivers, among the most important of which are the Unalakleet, Koyuk, Fish, Kuzitrin, Agiapuk and Serpentine drainages.

Mountain Ranges: The district includes the Kigluaik Mountains in the southern Seward Peninsula, with peaks rising to 4,000 feet.

Other: The district is generally treeless and relatively flat. Most of the villages are located on wet tundra regions near the coast.

MAIN SERVICE CENTER

Anchorage

Distance from Central Office: Unalakleet has scheduled air service to Anchorage, 395 miles to the southeast.

REFERENCES:

ADC&RA, Community Profiles, Bering Straits Region

ADR, Federal Income Tax Payer Profile, 1988

ADOL, Alaska Population Overview, 1985 Estimates, 1987

ADOL, Winter/Summer 1987 Employment and Wage Information

ADF&G, Subsistence In Alaska, Arctic, Interior, Southcentral, Southwestern and Western Regional Summaries, 1987

Alaska Climate Center, Technical Note #3: Alaska Climate Summaries, 1986

DISTRICT STATISTICS—FY88
BERING STRAITS SCHOOL DISTRICT: ADM 1259.40

INSTRUCTIONAL UNITS & DIFFERENTIAL SUMMARY

Instructional Unit	No.	Differential Summary	
K-12	158.09	**TOTAL INST. UNITS**	**185.88**
Bilingual	11.42	**DISTRICT DIFFERENTIAL**	**x1.39**
Special Education	14.04		
Vocation Education	2.33	**WEIGHTED INST. UNITS**	**258.37**

FINANCIAL SUMMARY—SCHOOL OPERATING FUND (01 FUND)

		% Of Budget	Per ADM
TOTAL BUDGET	**$15,786,241.00**	100%	$12,534.73
Expenditures			
Salary & Benefits	$10,669,813.00	68%	$8,472.00
Non Personnel costs	$5,116,428.00	32%	$4,063.00
Revenues			
State Foundation	$10,965,970.00	69%	$8,707.00
Local, PL874 & Other	$4,820,271.00	31%	$3,827.00

PERSONNEL SUMMARY—SCHOOL OPERATING FUND (01 FUND)

	No.	Per 100 in ADM
Certified		
Regular Classroom Teachers	98.12	7.79
Total Teachers Salary Schedule	115.68	9.19
Districtwide Administrators	8.29	0.66
Total Administrators	19.97	1.59
Total Certified	135.65	10.77
Classified		
Regular Instruction Aides	19.06	1.51
Total Aides	54.59	4.33
Secretarial	13.76	1.09
Business Services/Data Proc.	4	0.32
Maint/Custodial	41.66	3.31
Transportation/Other	5	0.4
Total Classified	119.01	9.45
TOTAL PERSONNEL	254.66	20.22

OTHER FUNDS & PERSONNEL (NOT 01)

Other Funds		Other Personnel (FTE)	
(Food Servs., Activities, etc.)	$2,724,170.00	Certificated	11.74
Per ADM	$2,163.00	Classified	64.37

FACILITIES SUMMARY

Total Buildings	62	Instructional(GSF)	251,881
Total Gross Sq. Ft. (GSF)	409,624	Instructional GSF Per ADM	200
Total Bldgs Per Maint FTE	3	Instructional GSF Per Bldg	6,297
Custodial (FTE) Per Inst Bldg	0.44	Instructional GSF Per Custodial FTE	14,263

FUNDING COMMUNITIES SUMMARY—FACILITIES & ENROLLMENT

Funding Communities	Grade Levels	Instruction Buildings	Other Bldgs.	Teaching Stations	Enrollment Oct. 1987
Brevig M.	P-12	2	2	11	45
Diomede	K-12	2	2	12	51
Elim	K-12	4	NP	16	79
Gambell	K-12	3	5	13	125
Golovin	K-12	4	1	7	38
Koyuk	P-12	2	2	13	61
Savoonga	P-12	2	1	15	134
Shaktoolik	K-12	1	1	9	51
Shishmaref	P-12	4	1	18	135
St. Michael	P-12	3	1	15	104
Stebbins	P-12	3	2	16	127
Teller	K-12	2	3	11	47
Unalakleet	P-12	3	3	21	197
Whales	K-12	2	1	7	36
White Mt.	K-12	3	2	10	31
Totals		40	27	194	1261

District Differential Summary

Bering Strait

Personnel (Cost of Living) Differential

Household Item	Expenditure Weights	District Differential	Cost-Of-Education Differential
Housing	0.24	1.13	0.27
Food	0.29	1.64	0.48
Transportation	0.18	1.41	0.25
Clothing	0.10	0.96	0.10
Recreation	0.05	1.12	0.06
Medical	0.09	1.17	0.11
Miscellaneous	0.05	1.31	0.07
Total	1.00		1.34

Nonpersonnel (Operations) Differential

Expense Item			
Professional and Tech. Services	0.06	1.12	0.07
Communications	0.04	1.38	0.05
Insurance and Bonding	0.09	1.38	0.13
Travel	0.10	2.37	0.23
Utilities	0.32	1.85	0.60
Other Purchased Services	0.11	1.35	0.15
Supplies, Materials and Media	0.23	1.07	0.25
Equipment	0.05	1.03	0.05
Total	1.00		1.53

District Differential Summary

Personnel Differential	0.68	1.34	0.91
Nonpersonnel Differential	0.32	1.53	0.48
Total District Differential	1.00		1.40