**GAO** 

Report to Congressional Requesters

February 1988

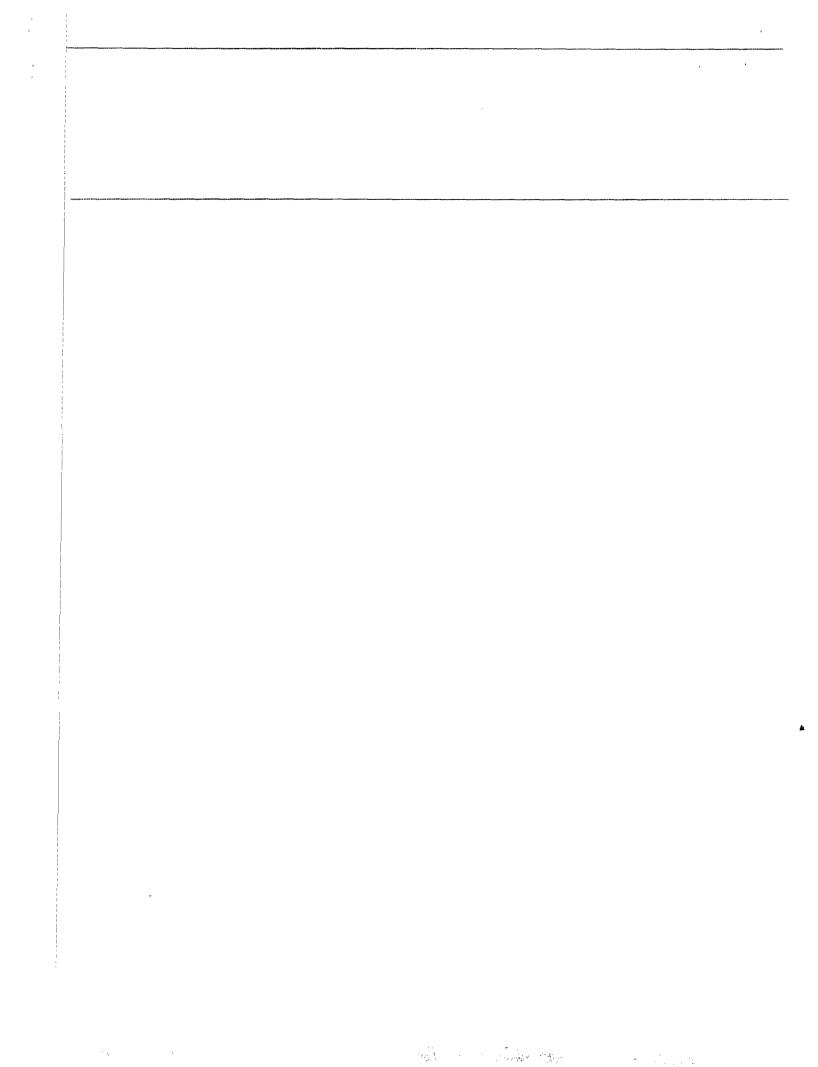
## POSTAL SERVICE

# Cost Comparisons: Mail Delivery to Residential Addresses





135067





United States General Accounting Office Washington, D.C. 20548

#### **General Government Division**

B-229361

February 19, 1988

The Honorable William D. Ford Chairman, Committee on Post Office and Civil Service House of Representatives

The Honorable Mickey Leland Chairman, Subcommittee on Postal Operations and Services Committee on Post Office and Civil Service House of Representatives

The Honorable Robert Garcia House of Representatives

This report responds to your request that we review the Postal Service's 1985 mail delivery cost study to determine if mail delivery costs are reduced by the use of neighborhood delivery and collection box units which are commonly called cluster boxes.

To determine if the data provided by the study could be used as a reasonable approximation of delivery costs, we reviewed the statistical methodology and assumptions the Service used to estimate delivery costs and interviewed Service officials and technicians responsible for carrying out the study.

Our review showed that the Service's 1985 mail delivery cost study had statistical methodological and data entry flaws that made the delivery cost estimates invalid. In response to our findings, the Service corrected the study in April 1987. Using the revised study's delivery cost estimates, we determined that the use of cluster boxes reduces mail delivery costs. The results of our analysis are as follows:

- In fiscal year 1985, an estimated 1.9 million, or about 4 percent, of the 53 million daily city mail deliveries nationwide were to cluster boxes. About 94 percent of the cluster boxes were located to serve residential customers residing either in low-rise apartments (37 percent), townhouses (33 percent), or detached homes (24 percent).
- For residential customers living in detached homes, the estimated annual cost of cluster box delivery was, in fiscal year 1985, about \$10 less per customer than the estimated cost of providing curbside mailbox

A Marine Commence of the Comme

- delivery to such customers. In fiscal year 1985, nationwide cluster box deliveries to residential customers residing in detached homes produced estimated delivery cost savings of about \$4.5 million.<sup>2</sup>
- For residential customers living in townhouses the annual cost per cluster box delivery was about \$11 less than the estimated cost of providing delivery to a mailbox located at the door. Door delivery was used for cost comparison purposes because not enough carrier routes with both cluster box and curbside deliveries to townhouse customers were studied by the Service to provide useable data. On the basis of a comparison with door delivery costs in fiscal year 1985, we determined that cluster box deliveries to townhouses produced estimated delivery cost savings nationwide of about \$6.9 million.
- The annual cost per cluster box delivery to low-rise apartment customers is essentially the same as the cost per delivery to interior lobby boxes. The Service stopped providing cluster boxes to new low-rise apartment customers in 1984.

Details on the methodology and results of our review are in appendixes I and II. A letter from the Postmaster General commenting on a draft of this report is included as appendix III. The comments state that the report is accurate and that the Postal Service agrees with our finding that the use of cluster boxes reduces mail delivery costs.

As arranged with your offices, we are sending copies of this report to the Postmaster General; the Director, Office of Management and Budget;

<sup>&</sup>lt;sup>1</sup>At the 90 percent confidence level, the confidence interval ranges from about \$5 to \$14.

<sup>&</sup>lt;sup>2</sup>At the 90 percent confidence level, the confidence interval ranges from about \$1.4 million to about \$9.4 million.

<sup>&</sup>lt;sup>3</sup>At the 90 percent confidence level, the confidence interval ranges from about \$4 to \$18.

 $<sup>^4\</sup>mathrm{At}$  the 90 percent confidence level, the confidence interval ranges from about \$1.6 million to about \$15.7 million.

and other interested parties, including the Chairman of the Subcommittee on Government Information, Justice, and Agriculture, Committee on Government Operations, House of Representatives.

L. Nye Stevens

**Associate Director** 

## Contents

Letter		1
Appendix I Cost Comparisons: Mail Delivery to Residential Addresses	Background 1985 Study of Delivery Costs Objectives, Scope, and Methodology Cost Comparisons Favor Cluster Box Delivery to Detached Homes and Townhouses Savings Not Evident at Low-Rise Apartments Agency Comments	6 6 7 8 10 10
Appendix II Confidence Intervals and Savings Estimates	Confidence Intervals Savings Estimate Methodology	11 11 12
Appendix III Comments of the Postmaster General on a Draft of This Report		17
Tables	Table II.1: Daily Deliveries by Delivery Mode for All City Mail Carrier Routes	11
	Table II.2: Daily Cluster Box Deliveries for All City Mail Carrier Routes	12
	Table II.3: Annual Savings Per Delivery and Nationwide Savings by Delivery Application	12
	Table II.4: Cluster Box Savings Estimates for Sampled Detached Homes (Motorized, Residential, Regular Routes)	13
	Table II.5: Cluster Box Savings Estimates for Sampled Detached Homes (Motorized, Residential, Auxiliary Routes)	14
	Table II.6: Cluster Box Savings Estimates for Sampled Detached Homes (Motorized, Mixed, Regular Routes)	14
	Table II.7: Projected Cluster Box Savings for Detached Homes by Route Type	15
•	Table II.8: Estimated Cluster Box Deliveries to Detached Homes by Route Type	15

Contents
----------

and From The State of the State		
	Table II.9: Estimated Annual Cost Savings for Detached Homes	16
Figure	Figure I.1: Cluster Boxes in Virginia Beach, Virginia	7

### Cost Comparisons: Mail Delivery to Residential Addresses

#### Background

Mail for residential customers is delivered either to the door, to curbside mailboxes, to sidewalk mailboxes, or to central delivery points such as apartment-style mailboxes and cluster boxes. Individual residential customers and apartment house owners are responsible for purchasing, installing, and maintaining the mailboxes used for delivery to the door, apartment, curbside, and sidewalk locations. The Postal Service may purchase, install, and maintain cluster boxes. It ceased providing door delivery to new residential addresses in 1978.

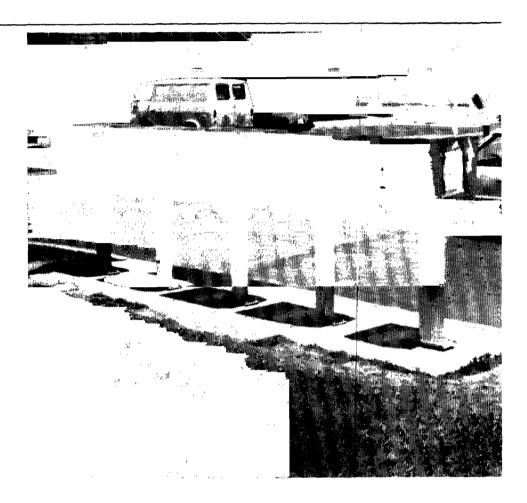
As shown by figure 1.1, cluster boxes are pedestal-mounted units that are located outdoors and are used to consolidate mail delivery at a single point for either 8, 12, or 16 residences. The occupants of each residence served by a cluster box are required to pick up mail from their own separate locked compartment.

The Service conducted an experimental program delivering mail to cluster boxes between 1967 and 1975. During that period, the Service purchased, installed, and maintained cluster boxes. This program was suspended as a result of the Postal Reorganization Act Amendments of 1976, which placed a moratorium on the Service installing cluster boxes in new housing areas. Congressional concern was over whether delivery to cluster boxes represented a reduction in mail delivery service.

After the moratorium expired in March 1977, the Service continued to encourage mail delivery to cluster boxes, but required that the boxes be purchased and installed by customers. This arrangement apparently proved to be ineffective in promoting the use of cluster boxes. In December 1980, the Service proposed that postal regulations be modified to allow the Service to encourage the acceptance and continued use of cluster boxes by agreeing to purchase, install, maintain, and replace the boxes. The proposed modification became final when it was published in the March 5, 1981, Federal Register.

The final rule authorized the Service to purchase, install, maintain, and replace cluster boxes when it determined that this would improve the efficiency of mail delivery. Since the effective date of the rule, April 6, 1981, the Service has increased the use of cluster boxes. According to the Service, in 1981 only about 3/10 of 1 percent of city deliveries were made to cluster boxes. By fiscal year 1985 that percentage had grown to nearly 4 percent (about 1.9 million deliveries).

Figure I.1: Cluster Boxes in Virginia Beach, Virginia



About 94 percent of the cluster box deliveries in fiscal year 1985 served residential customers. Seventy percent of the deliveries served customers residing either in low-rise apartments (37 percent) or townhouses (33 percent). The remaining 24 percent served customers in detached homes.

#### 1985 Study of Delivery Costs

In June 1984, the Service initiated a statistical study to update estimates of the costs of delivering mail. The Service wanted more comprehensive information to ensure that estimated savings from delivering mail to cluster boxes were valid. The Service had been relying on two 1974 studies, updated for inflation, to support claimed savings. To generate updated mail delivery cost estimates for the study, the Service systematically recorded the amount of time spent processing and delivering mail to mailboxes located on a stratified sample of 1,311 carrier routes.

Appendix I Cost Comparisons: Mail Delivery to Residential Addresses

The routes studied were for the most part, randomly selected from a universe of about 125,000 city carrier routes nationwide. About 420,000 deliveries to city addresses were studied. Data collection was carried out from March through June 1985. The updated cost study estimates, published in December 1985, also considered, in addition to labor costs, vehicle costs associated with delivering mail as well as costs incurred by the Postal Service purchasing and maintaining cluster boxes.

## Objectives, Scope, and Methodology

In September 1985, Representative William D. Ford, Chairman of the House Committee on Post Office and Civil Service; Representative Robert Garcia, then Chairman of the Committee's Subcommittee on Census and Population; and Representative Mickey Leland, Chairman of the Committee's Subcommittee on Postal Operations, asked us to review the Service's cluster box program. On the basis of discussions with representatives of the Subcommittee on Census and Population, our review objectives were to (1) evaluate how national policy governing the use of cluster boxes was carried out during fiscal year 1985 by local postal officials and (2) determine if mail delivery costs are reduced by the use of cluster boxes.

As requested by representatives of the Subcommittee on Census and Population, we divided our work into two phases. The report on the first phase describing how the Service's national policy on cluster box usage was carried out by local postal officials was issued in June 1987.<sup>2</sup>

The second phase of the requested review began in February 1986. We reviewed the records relating to the 1985 mail delivery cost study and the statistical methodology and assumptions the Service used to calculate mail delivery cost estimates. The records reviewed included forms used by postal personnel to record time spent by letter carriers to complete various types of deliveries on 1,311 routes. It was not possible for us to verify that time spent on individual deliveries was correctly observed and recorded because this basic data gathering was completed before we started our review. We did, however, confirm that the forms were prepared in accordance with instructions and the numbers were

<sup>&</sup>lt;sup>1</sup>These routes were selected from a sampling frame covering about 90 percent of daily deliveries on city routes.

<sup>&</sup>lt;sup>2</sup>Mail Delivery to New Residential Addresses: Adherence to Policy Can Be Improved (GAO/GGD-87-66, June 5, 1987).

Appendix I Cost Comparisons: Mail Delivery to Residential Addresses

correctly keypunched. We also interviewed Service officials and technicians responsible for carrying out the study. We found several defects in the delivery cost study, which made the validity of 1985 delivery cost estimates questionable. We concluded, however, that the study's defects could be remedied and the Service made our suggested revisions, which included (1) removing judgmentally selected mail carrier routes from the study, leaving only randomly selected routes; (2) rekeypunching all city delivery data collected for the study, thereby reducing the data entry error rate to an acceptable level; and (3) redistributing costs associated with mail carrier office and travel time, thereby providing a more accurate allocation of costs.

We determined that study data, as revised by the Service in April 1987, could be used as a reasonable approximation of delivery costs. We used the revised study data to compute annual cost per delivery for (1) cluster box deliveries to residential customers residing in detached homes, townhouses, and low-rise apartments, (2) curbside and door mailbox deliveries to detached homes and townhouses, and (3) deliveries to mailboxes located in low-rise apartment lobbies. For detached homes we compared the cost of cluster box delivery with curbside per delivery costs to compute savings. For townhouses we compared the cost per cluster box delivery with per door delivery costs to compute savings. (The number of carrier routes with both cluster box and curbside deliveries to townhouses included in the Service's study was not sufficient for estimating costs.) For low-rise apartments, we compared the cost per cluster box delivery with the per delivery costs of delivering to mailboxes located in the lobby.

Our estimates of savings per delivery have associated sampling errors, or confidence intervals, computed at the 90 percent level.<sup>4</sup> These confidence intervals are rather large because there was (1) high variability in both the number of cluster box deliveries and per delivery costs on the carrier routes sampled and (2) only a small number of routes where per cluster box delivery costs could be compared with the delivery costs of the other types of residential mailboxes. The upper and lower limits of the confidence intervals associated with cluster box savings estimates as well as the methodologies used to compute them are shown in appendix II.

 $<sup>^3</sup>$ Low-rise apartments are multifamily dwellings that have a common entrance and no more than three stories.

 $<sup>^4</sup>$ This means that there is a 90 percent chance that the interval will include the true universe value.

Appendix I Cost Comparisons: Mail Delivery to Residential Addresses

We performed our work in accordance with generally accepted government auditing standards.

## Cost Comparisons Favor Cluster Box Delivery to Detached Homes and Townhouses

The use of cluster boxes to deliver mail to residents of detached homes and townhouses reduced 1985 city delivery costs by about \$11.4 million—\$4.5 million<sup>5</sup> for detached homes and \$6.9 million<sup>6</sup> for townhouses. For each delivery the savings averaged about \$10 annually for detached homes<sup>7</sup> and \$11 for townhouses. Daily, the savings are less than .04 cents per delivery. The savings produced from cluster boxes result from a reduction in delivery time and, as such, are recurring and vary as labor costs increase or decrease.

The savings amount for detached homes was derived by comparing daily per delivery costs on carrier routes with both cluster box and curbside deliveries to detached homes. For townhouses, door delivery instead of curbside was used for cost comparison purposes because there were too few carrier routes in the Service's study with both cluster box and curbside deliveries to townhouses to estimate savings.<sup>9</sup>

#### Savings Not Evident at Low-Rise Apartments

For mail delivery to low-rise apartments we compared per delivery costs on routes with both cluster box deliveries and deliveries to mail boxes located in lobbies. On the basis of this cost comparison, we determined that the annual cost per cluster box delivery in fiscal year 1985 was essentially the same as cost per delivery to interior lobby boxes. The Service stopped providing cluster boxes to new low-rise apartment customers in 1984.

#### **Agency Comments**

In commenting on a draft of this report, the Postal Service said that it was accurate and agreed with our finding that the use of cluster boxes reduces mail delivery costs. Comments from the Postal Service are included as appendix III.

<sup>&</sup>lt;sup>5</sup>At the 90 percent confidence level, the confidence interval ranges from about \$1.4 million to about \$9.4 million.

 $<sup>^6</sup>$ At the 90 percent level, the confidence interval ranges from about \$1.6 million to about \$15.7 million

<sup>&</sup>lt;sup>7</sup>At the 90 percent confidence level the confidence interval ranges from about \$5 to about \$14.

 $<sup>^8</sup>$ The confidence interval at the 90 percent confidence level ranges from about \$4 to \$18.

<sup>&</sup>lt;sup>9</sup>Door delivery to new residential addresses was stopped in 1978.

## Confidence Intervals and Savings Estimates

This appendix lists the confidence intervals for statistical estimates mentioned in appendix I and discusses the methodology we used to estimate the amount of fiscal year 1985 savings attributed to using cluster boxes instead of other delivery methods. Confidence intervals were developed at the 90 percent confidence level in accordance with the methodology used in the 1985 Postal Service delivery cost study.

#### Confidence Intervals

Estimates for deliveries, cost savings per delivery, and annualized, nationwide cost savings cited in appendix I correspond to projections from a stratified sample in which the strata are different types of mail carrier routes. In the tables that follow, universe estimates are provided with corresponding upper and lower limits for 90-percent confidence intervals.

Table II.1: Daily Deliveries by Delivery Mode for All City Mail Carrier Routes

	Estimated daily	Percent of	90-percent confidence intervals <sup>a</sup>	
Delivery modes	deliveries	total	(Lower limit)	(Upper limit)
Door	26,421,630	50	24,598,769	28,244,492
Curbside mailbox	11,083,076	21	9,126,181	13,039,971
Apt. style mailbox	7,020,206	13	5,808,443	8,231,969
Cluster Box	1,860,408	4	1,121,866	2,598,949
Other <sup>b</sup>	6,553,180	12	5,279,182	7,827,177
Totals <sup>c</sup>	52,938,500	100.00	49,653,818	56,273,185

<sup>&</sup>lt;sup>a</sup>Confidence intervals for the overall total and those associated with individual delivery modes are computed independently. Therefore, individual confidence interval sums may not equal overall totals.

<sup>&</sup>lt;sup>b</sup>This category includes deliveries to mailboxes located behind the sidewalk, grouped boxes, mail delivery centers, bulk deliveries, deliveries to mail rooms in high-rise buildings, parcel post deliveries, and special services mail deliveries.

<sup>&</sup>lt;sup>c</sup>These totals correspond to 90 percent of all city mail carrier routes. If the other routes had the same characteristics as the routes sampled, the estimated number of daily city deliveries would total about 59 million.

#### Table II.2: Daily Cluster Box Deliveries for All City Mail Carrier Routes

	Estimated daily	Percent of	90-percent confidence intervals	
Delivery application	deliveries	total	(Lower limit)	(Upper limit)
Low-rise Apartments	688,117	37	259,665	1,116,570
Townhouses	615,703	33	366,366	865,040
Detached Homes	452,014	24	255,316	648,711
Businesses	75,190	4	55,874	94,507
Other	29,384	2	26,844	31,924
Totals <sup>b</sup>	1,860,408	100	1,121,866	2,598,949

<sup>&</sup>lt;sup>a</sup>Confidence intervals for the overall total and those associated with individual delivery applications are computed independently. Therefore, individual applications confidence limit sums may not equal overall totals.

#### Table II.3: Annual Savings Per Delivery (Based on routes with comparable data) and Nationwide Savings by Delivery Application

	Modes being	Estimated annual per delivery	90-percent inter	
<b>Delivery application</b>	compared	savings	(Lower limit)	(Upper limit)
Annual Savings Per I	Delivery			
Detached homes	Cluster vs Curb	\$9.93	\$5.41	\$14.45
Townhouses	Cluster vs Door	11.20	4.24	18.16
Low-rise apts.	Cluster vs Apt.	(0.88)	(4.92)	3.17
Nationwide Cost Sav	ings			
Detached homes	Cluster vs Curb	\$4,487,536	\$1,380,106	\$9,374,069
Townhouses	Cluster vs Door	6,897,105	1,554,077	15,710,943
Low-rise apts.	Cluster vs Apt.	(602,605)	(5,498,549)	3,542,910

#### Savings Estimate Methodology

Fiscal year 1985 savings estimates attributed to using cluster boxes instead of other modes of delivery were computed by first developing an annual savings estimate per delivery. This figure was then multiplied by estimated annual cluster box deliveries to detached homes, low-rise apartments, and townhouses to obtain estimates of the cost of delivery for each type.

To develop savings estimates per delivery, we considered only those routes in the Service's sample that had combinations of the delivery type we were comparing.

<sup>&</sup>lt;sup>b</sup>These totals correspond to 90 percent of fiscal year 1985 city mail carrier routes. If the other routes had the same characteristics as the routes sampled, the estimated daily total for cluster box deliveries would be about 2.1 million.

- Detached home savings estimates were computed by comparing per delivery costs on route types that had both cluster box and curbside deliveries to detached homes.
- Townhouse savings estimates were computed by comparing per delivery costs on route types that had both cluster box and door deliveries to townhouses.
- Low-rise apartment savings estimates were computed by comparing per delivery costs on route types that had both cluster boxes serving lowrise apartments and deliveries to mailboxes located inside apartment lobbies.

Thus, in comparing delivery costs for detached homes on "motorized, residential, regular" routes, for example, we first considered Service sample data for only those routes that had both cluster box and curbside deliveries. The savings amounts were then derived by computing the cost differential per delivery as observed on the day of the study (this assumes that had cluster boxes not been in place, curbside deliveries would have been made at costs similar to the route's existing curbside deliveries). This cost differential, or "savings," was then multiplied by the total number of cluster box deliveries on each route, thereby arriving at a net daily savings per route. Tables II.4, II.5, and II.6 summarize, for the three primary detached home route types, all observed cost differentials.

Table II.4: Cluster Box Savings Estimates for Sampled Detached Homes (Motorized, Residential, Regular Routes)

	Costs Per Delivery		Cost		
Sample route number	Cluster boxes	Curbside mailboxes	differential per delivery <sup>a</sup>	Cluster box deliveries	Net daily savings <sup>b</sup>
3050	\$0.18	\$0.23	\$0.05	21	\$1.02
7005	0.47	0.35	(0.12)	15	( 1.81
2905	0.31	0.27	(0.04)	11	( 0.49
0104	0.22	0.23	0.01	39	0.20
4528	0.20	0.24	0.04	268	12.01
0001	0.17	0.20	0.03	18	0.54
2004	0.30	0.29	(0.01)	67	(1.00
1004	0.41	0.46	0.05	225	11.13
<b>Route Type Totals</b>	}			664	\$21.60

<sup>&</sup>lt;sup>a</sup>Might not equal amount shown due to rounding.

<sup>&</sup>lt;sup>b</sup>Because of rounding, values listed might not agree with the result of multiplying the number of cluster boxes with the cost differential.

Table II.5: Cluster Box Savings Estimates for Sampled Detached Homes (Motorized, Residential, Auxiliary Routes)

	Costs Per	Delivery	Cost		
Sample route number	Cluster boxes	Curbside mailboxes	differential per delivery*	Cluster box deliveries	Net daily savings <sup>b</sup>
9208	\$0.27	\$0.18	(\$0.08)	5	(\$0.42
5009	0.29	0.26	( 0.03)	21	( 0.68
3109	0.29	0.24	( 0.05)	13	( 0.64
3525	0.30	0.31	0.02	194	2.86
8853	0.23	0.24	0.01	125	1.14
0004	0.21	0.21	(0.00)	5	( 0.02
6615	0.38	0.45	0.07	147	9.54
6031	0.23	0.23	0.00	71	0.28
9001	0.18	0.21	0.03	46	1.16
3308	0.30	0.35	0.05	77	3.98
6006	0.29	0.25	( 0.04)	216	(8.43
3014	0.28	0.28	(0.00)	127	( 0.23
1022	0.25	0.69	0.44	70	31.02
0003	0.37	0.47	0.10	5	0.50
7001	0.25	0.23	( 0.02)	193	( 3.14
1002	0.22	0.21	( 0.01)	87	( 0.71
Route Type Totals				1,402	\$36.21

<sup>&</sup>lt;sup>a</sup>Might not equal amount shown due to rounding.

Table II.6: Cluster Box Savings Estimates for Sampled Detached Homes (Motorized, Mixed, Regular Routes)

	Costs Per	Delivery	Cost		
Sample route number	Cluster boxes	Curbside mailboxes	differential per delivery	Cluster box deliveries	Net daily savings <sup>b</sup>
4920	\$0.36	\$0.45	\$0.09	5	\$0.45
4101	0.19	0.24	0.04	9	0.33
8011	0.24	0.31	0.07	373	26.92
0232	0.40	0.28	( 0.12)	8	(1.04)
1041	0.42	0.54	0.12	10	1.19
Route Type Totals				405	\$27.85

<sup>&</sup>lt;sup>a</sup>Might not equal amount shown due to rounding.

After arriving at these estimated daily savings for sample routes, we then made nationwide daily projections for the various route types. Because the Service's sample statistics were developed using stratified

<sup>&</sup>lt;sup>b</sup>Because of rounding, values listed might not agree with the result of multiplying the number of cluster boxes with the cost differential.

<sup>&</sup>lt;sup>b</sup>Because of rounding, values listed might not agree with the result of multiplying the number of cluster boxes with the cost differential.

sampling techniques, appropriate weights were applied to net daily savings estimates for each route type or strata (weights are determined by relating route sample sizes to known nationwide route totals). The results can then be summed up to arrive at an overall daily nationwide projection. Table II.7 summarizes net savings for cluster box deliveries to detached homes for the three primary detached home route types.

#### Table II.7: Projected Cluster Box Savings for Detached Homes by Route Type

Motorized route type	Net daily savings	Strata weight	Projected daily savings
Residential, Regular	\$21.60	548	\$11,837
Residential, Auxiliary	36.21	39	1,412
Mixed, Regular	27.85	32	891
Total Net Savings			\$14,140

Next, to arrive at a similar projection for daily deliveries, we applied the same weighting procedure to the number of deliveries in the sample routes we considered. Table II.8 summarizes total daily deliveries to which our estimate of net savings would apply.

#### Table II.8: Estimated Cluster Box Deliveries to Detached Homes by Route Type

Motorized route type	Deliveries in sample	Strata weight	Projected daily savings
Residential, Regular	664	548	363,912
Residential, Auxiliary	1,402	39	54,666
Mixed, Regular	405	32	12,967
Total Deliveries		······································	431,545

Net daily savings per delivery were then estimated by dividing net daily savings (see table II.7) by projected daily deliveries (see table II.8):

Finally, following procedures used by the Service, annual cluster box savings were derived by multiplying the daily savings per delivery estimate by 303, the delivery days that can be expected in any given year (making this annual projection assumes that the 1-day observations made in the Service's study are representative of all other days in which the sample could have been taken):

#### Appendix II Confidence Intervals and Savings Estimates

Annual savings per delivery = \$0.033 x 303 = \$9.93

This annual savings per delivery estimate was then used to compute annual savings for all estimated fiscal year 1985 cluster box deliveries. Table II.9 summarizes our annual estimated savings for detached homes, with associated sampling errors, for deliveries to cluster boxes in lieu of curbside deliveries for all three route types previously mentioned.

#### Table II.9: Estimated Annual Cost Savings for Detached Homes

	Savings per delivery	Overall cluster box deliveries	Overali nationwide estimated savings
Estimate	\$9.93	452,014	\$4,487,536
Lower limit	5.41	255,316	1,380,106
Upper limit	14.45	648,711	9,374,069

## Comments of the Postmaster General on a Draft of This Report



#### THE POSTMASTER GENERAL Washington, DC 20260-0010

November 18, 1987

Dear Mr. Stevens:

This refers to your draft report entitled <u>Cost Comparison:</u> Mail Delivery to Residential Addresses.

The report is accurate and we certainly agree with your finding that the use of cluster boxes reduces mail delivery costs.

Thank you for the opportunity to comment on your draft.

Sincerely,

Preston R. Tisch

Mr. L. Nye Stevens Associate Director United States General Accounting Office Washington, DC 20548-0001

			 	-			
	4						
ā							
		<b>&gt;</b>					

Requests for copies of GAO reports should be sent to:

U.S. General Accounting Office Post Office Box 6015 Gaithersburg, Maryland 20877

Telephone 202-275-6241

The first five copies of each report are free. Additional copies are \$2.00 each.

There is a 25% discount on orders for 100 or more copies mailed to a single address.

Orders must be prepaid by cash or by check or money order made out to the Superintendent of Documents.

United States General Accounting Office Washington, D.C. 20548

Official Business Penalty for Private Use \$300 First-Class Mail Postage & Fees Paid GAO Permit No. G100