Postal Rate Commission
Submitted 11/13/01

Revised 11/13/01

USPS-T-25

BEFORE THE
POSTAL RATE COMMISSION
WASHINGTON, D.C. 20268-0001

POSTAL RATE AND FEE CHANGES, 2001	:	**Docket No. R2001-1**

DIRECT TESTIMONY
OF
JENNIFER L. EGGLESTON
ON BEHALF OF
UNITED STATES POSTAL SERVICE

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DIRECT TESTIMONY
OF
JENNIFER L. EGGLESTON

AUTOBIOGRAPHICAL SKETCH

My name is Jennifer Eggleston. I am an Operations Research Analyst for the Special Studies Division of Cost and Rate Case Development. I joined the Postal Service as an Economist in July 1997. Since joining the Postal Service, I have been involved with many issues dealing with Package Services and Standard parcels. I have visited several Bulk Mail Centers (BMCs), Processing and Distribution Centers (P&DCs), delivery units, and other postal facilities.

In Docket No. R2000-1, I testified before the Postal Rate Commission concerning Parcel Post, Media Mail, Bulk Parcel Return Service (BPRS) and Merchandise Return Service. In addition, I supplied rebuttal testimony for Parcel Post final adjustments and the Transportation Cost System (TRACS). Other previous work includes the BPRS Cost Study provided to the Postal Rate Commission in October 1998 to fulfill the requirements of Docket No. MC97-4 and testimony in Docket No. MC99-4 (BPRS Expedited Minor Classification Case).

Before joining the Postal Service, I worked as an Economist for Research Triangle Institute (RTI), a non-profit research firm in North Carolina. I also worked for one year for the Naval Center for Cost Analysis in Crystal City, VA. I earned a Bachelor's Degree in Economics from James Madison University in 1992 and a Master's degree in Economics from North Carolina State University in 1995.

I. PURPOSE AND SCOPE OF TESTIMONY

The purpose of this testimony is to provide several rate witnesses with cost data to support their testimonies. It provides witness Kiefer (USPS-T-33) with mail processing and transportation cost data to support his development of Parcel Post rates, Bound Printed Matter rates, and Media Mail/Library Mail rates. In addition, this testimony provides witness Koroma (USPS-T-37) with the estimated unit cost of BPRS. Also, final adjustments are developed in this testimony. These are used by witness Patelunas (USPS-T-12) in his roll-forward analysis and by witness Kay (USPS-T-21) in her development of incremental costs.

II. MATERIALS RELATING TO THIS TESTIMONY

I am sponsoring the following library references.

LR-J-64: Cost Models Supporting USPS-T-25

This library reference contains the cost models described in this testimony. This includes the Parcel Post mail processing model, Parcel Post transportation model, Bound Printed Matter mail processing model, Bound Printed Matter transportation model, Media Mail mail processing model, Bulk Parcel Return Service cost model, and the final adjustments cost model.

LR-J-65: Bound Printed Matter Mail Processing and Parcel Post Window Service Costs

LR-J-65 documents how several inputs to the Parcel Post and Bound Printed Matter (BPM) cost models are developed. The inputs developed in this library reference are costs by basic function for BPM, costs for operation 07 for BPM, costs for auxiliary service facilities (ASFs) for BPM, and window service costs divided between dropshipped and non-dropshipped Parcel Post.

LR-J-66: Description and Program Documentation of Cube-Weight Estimation

This library reference documents the computer program used for the Parcel Post cubic-feet-per-piece regression analysis. Witness Kiefer (USPS-T-33) and I use the results of the regression analysis.

LR-J-67: Parcel Post Volume, Cubic Feet and Weight Data

LR-J-67 contains Parcel Post data and the documentation necessary to support the data. This library reference includes government fiscal year (GFY) 2000 Parcel Post volume, cubic feet, and weight data by weight and zone; Bulk Mail Center (BMC)/Auxiliary Service Facility (ASF) distribution data; and non-machinable(NMO)/machinable volume distribution by BMC. Witness Kiefer (USPS-T-33) and I use the data presented in this library reference.

III. PARCEL POST MAIL PROCESSING COSTS

A. Introduction

This section provides the mail processing cost data used by witness Kiefer to support the following rate categories:

- the intra-BMC rates,
- the OBMC discount,
- the BMC presort discount,
- the DBMC rates,
- the DSCF rates,
- the DDU rates,
- the proposed DSCF 3-digit nonmachinable (NMO) rate,
- the NMO surcharge for inter-BMC, intra-BMC and DBMC,
- the oversize rates for inter-BMC, intra-BMC, DBMC, DSCF and DDU,
- and the parcel pre-barcode discount.

As it has been done historically, the cost data supporting these rates are the estimated volume variable cost differences between two appropriate rate categories. For example, the data supplied to support the inter-BMC NMO surcharge is the estimated volume variable unit cost difference between an inter-BMC NMO and an inter-BMC machinable parcel.

B. Description of Methodology Using Mailflow Models

The methodology described in this section is used for all the Parcel Post cost estimates except for BMC presort, OBMC, the parcel pre-barcode discount, and the window service portion of DBMC cost savings. The methodology for those rate categories will be discussed in section C below.

The methodology used in this rate case is similar to the methodology used in Docket No. R2000-1, USPS-T-26. Updated data were used as available. One of the main changes in the methodology is that DBMC mail processing cost savings are now estimated using the same methodology as the other Parcel Post rate categories. The methodology has four parts.

1. Use mail flow models/cost summary worksheets to estimate the volume variable unit costs associated with the direct labor operations for each type of mailstream (i.e. machinable inter-BMC parcels).

2. Calculate a weighted average of all the modeled costs using the base year volume proportions.

3. Tie the weighted average modeled cost to the Cost and Revenue Analysis Report (CRA) and produce both a fixed and proportional CRA adjustment factor.

4. Apply the proportional and fixed CRA adjustment factors to the estimated cost of each mail stream, then compare these adjusted estimated costs to derive estimated cost differences.

Each part will be discussed separately below.

1. Mailflow Models/Cost Summary Worksheets

LR-J-64, Attachment A, pages 8 through 23 display the Parcel Post mailflow model/cost summary worksheets. As mentioned previously Parcel Post DBMC cost savings are now estimated using these mailflow models. In order to do this, it was necessary to add origin associate office (AO) costs to the Parcel Post mailflow models. In addition, "moving" costs and "sorting" costs at the destination AO were added to the Parcel Post mailflow models.

All of the inputs to the Parcel Post cost summary worksheets come from LR-J-64, Attachment A, pages 3 through 7. The first column of data in the cost summary worksheets shows the number of handlings a parcel receives in that mailstream. The next column on the cost summary worksheets is the “units per hour” or productivity for each operation. The conversion factors are shown in the third column of the cost summary worksheets. Conversion factors are the number of parcels that are included

in one handling. Usually this refers to the number of parcels that fit into each type of container. When parcels are handled individually, the conversion factor equals one.

The fourth column in the cost summary worksheets displays piggyback factors. Piggyback factors account for indirect costs associated with the direct labor costs of each operation.

The fifth column in the cost summary worksheets is the cost per operation. This is calculated as the product of the test year mail processing wage rate and piggyback factor divided by the product of the conversion factor and units per workhour.

The sixth column displays the cost per facility. This is calculated by multiplying the cost per operation by the number of handlings.

2. Calculate the Weighted Average of All of the Cost Summary Worksheets

At the bottom of each of the Parcel Post cost summary sheets is the total modeled cost of that mailstream. The model weight is displayed directly below the modeled cost. Model weights are derived from base year (BY) 2000 Parcel Post volumes. Row 1 on page 1 of LR-J-64, Attachment A, shows the total weighted average modeled cost, $1.057.

3. Calculate the CRA Adjustment Factors

CRA adjustment factors are used to tie the modeled costs to the costs reported in the Cost and Revenue Analysis Report (CRA). Page 2 of LR-J-64, Attachment A shows the separation of CRA cost pools into two categories: proportional and fixed. Proportional cost pools are those cost pools that are included in the model. Fixed cost pools are those cost pools that are not included in the model because either the cost pool is not worksharing-related, or the cost pool is not parcel-related.

Attachment A, page 1 shows the calculation of the CRA adjustment factors. The proportional CRA adjustment factor is calculated by dividing the sum of CRA proportional costs by the total weighted average modeled cost. This results in a proportional CRA adjustment factor of 1.286. The fixed CRA adjustment factor is the sum of the fixed CRA components. The fixed CRA adjustment factor is 17.0 cents.

4. Apply the CRA Adjustment Factors and Estimate Cost Differences

The next step is to apply the CRA adjustment factors to the modeled cost of certain mailstreams. Since the proportional CRA adjustment factor accounts for differences in modeled costs compared to their respective CRA cost pools, the proportional adjustment factor is multiplied by the modeled cost of each mailstream. Since the fixed CRA adjustment factor accounts for those cost pools that were not incorporated into the model, it is added to each of the modeled costs after they have been multiplied by the proportional CRA adjustment factor. This is shown in Table 2, on page 1 of LR-J-64, Attachment A.

The last step is to estimate the cost differences related to each of the rate categories mentioned above. This is shown in Table 3 on page 1 of LR-J-64, Attachment A. These are the cost estimates that witness Kiefer uses to develop the Parcel Post rates.

C. Methodology for Other Cost Differences

Several of the Parcel Post mail processing models were estimated using a different methodology than described in Section B above. These include DBMC window service cost savings, BMC Presort cost savings, OBMC cost savings, and the parcel pre-barcode cost savings. The methodology used to estimate each of these cost savings is described below.

1. DBMC Window Service Cost Savings

DBMC window service costs are calculated using the same methodology as used in Docket No. R2000-1. First, the proportion of base year direct window service costs are calculated in LR-J-65. Next, in LR-J-64, Attachment A, page 27, these percentages are used to allocate total base year window service costs to dropshipped and nondropshipped Parcel Post. Next, these total costs are divided by their respective volumes, and multiplied by a piggyback factor and a wage adjustment factor to derive test year unit costs. The estimated cost per piece of Parcel Select is subtracted from the estimated cost per piece of non-Parcel Select to derive the cost savings. As shown on row 15, the estimated test year window service cost savings of DBMC is 13.5 cents.

2. BMC Presort Mail Processing Cost Savings

The estimated cost savings of BMC presort is shown on page 24 of LR-J-64, Attachment A. The cost savings are estimated by subtracting the modeled BMC presorted cost per piece (column 2) from the modeled nonpresorted (inter-BMC) cost per piece (column 1).

The BMC presorted cost per piece is estimated on page 25 of Attachment A. It is estimated using a methodology similar to the mail processing models discussed in Section III B above. The operations in the model have been changed to reflect the fact that the BMC presorted parcels only need to be crossdocked at the origin BMC. In addition, the conversion factors have been changed to reflect the BMC presort requirements. Machinable parcels must be sorted in a 69 inch pallet box with a minimum of 52 inches of mail in each, and NMOs must be sorted onto pallets with a minimum height of 42 inches of mail.[1]

As shown in row 6, on page 24 of LR-J-64, Attachment A, the estimated BMC presort unit cost savings is 28.4 cents.

3. Origin BMC Mail Processing Cost Savings

The estimated cost savings of Origin BMC (OBMC) has two parts. The first part is the cost an OBMC parcel avoids by being dropped at the origin BMC. Since an OBMC parcel avoids costs at the facilities upstream of the BMC, these costs are equivalent to the costs a DBMC parcel avoids, including window service costs.[2] The second part of the cost savings relates to the fact that OBMC parcels are presorted by destination BMC. These avoided costs are the same as the BMC-presorted parcel cost savings. Therefore, the estimated costs avoided by an OBMC parcel are the sum of the DBMC unit cost savings and the BMC presort unit cost savings. This estimated OBMC cost savings is 117.4 cents.

[1] The BMC presort requirement is from DMM § M045.11.8. The cost analysis assumes that on average the pallet boxes and pallets will be filled halfway between the minimum requirement and the maximum fullness.

4. Parcel Pre-barcode Mail Processing Cost Savings

The difference between a pre-barcoded parcel and a non pre-barcoded parcel is how it is handled during its first handling on the parcel sorting machine (PSM). A clerk on the PSM must key the ZIP Code on non pre-barcoded parcels. In contrast, for a pre-barcoded parcel, the clerk only needs to orient the parcel so that the scanner can read the barcode. The cost savings associated with a pre-barcoded parcel are modeled in LR-J-64, Attachment A page 26. Since the only operation affected by the presence of a barcode is the PSM, it is the only operation modeled.

D. Rationale for Cost Differences for NMO and Oversize Parcels

This section describes the costing rationale that supports the NMO surcharges and oversize rates.

1. Cost Support for NMO Surcharge

The nonmachinable surcharges apply to parcels more than 34 inches long, 17 inches wide, or 17 inches high; weighing more than 35 pounds; or meeting certain other criteria.[3] NMOs are more expensive to process than machinable parcels for several reasons. By definition NMOs are parcels that cannot be sorted on the PSM. Therefore, they are either manually sorted or sorted on a less efficient mechanical sorter. This is reflected in the model through lower productivities associated with the "sort" operation.

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[2] Although both DBMC and OBMC parcels avoid the costs at facilities upstream of the BMC, DBMC parcels avoid these costs compared to intra-BMC parcels while OBMC parcels avoid these costs compared to inter-BMC parcels.

[3] Other criteria defining nonmachinable parcels are: high-density parcels (other than books and printed matter) weighing more than 15 pounds, and exerting more than 60 pounds per square foot (.04167 pounds per square inch) pressure on their smallest side; cartons containing more than 24 ounces of liquid in one or more glass containers; cartons containing 1 gallon or more of liquid in metal or plastic containers; cans, paints; rolls and tubes longer than 26 inches; metal-band strapped boxes, metal boxes, and wood boxes; articles not mailed in boxes or other containers; harmful matter; hazardous materials except ORM-D materials; and containers with all dimensions exceeding the minimum dimensions for a machinable (regular) parcel, if their coefficient of friction or ability to slide on a smooth, hard surface is not similar to that of a domestic-class fiberboard box of the same approximate size and weight. DMM § C050.6.0.

Since the productivity of sorting a NMO is less than the productivity of sorting a machinable parcel, each NMO has more costs associated with it. In addition, since NMOs are more burdensome to sort, they are currently only sorted to 3-digits at the BMC. This means that they will incur additional costs associated with receiving a manual sort at the plant. Since machinable parcels are sorted to 5-digits at the destination BMC, they simply need to be crossdocked at the plant.

Another reason why NMOs are more expensive to process than machinable parcels is that they are larger than machinable parcels. In BY2000, the average size of a NMO was 2.244 cubic feet and the average size of a machinable parcel was .597 cubic feet.[4] Since NMOs are larger than machinable parcels, fewer fit into each type of container. This is reflected in the model through lower conversion factors. Since conversion factors are used to unitize containerized costs, smaller conversion factors will result in more costs being allocated to each parcel.

2. Cost Support for Oversize NMOs

Oversize NMOs are parcels that have a length plus girth between 108 inches and 130 inches. These parcels are more costly to handle than other NMOs for many of the same reasons that NMOs are more costly to handle than machinable parcels. Since oversize parcels are larger than other NMOs, fewer oversize parcels fit in each type of container. This is reflected in the conversion factors shown on page 7 of LR-J-64, Attachment A. Since a smaller number of parcels fit into each container, the costs of loading, unloading, and moving that container are distributed among a smaller number of parcels. In addition, while some non-oversize NMOs may be sorted on mechanized equipment, oversize parcels have to be sorted manually.

[4] USPS LR-J-67.

E. Summary

The following table summarizes the estimated mail processing cost differences for Parcel Post. The appropriate benchmarks are shown in parenthesis.

Table III-I. Summary of Parcel Post Mail Processing Cost Differences

Rate Category	Cost Difference
Weighted Average BMC Presort Savings (compared to Inter-BMC)	($ 0.284)
Weighted Average OBMC Cost Savings (compared to Inter-BMC)	($ 1.174)
Machinable Intra-BMC Cost savings (compared to mach Inter-BMC)	($ 0.504)
Machinable DBMC Cost Savings (compared to mach Intra-BMC)	($ 0.707)
Weighted Average DSCF Cost Savings (compared to DBMC)	($ 0.643)
Weighted Average DDU Cost Savings (compared to DBMC)	($ 1.023)
Cost Data to Support NMO surcharge (compared to machinable in same rate category)	
Inter-BMC NMO	$ 3.327
Intra-BMC NMO	$ 2.534
DBMC NMO	$ 1.914
Cost Data to Support oversize rates (compared to NMO in same rate category)	
Inter-BMC oversize	$ 11.922
Intra-BMC oversize	$ 9.219
DBMC oversize	$ 5.110
DSCF oversize	$ 3.307
DDU oversize	$ 0.325
Proposed NMO-3-digit DSCF (compared to DSCF weighted average)	$ 1.093
Parcel Pre-barcode Savings (compared to non-barcoded parcel)	($ 0.031)

IV. PARCEL POST TRANSPORTATION COSTS

A. Introduction

The cost analysis presented in this section takes the transportation costs allocated to Parcel Post by the Transportation Cost System (TRACS) and develops the unit cost-per-cubic-foot estimates for each zone for each of the following Parcel Post rate categories: inter-BMC, intra-BMC, DBMC, DSCF and DDU. These costs are used by witness Kiefer in his development of Parcel Post rates.

The Parcel Post transportation model presented in this testimony employs an updated version of the methodology used in Docket No. R2000-1.[5] The updates to the model were necessary to incorporate the impacts of the agreement between the Postal Service and Fed-Ex for transportation services.[6] These changes will be discussed in Section B.3.b below.

The Parcel Post transportation cost model still employs the basic methodology developed by witness Hatfield in Docket No. R97-1. This methodology incorporates two major concepts: dividing transportation costs into transportation function (local, intermediate, and long distance) and dividing costs into zone-related (ZR) and non-zone-related (NZR).[7] These two concepts are briefly described below.

1. Transportation Functions

The transportation functions are defined in the Parcel Post transportation model as follows:

- **Local**: Costs associated with transporting parcels between facilities that are within the service area of a Processing and Distribution Center (P&DC), primarily between AOs and P&DCs. Local costs include the costs of postal owned vehicles.

[5] Docket R2000-1, USPS-T-26.
[6] More specifically, the model needed to be changed to account for the fact that the base year does not include any Fed-Ex impacts, but the test year does include these impacts.
[7] Docket R97-1, USPS-T-16. Zone-related and non-zone-related costs were originally referred to as distance-related and non-distance-related.

- **Intermediate:** Costs associated with transporting parcels between facilities that are within the service area of a BMC, primarily between P&DCs and BMCs.

- **Long distance:** Costs associated with transporting parcels between facilities that are in different BMC service areas, primarily between two BMCs. Long distance cost is associated only with inter-BMC parcels.

2. Zone-Related (ZR) vs. Non-Zone-Related (NZR)

The Postal Service measures great circle distance (GCD) as the distance between the 3-digit origin and the 3-digit destination of a parcel.[8] GCD can be quite different from the distance a parcel actually travels. Since the true cost of transportation is associated with the distance a parcel actually travels, GCD is not always an accurate indicator of the cost. This testimony makes a distinction between when the distance a parcel travels is related to GCD (zone-related) and when it is not related to GCD (non-zone-related). It should be noted that this is not necessary for DSCF and DDU since they are un-zoned rate categories and only incur local costs. The following table displays the results of this analysis.

Table IV-1. Zone and Non-Zone Costs

	Inter-BMC	Intra-BMC	DBMC
Local	Non-zone-related	Non-zone-related	Non-zone-related
Intermediate	Non-zone-related	Non-zone-related	Zone-related
Long-Distance	Zone-related*	N/A	N/A

There is an asterisk by "zone-related" for inter-BMC long-distance costs because although the majority of these costs are considered to be zone-related, there are some

[8] The earth is divided into units of area 30 minutes square, identical with a quarter of the area formed by the intersecting parallels of latitude and meridians of longitude. Postal zones are based on the distance between these units of area. The distance is measured from the center of the unit of area containing a point representing the 3-digit ZIP Code area of dispatch. DMM § GO301.1.

exceptions. The distribution of these costs can be seen on LR-J-64, Attachment B, page 7.

B. Methodology

This section of my testimony provides an overview of the Parcel Post transportation cost methodology. For a more detailed discussion and justifications of the methodology, please see Docket No. R97-1, USPS-T-16. The development of Parcel Post transportation unit cost-per-cubic-foot estimates are discussed in the following four sub-sections.

1. Estimation of Parcel Post cube-weight relationship.
2. Cubic feet and cubic foot miles.
3. Division of Parcel Post transportation costs by function and rate category.
4. Calculation of unit cost-per-cubic-foot transportation costs.

1. Estimation of Parcel Post Cube-Weight Relationships

One of the pieces of information needed for this analysis is the cube-weight relationship of Parcel Post. This relationship is used for two purposes. It is used by witness Kiefer to develop rates and it is used in this testimony to estimate the total cubic feet in each zone for each rate category.

The regression analysis used to estimate the cube-weight relationship is described in LR-J-66. The cube-weight relationship is estimated separately for inter-BMC, intra-BMC, and Parcel Select parcels.[9] The results are expressed in terms of an estimated cubic feet per parcel for each pound increment. The results of the regression analysis are shown in LR-J-64, Attachment B. Page 1 displays the equation results. Page 2 shows the results graphically.

2. Cubic Feet and Cubic Foot Miles

In order to develop unit cost-per-cubic-foot transportation costs, it is necessary to estimate the number of cubic feet in each zone for each of the five rate categories. This

[9] Detailed cubic feet and weight data are not available separately for DBMC, DSCF, and DDU.

is done by multiplying the test year before-rates volume estimates in each rate cell by the corresponding estimated cubic feet per parcel from the cube-weight regression in LR-J-64, Attachment B, page 1. The cubic foot estimates for each rate cell are shown on pages 3 through 5 of the same attachment. The total cubic feet per zone for each of the rate categories are summarized on page 6 of LR-J-64, Attachment B.

Total cubic-foot miles for the inter-BMC and DBMC rate categories are also needed for this analysis. These data are needed to distribute distance-related costs. These data come from LR-I-67 and are shown on page 6 of LR-J-64, Attachment B.

3. Division of Parcel Post Transportation Costs by Function and Rate Category

The division of Parcel Post transportation costs by function and rate category includes 4 steps.

a. Separate base year costs into functions.
b. Estimate test year costs.
c. Estimate the number of legs traveled by rate category and function.
d. Distribute test year costs to five rate categories: inter-BMC, intra-BMC, DBMC, DSCF and DDU.

a. Separate Base Year Costs Into Functions

The first step is to distribute base year costs from USPS-T-11, WP.B., cost segment 14.1 into the transportation functions: local, intermediate, long distance-ZR, and long distance-NZR. In addition, base year air costs are broken down into two categories, "Roll-Forward" and "Use Test Year Inputs". These categories signify how the cost will be handled in the estimation of test year costs. This is shown on page 7 of LR-J-64, Attachment B.

b. Estimate Test Year Costs

The basic methodology for estimating Parcel Post test year costs is to use the percentage of base year costs in each function to allocate total test year costs to each function. This step is shown on LR-J-64, Attachment B, page 8, rows 13 through18.

This applies to all highway, rail and water costs as well as air costs labeled "Roll Forward" on page 7 of the same attachment.

The costs labeled "Use Test Year Inputs" on page 7 of LR-J-64, Attachment B are treated differently. Instead of using base year percentages of Passenger Air and Dedicated Networks, the corresponding test year costs are pulled from witness Hatfield's testimony (USPS-T-18).[10] Also, as in the previous rate case, Alaska non-preferential costs are taken directly from the test year cost segment and component report. These test year costs are shown on LR-J-64, Attachment B, page 8, rows 19 through 21.

The final part of the estimation of test year costs is adding test year postal owned vehicle costs to local costs. Test year postal owned costs are shown on LR-J-64, Attachment B, page 8, rows 22 through 24.

LR-J-64, Attachment B, page 8, rows 25 through 31 show total test year costs by local, intermediate, long-distance-ZR, and long-distance-NZR. As can be seen, plant load costs and Alaska air non-preferential costs are pulled out of all other intermediate costs. This is because these two costs are not attributed to all rate categories. Since by definition DBMC, DSCF and DDU Parcel Post must be dropped at the destination facility by the mailer, plantloaded costs are only allocated to the inter-BMC and intra-BMC rate categories. In addition, since Parcel Post destinating in Alaska is not eligible for the DBMC rate, Alaska Air costs are not allocated to this rate category.

c. Estimate the Number of Legs Traveled by Rate Category and Function

Before distributing test year costs to each rate category, it is first necessary to estimate the average number of legs a parcel travels on each transportation function of each rate category. For example, if a parcel follows the full path of the inter-BMC mailstream, it will incur costs associated with:

- 2 legs of local transportation (origin AO to origin plant and destination plant to destination AO),

[10] Since these costs are adjusted for various reasons in the roll-forward process, these inputs are only approximations of the test year components.

- 2 legs of intermediate transportation (origin plant to origin BMC and destination BMC to destination plant), and
- 1 leg of long distance transportation (origin BMC to destination BMC).

In reality, not all parcels travel the full path associated with their mailstream. For example, some intra-BMC parcels are held out at the local AO. Table V-2 displays the assumed number of legs for Parcel Post used in this transportation model. The sources for these assumptions can be found on LR-J-64, Attachment B, page 9.

Table IV-2. Parcel Post Transportation Model - Number of Legs

	Inter-BMC	Intra-BMC	DBMC	DSCF	DDU
Local	1.93	1.92	1	1	0.17
Intermediate	1.93	1.92	1		
Long Distance	1				

d. Distribute Test Year Costs to Inter-BMC, Intra-BMC, DBMC, DSCF, and DDU

The next step is to distribute test year costs to five rate categories: inter-BMC, intra-BMC, DBMC, DSCF and DDU. Costs are distributed based on total cubic feet in the rate category and number of legs traveled in that function. This distribution is shown on page 9 of LR-J-64, Attachment B. As mentioned earlier, plant load costs are not allocated to any of the Parcel Select rate categories and Alaska Air costs are not allocated to the DBMC rate category.

4. Calculation of Unit Transportation Costs

The final step is to calculate the unit cost-per-cubic-foot transportation costs. This will be discussed separately for each rate category.

a. Inter-BMC Unit Transportation Costs

The calculation of unit cost-per-cubic-foot transportation costs for the inter-BMC rate category is shown on page 10 of Attachment B. The second column shows the percentage of cubic feet in each zone. These are used to distribute the non-zone-related costs (local, intermediate and long distance-NZR costs) to zones. These calculations are shown in columns 4, 5, and 7. The third column displays the percentage of cubic foot miles in each zone. These are used to allocate zone-related costs (long distance-ZR costs) to each zone. These calculations are shown in column 6.

The next step is to calculate the unit cost-per-cubic-foot in each zone for each transportation function. This is done by dividing the total costs in each zone (columns 3-6) by the total inter-BMC cubic feet in each zone (column 1). Next, the total unit cost-per-cubic-foot for each zone is calculated as the sum of the unit cost-per-cubic-foot for each transportation function. This is shown in column 12 on page 10 of LR-J-64, Attachment B.

b. Intra-BMC Unit Transportation Costs

The methodology used to calculate unit cost-per-cubic-foot transportation costs for intra-BMC parcels is slightly different than the methodology used for inter-BMC parcels for two reasons. First, none of the intra-BMC transportation costs are zone-related. Second, it is assumed that fifty percent of the *local-zone* intra-BMC parcels are held out at the AO.[11] The held-out parcels will avoid most of the transportation costs with the exception of local transportation costs that are incurred below the delivery unit. These costs, intra-city and box route, are pulled out of the local costs, and distributed separately.

The calculation of the intra-BMC unit cost-per-cubic-foot transportation estimates is displayed on page 11 of LR-J-64, Attachment B. Column 1 shows the total cubic feet

[11] The term "local-zone" is from the rate chart (local-zone, zone 1/2, zone 3, zone 4, etc). "Non-local-zone" refers to zones 1/2 through zone 8. The term "local" refers to the separation of costs into cost function (local, intermediate, and long distance). In order to avoid confusion, the terms "local-zone" and "non-local-zone" will be italicized and underlined.

in the *local-zone* and the *non-local-zone*. Column 2 displays the average number of local and intermediate legs. Since 50 percent of *local-zone* intra-BMC parcels incur zero legs of local transportation and 50 percent incur two legs of local transportation, on average, *local-zone* intra-BMC parcels incur one leg of local transportation.[12]

Column 3 on page 11 of LR-J-64, Attachment B, displays the average cubic foot legs for *local-zone* and *non-local-zone*. This is calculated as the product of cubic feet (column 1) and average number of legs (column 2). Column 4 shows the percent of cubic foot legs in *local-zone* and *non-local-zone*. Column 5 uses the percentage shown in column 4 to distribute local costs to *local-zone* and *non-local-zone*. Intra-city and box route costs are shown separately. Column 6 uses the percentages in column 4 to distribute intermediate costs to *local-zone* and *non-local-zone*.

Column 7 on page 11 of LR-J-64, Attachment B, calculates the local cost-per-cubic-foot for each type of zone. The local unit cost-per-cubic-foot in *local-zone* is calculated as the total local cost in *local-zone* (column 5) divided by the total cubic feet in *local-zone* (column 1), plus the total intra-city and box route cost (column 5) divided by the total cubic feet of all intra-BMC (column 1). The local unit cost-per-cubic-foot for zones 1/2 through zone 8 is calculated as the total local cost in *non-local-zone* (column 5) divided by the total cubic feet in *non-local-zone* (column 1), plus the total intra-city and box route cost (column 5) divided by the total cubic feet in all zones (column 1).

Intermediate unit cost-per-cubic-foot estimates are calculated in column 8. These costs are calculated similarly to local costs, without the extra step of adding in intra-city and box route costs. Column 9 displays the total unit-cost-per-cubic-foot estimates.

c. DBMC Unit Transportation Costs

The methodology to calculate DBMC unit cost-per-cubic-foot estimates is very similar to the one used for inter-BMC. These calculations are shown in LR-J-64, Attachment B, page 12. The main difference is which transportation functions are zone-related and non-zone-related. As discussed earlier, it is assumed that DBMC

[12] As mentioned earlier, it is assumed that 50 percent of *local-zone* intra-BMC parcels are held out at the local AO. These parcels will incur zero legs of local transportation.

intermediate costs are zone-related and therefore are allocated to zone by cubic-foot miles. This is displayed in column 4. DBMC local costs are assumed to be non-zone-related and allocated to zone by cubic feet. Local costs by zone are displayed in column 3. There are no DBMC long-distance costs.

d. DSCF Unit Transportation Costs

The estimated unit cost-per-cubic-foot for DSCF is shown on LR-J-64, Attachment B, page 13. The calculation of cost-per-cubic-foot for DSCF Parcel Post is very simple due to two factors. First, DSCF is not zoned. Second, the only transportation costs incurred by DSCF parcels are local. Therefore the unit cost-per-cubic-foot is estimated by dividing total local DSCF costs by total DSCF cubic feet.

e. DDU Unit Transportation Cost Savings

The DDU unit cost-per-cubic-foot estimate is calculated in the same manner as DSCF. The DDU unit cost-per-cubic-foot is estimated by dividing total DDU transportation cost by total DDU cubic feet. This is shown on LR-J-64, Attachment B, page 14.

C. Summary

The summary of the Parcel Post unit cost-per-cubic-foot estimates is shown in Table IV-3 below.

Table IV-3. Parcel Post Unit Cost-Per-Cubic-Foot Estimates

Rate Category	$/cf
Inter-BMC	
Zone 1/2	$3.891
Zone 3	$4.324
Zone 4	$5.035
Zone 5	$6.080
Zone 6	$7.264
Zone 7	$8.592
Zone 8	$11.74
Intra-BMC	
Local-Zone	$1.875
Zone 1/2	$3.495
Zone 3	$3.495
Zone 4	$3.495
Zone 5	$3.495
DBMC	
Zone 1/2	$1.306
Zone 3	$2.817
Zone 4	$4.150
Zone 5	$7.833
DSCF	$0.807
DDU	$0.139

V. BOUND PRINTED MATTER MAIL PROCESSING COSTS

A. Introduction

This section explains how mail processing cost differences for DBMC, DSCF, DDU, and Carrier-Route Bound Printed Matter (BPM) are developed. These cost estimates are used by witness Kiefer in his development of BPM rates.

B. Methodology

The methodology will be explained separately by rate category. The full BPM mail processing cost model is displayed in LR-J-64, Attachment D.

1. DBMC

The BPM DBMC mail processing cost savings are estimated using a methodology similar to the one developed in Docket No. R2000-1. In addition, the cost model uses data collected in the BPM study documented in Docket R2000-1, USPS LR-I-109.

The first step in estimating the DBMC cost savings is to estimate the outgoing mail processing costs at BMCs and non-BMC facilities. This analysis is displayed and explained in LR-J-65. Since BPM DBMC will be entered at the destination BMC and not incur any mail processing costs at the origin associate office (AO) or the origin sectional center facility (SCF), it is assumed that DBMC BPM will avoid all outgoing mail processing costs at non-BMC facilities. In addition, it is assumed that DBMC BPM parcels will avoid 55.7 percent of outgoing mail processing costs at BMC facilities. This percent represents the percentage of outgoing mail processing costs that are associated with mail processing costs incurred at the origin BMC. This percent is derived in LR-J-64, Attachment D, page 8.

LR-J-64, Attachment D, page 9 displays the calculation of mail processing costs avoided by BPM DBMC mailpieces. There is one change in this methodology compared to Docket No. R2000-1. In that case, ASF outgoing mail processing costs were simply added to the total of BMC outgoing mail processing costs. In this testimony, outgoing mail processing ASF costs are distributed to BMCs and non-BMC facilities. This is done based on a survey conducted in R2000-1 that showed that ASFs

act like BMCs 36.1 percent of the time.[13] Therefore 36.1 percent of outgoing costs at ASFs are added to the BMC outgoing costs, and 63.9 percent are added to non-BMC outgoing costs.

In order to estimate the unit costs avoided by a DBMC BPM mailpiece the total avoided outgoing mail processing costs are divided by the volume of BPM that is entered upstream of a BMC. As can be seen in LR-J-64, Attachment D, page 9, the estimated volume variable mail processing unit costs savings of DBMC BPM is 46.1 cents.

2. DSCF

The cost savings of BPM DSCF is calculated using the same methodology used in Docket No. R2000-1. The cost savings are estimated as the cost difference between a DBMC mailflow model and a DSCF mailflow model.[14] The mailflow models for DBMC and DSCF are displayed in LR-J-64, Attachment D, pages 6 and 7, respectively. As can be seen in this attachment, DBMC modeled costs are 38.8 cents and DSCF modeled costs are 11.3 cents. Therefore, the estimated test year mail processing cost savings of DSCF is 27.4 cents.

3. DDU

The DDU cost savings are estimated as the mail processing cost savings compared to DBMC. Since the BPM DBMC mailflow cost model estimates costs up to the point where BPM DDU would began to incur costs, the cost savings are equivalent to the DBMC modeled costs. Therefore the estimated test year DDU unit mail processing cost savings is 38.8 cents.

4. Carrier-Route

The carrier-route cost savings methodology is an update of the methodology used in Docket No. R2000-1. This methodology dates back to the study done by witness Madison in R84-1. The carrier-route cost savings is calculated as the cost

[13] Docket No. R2000-1, USPS-T-26, Attachment Y.
[14] These mailflow models are described in more detail in the Parcel Post mail

savings of carrier-route presorted mail compared to basic presort. According to the R84-1 study, carrier-route bundles will avoid being sorted to the carrier route at the destination facility, but they will incur the cost of being sorted as a bundle to carrier route at the destinating post office (Docket R84-1, USPS-T-16C, page 1). As can be seen in LR-J-64, Attachment D, page 10, the cost difference between these two types of sorts is 8.6 cents.

C. Summary

Table V-1 below summarizes the BPM mail processing cost savings estimated in this section.

Table V-1. BPM Mail Processing Cost Savings

Rate Category	Cost Savings
DBMC (compared to nondropship)	$0.461
DSCF (compared to DBMC)	$0.274
DDU (compared to DBMC)	$0.388
Carrier Route Presort (compared to basic presort)	$0.086

processing section of this testimony.

VI. BOUND PRINTED MATTER FLAT/PARCEL COST DIFFERENCE

A. Introduction

This section develops a unit cost difference between Bound Printed Matter (BPM) flats and parcels. This cost differential is used by witness Kiefer in his development of BPM rates.

B. Methodology

The methodology used in this section only estimates the delivery cost difference, specifically the elemental load cost difference, between flats and parcels.

The rationale for the cost difference is the following. Elemental load costs refer to the costs associated with putting mail into the delivery receptacle. Since flats can be cased, they will be put into the mail receptacle along with all the other pieces of mail in the bundle. Therefore, they only incur a portion of the costs associated with placing the bundle of mail into the delivery receptacle. Parcels, on the other hand, are separate from the cased bundle and will be placed individually into the delivery receptacle. Therefore, they incur the full cost of putting that mailpiece into the delivery receptacle. Therefore, on average, parcels incur more elemental load costs than flats.

C. Summary

LR-J-64, Attachment E, page 1 shows the BPM flat/parcel cost difference calculation. As can be seen in that attachment the estimated cost difference is 7.7 cents.

VII. BOUND PRINTED MATTER TRANSPORTATION COSTS

A. Introduction

This section of the testimony develops unit cost-per-pound transportation estimates for the following Bound Printed Matter (BPM) categories: non-dropship, DBMC, DSCF and DDU. Witness Kiefer uses these cost estimates in his development of BPM rates.

B. Methodology

The BPM transportation model employs the same methodology used in R2000-1.[15] While there are many similarities between the BPM transportation cost methodology and the Parcel Post transportation cost methodology, they vary due to differences in rate categories' characteristics and availability of data. The methodology will be described in steps. The cost model is displayed in LR-J-64, Attachment F.

1. Separate Base Year Costs into Function (Local, Intermediate, Long Distance-ZR, and Long Distance-NZR)

The first step is consistent with the Parcel Post transportation methodology. Base year transportation costs are divided into four functions: local, intermediate, long-distance-ZR, and long distance-NZR.[16] As in the Parcel Post transportation model, several base year air costs are labeled "Use Test Year Inputs" and will not be used to estimate test year costs due to impacts of the Fed-Ex agreement. For a more detailed description of this step, see the Parcel Post transportation section of this testimony.

2. Estimate Test Year Costs

The next step in the BPM transportation model is also analogous to the Parcel Post transportation model. Highway, rail, water, and "Roll Forward"-labeled air costs are estimated using base year percentages. Fed-Ex impacted and Alaska Air costs

[15] Docket No. R2000-1, USPS-T-27.
[16] Base year transportation costs are from USPS-T-11, WP.B. cost segment 14.1.

(labeled "Use Test Year" in LR-J-64, Attachment F, page 2) are taken directly from witness Hatfield's testimony.[17]

3. Estimate Local and Intermediate Costs-per-Pound-Leg

This step is where the BPM transportation model diverges from the Parcel Post transportation cost methodology. In the BPM model, the next step is to estimate the local and intermediate cost-per-pound-leg. First, the average number of legs of transportation are estimated separately for all BPM and DBMC BPM. This is shown on page 1 of LR-J-64, Attachment F.

Next, the local cost-per-pound-leg and the intermediate cost-per-pound-leg are estimated. The local cost-per-pound-leg is calculated by dividing total BPM local costs by the product of BPM average number of local legs and total BPM pounds. The intermediate cost-per-pound-leg is calculated in the same manner. These are shown on LR-J-64, Attachment F, page 4.

4. Allocate Costs to BPM DBMC

The next step is to use the cost-per-pound-leg estimates calculated in step 3 to allocate local and intermediate costs to BPM DBMC. Local DBMC costs are calculated by multiplying the local cost-per-pound-leg by the DBMC average number of local legs and total DBMC cubic feet. Intermediate DBMC costs are calculated by multiplying the intermediate cost-per-pound-leg by the DBMC average number of intermediate legs and total DBMC cubic feet. Total DBMC transportation costs are the sum of the local and intermediate costs.

5. Estimate DBMC Cost-per-Pound per Zone

This step is similar to the Parcel Post transportation model. Local costs are allocated to zone using the percentage of BPM DBMC pounds per zone. DBMC intermediate costs are assumed to be zone-related, and therefore are distributed to zone using pound-miles. Costs per zone are then divided by total pounds in each zone

[17] USPS-T-18.

to estimate the unit cost-per-pound for each zone. These calculations are shown on LR-J-64, Attachment F, page 4.

6. Estimate DSCF and DDU costs

DSCF and DDU BPM transportation costs are estimated on LR-J-64, Attachment F, page 5. Unlike the Parcel Post transportation model, first the unit cost-per-pound is estimated and then these are used to estimate the total DSCF and DDU costs. As can be seen on row 1 on page 5 of LR-J-64, Attachment F, DSCF unit cost-per-pound is assumed to be the same as the local DBMC unit cost-per-pound. Total DSCF costs are estimated by multiplying the unit cost-per-pound by total DSCF pounds.

DDU BPM mailpieces are assumed to avoid 83.6 percent of the local costs.[18] Therefore the DDU unit cost-per-pound is estimated as 16.4 percent of the DSCF unit cost-per-pound. Total DDU costs are calculated as the DDU unit cost-per-pound multiplied by total DDU pounds.

7. Allocate Total Costs to Non-Dropship

Total BPM nondropship transportation costs are estimated as the difference between total BPM costs and "properly-dropped" BPM transportation costs. "Properly-dropped" BPM transportation cost refers to the sum of DBMC, DSCF and DDU transportation costs.[19]

As can be seen on page 5 of LR-J-64, Attachment F, non-dropship costs are separated into zone-related and non-zone-related. As with Parcel Post, for non-dropshipped BPM, only some portions of long-distance costs are assumed to be zone-related. Therefore, the long-distance-ZR costs are shown as the zone-related non-dropship transportation costs. The remaining non-dropship transportation costs are assumed to be non-zone-related.

[18] USPS LR-J-64, Attachment F, page 5, row 6.

[19] The reason why the sum of DBMC, DSCF and DDU is referred to as "properly dropped" is that BPM mail that does not meet the dropship requirements may still be entered at destination facility.

8. Estimate Non-Dropship Unit Cost-per-Pound per Zone

On page 6 of Attachment F, LR-J-64, unit transportation costs-per-pound per zone are estimated for non-dropship BPM. As can be seen on that page, zone-related costs are distributed to zone using percent of pound-miles. The unit costs-per-pound for zone-related costs are calculated by dividing the zone-related costs by total pounds in each zone.

Non-zone-related unit costs-per-pound are calculated by dividing total non-zone-related costs by total nondropship pounds. Since, by definition, non-zone-related costs do not vary by zone, this unit cost is the same for every zone.

C. Summary

Table VII-1 displays the summary of the Bound Printed Matter transportation costs.

Table VII-1. Bound Printed Matter Unit Transportation Costs

Rate Category	Unit Cost-per-Pound
Non-Dropship	
Zone 1/2	$0.109
Zone 3	$0.128
Zone 4	$0.150
Zone 5	$0.187
Zone 6	$0.225
Zone 7	$0.268
Zone 8	$0.352
DBMC	
Zone 1/2	$0.042
Zone 3	$0.080
Zone 4	$0.109
Zone 5	$0.218
DSCF	$0.029
DDU	$0.005

VIII. MEDIA MAIL AND LIBRARY MAIL MAIL PROCESSING COSTS

A. Introduction

This section of my testimony provides witness Kiefer with mail processing cost data to support the Media Mail and Library Mail Basic presort and 5-digit presort discounts.[20] As discussed in Section III, the cost data supporting these rates is the estimated volume variable mail processing cost difference between two rate categories. The cost models are contained in LR-J-64, Attachment G.

B. Methodology

The Media Mail/Library Mail mail processing costs are developed using two steps. The first is similar to the methodology used to develop Parcel Post mail processing cost data in Section III. The Media Mail/Library Mail mail processing models associated with step 1 are found in LR-J-64, on pages 8 through 17, of Attachment G. These mail processing cost models reflect the current requirements. On page 1 of LR-J-64, Attachment G, the weighted average cost of these models is compared to the CRA costs to develop CRA adjustment factors.

The second step is to model the costs associated with the proposed requirements.[21] The mail processing cost models displayed on pages 18 through 24 of LR-J-64, Attachment G, reflect the proposed requirements. On page 1 of the same attachment, these modeled costs are adjusted using the CRA adjustment factors developed in step 1.

After the total adjusted modeled costs are estimated, the next step is to calculate the cost differences. This is done by subtracting the adjusted modeled cost of basic presorted and 5-digit presorted Media Mail/Library Mail from the adjusted modeled cost of nonpresorted Media Mail/Library Mail.

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[20] Costs are no longer collected separately for Media Mail and Library Mail. Therefore, the cost models described in this section use the combined costs of Media Mail and Library Mail.

[21] Although the new requirements have not been officially determined, the requirements used in these cost models are the best estimates of what the proposed requirements will be.

C. Summary

Table VIII-1 below summarizes the results of the Media Mail/Library Mail mail processing model. These are the estimated cost savings associated with the proposed requirements.

Table VIII-1. Media Mail Cost Savings

Rate Category	Cost Savings
Basic	$0.250
5-digit	$0.380

IX. BULK PARCEL RETURN SERVICE COSTS

A. Introduction

Bulk Parcel Return Service (BPRS) was introduced in October 1997. It is a service that is available for the return of Standard parcels to the original sender. BPRS requires a minimum annual volume of 10,000 returned parcels per year. To qualify for BPRS, parcels must weigh under a pound, be machinable as defined by DMM § C050.4.0, and carry a "BPRS requested" endorsement.

In October 1998 the Postal Service submitted a BPRS cost study to the Commission to fulfill the Postal Service's obligation to develop a more refined per-piece cost estimate for BPRS in accordance with the BPRS study plan submitted in Docket No. MC97-4. This testimony employs the data collected in that study.

B. Methodology

For the purpose of this study, costs are divided into five cost components:

1. collection costs,
2. mail processing costs,
3. transportation costs,
4. bulk delivery costs, and
5. postage due costs.

This testimony uses the same methodology as used in Docket No. R2000-1, with one exception. The one exception applies to the mail processing methodology. The fixed CRA factor has been adjusted to account for differences in the modeled costs of BPRS and Media mail. This adjustment is consistent with the Commission's methodology presented in the Docket No. R2000-1 Postal Rate Commissions Decision and Recommended Opinion.

1. Collection Costs

Collection costs are estimated using Standard single piece collection costs as a proxy. Since this rate category ceased to exist as of January 10, 1999, data from FY 1998 were used. A wage adjustment factor, consisting of the ratio of the appropriate

test year wage rate to FY98 wage rate is used to calculate test year 2003 (TY03) costs. The total estimated TY 03 volume variable unit cost for collection is 3.2 cents.

It should be noted that this methodology does not follow the PRC's Recomended Decision in Docket No. R2000-1. In that docket, the PRC accepted a proposal by witness Buc to eliminate the "window service" portion of the collection costs. [22] Witness Buc's justification for this was twofold. First he claimed that BPRS parcels will not be weighed and rated, and secondly since they are under a pound they will not frequently be entered at the window. Each of these justifications is refuted separately.

Argument against the justification: BPRS parcels will not be weighed and rated at the window and therefore the window service portion should be eliminated from collection costs.

While it is correct that BPRS parcels will not be weighed and rated at the window, this assumption does NOT imply that BPRS parcels incur ZERO window service costs. Any piece of mail entering the mailstream via the window will incur some sort of cost. In a 1996 Transaction Time Study the mean transaction time for acceptance was found to be 22.65 seconds.[23] Using the test year window service wage rate of $30.84, this results in an average cost of 40.4 cents.[24]

This justification is also weakened by the fact that it assumes that the proxy, single-piece Standard, was often weighed and rated at the window. The majority of single-piece Standard parcels were either residual parcels entered by mailers at the Business Mail Entry Unit (BMEU), or returns. Only returns would incur window costs, and in the case of returns, some if not most, were prepaid by the mailer.[25]

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[22] Docket No R2000-1 Opinion and Recommended Decision, Volume 1, Chapter V, page 567.

[23] Docket No. R97-1, LR-H-167. Acceptance is defined as: The clerk takes the stamped/metered mail from the customer and enters it in the mailstream. It does not include weighing or rating OR even lifting the mailpiece to determine weight. It includes all mail types except Express Mail (Page 55 of LR-H-167).

[24] The calculation for this is as follows: total hours (22.65/3600) × overhead/wait factor (1.5) × wage rate ($30.84) × piggyback factor (1.46). The overhead/wait factor is calculated by witness Neito (USPS-T-26).

[25] BPRS as a service came about because mailers wanted "relief" from the rate they paid on these returns.

Argument against the justification: BPRS parcels will not frequently be entered at the window and therefore the window service portion should be eliminated from collection costs.

The second point, while potentially correct in its assumption that a large number of BPRS parcels will probably not enter the mailstream via the window, still does not justify eliminating 1.26 cents of the collection cost. Even if it is true that BPRS parcels are not frequently entered over the window, this does not mean that BPRS parcels will NEVER be entered at the window. As mentioned above, single-piece Standard Mail also contained a lot of returns, and since window service costs exist, some of these parcels must have been entered over the window.

In addition, even if not a single piece of BPRS was entered over the window, this does not justify eliminating 1.26 cents from collection costs. Eliminating this cost ignores the fact that if a parcel does not go over the window it still will enter the mailstream via another means (i.e. via collection box). There will be some cost associated with this entry. The "window service" portion of the BPRS collection cost cannot be eliminated UNLESS the cost for the alternate method of entry is added.

2. Mail Processing Costs

The mail processing costs are derived using mail processing mailflow models similar to Parcel Post and Media Mail. This model incorporates the mail characteristics of BPRS as collected in the 1998 study. Since the Cost Segment and Components Report does not have a separate line item, and therefore costs by cost pool for BPRS, a proxy must be used for both the proportional and fixed CRA adjustment factors. Since Media Mail also contains lightweight returns, it was deemed to be the best proxy. As mentioned above, the fixed CRA adjustment factor was adjusted using the Commission's methodology. This was done by multiplying the fixed CRA adjustment factor by the ratio of BPRS modeled costs to Media Mail modeled costs. This results in a fixed CRA adjustment factor of 14.7 cents.[26] Applying this adjusted fixed CRA

[26] USPS LR-J-64, Attachment H, page 2, row 6.

adjustment factor and the proportional adjustment factor results in an estimated mail processing unit cost of 62.8 cents.

3. Transportation Costs

Transportation costs are estimated using both the intra-BMC and inter-BMC unit "cost-per-cubic-foot-leg" estimated in the Parcel Post transportation model. For both rate categories, there are three estimated costs-per-cubic-foot-leg, one for each type of transportation (local, intermediate, and long-distance). These estimated costs are multiplied by their respective estimated number of legs of transportation. This results in an estimated cost per cubic foot for each type of transportation. This can be seen in LR-I-64, Attachment H, page 11. Next, the three estimated costs are summed and multiplied by the average cube of a BPRS parcel. The estimated test year volume variable transportation unit cost of BPRS is 46.9 cents.

4. Bulk Delivery Costs

Delivery costs were estimated separately for each of the eight mailers that existed during the data collection study. LR-J-64, Attachment H, page 13 shows this analysis. Half of the mailers picked up their returns, and for these mailers the delivery costs are assumed to be zero.[27] The other half of the mailers had their BPRS parcels delivered. The cost of a local leg of transportation is used to model the cost of delivery for these four mailers.

The final step in estimating delivery cost is to calculate the weighted average of delivery cost for all eight BPRS mailers. Since half of them have an estimated cost of delivery equal to zero, the weighted average volume variable test year unit cost of delivery is only 4.9 cents.

[27] This does not imply that there are no costs associated with mailers picking up their mail. While there are costs associated with mailers picking up this mail, this was not specifically studied during the BPRS data collection study.

5. Postage Due Costs

For the purpose of this cost study, the following elements will be included in the calculation of postage due:

1. The manual sortation of parcels into a container that only contains BPRS parcels.
2. The steps involved in calculating postage due.
3. The steps involved with auditing the postage due calculations of the BPRS recipients.

Since BPRS recipients vary by daily volume and type of postage due, a separate postage due cost was estimated for each BPRS recipient. LR-J-64, Attachment H, pages 15 through 22, displays these calculations. Next, a weighted average is calculated by weighting the cost of postage due for each mailer by that mailer's weekly volume. This calculation is displayed in LR-J-64, Attachment H, page 14. The estimated test year volume variable unit cost of postage due is 5.1 cents.

C. Summary

The summary of the results is shown in the Table IX-1 below. The total estimated test year volume variable unit cost of BPRS is 123.2 cents.

Table IX-1. Summary of BPRS Unit Costs

COST COMPONENTS	UNIT COSTS (cents)
Collection	3.5
Mail Processing	62.8
Transportation	46.9
Delivery	4.9
Postage Due	5.1
Total	123.2

X. FINAL ADJUSTMENTS

A. Introduction

The purpose of this section is to calculate roll-forward final adjustments for FY 2001, FY 2002, test year before rates (TYBR), and test year after rates (TYAR). These adjustments are used by witness Patelunas to adjust costs by subclass in the roll-forward process. Witness Kay uses the final adjustments by rate category and cost component in her development of incremental costs.

Final adjustments are needed because the roll-forward process does not capture changes in the mix of mail below the CRA/rollforward categories. For some classes of mail, this is a valid assumption. However, for other classes of mail, mail mix changes in a way that significantly impacts costs. For example, the percent of Parcel Post volume that is entered as DDU is estimated to grow significantly between the base year and the test year. Since DDU is dropped at the destination delivery unit, this mail incurs fewer mail processing and transportation costs than other Parcel Post mail pieces. If the roll-forward costs were not adjusted, the Parcel Post test year mail processing and transportation costs would be overstated.

B. Methodology

The steps involved with calculating final adjustments are described below. In order to simplify the explanation, the steps will describe how the Parcel Post mail processing FY 2001 final adjustment is calculated. The same methodology will be used for other subclasses of mail, cost components and years. The following are the steps used to calculate final adjustments.

Step 1. Calculate the average mail processing unit cost used by the roll forward model to calculate Parcel Post mail processing costs in FY 2001. This is estimated by dividing total mail processing Parcel Post costs by total Parcel Post volume.

Step 2. Calculate the average mail processing unit cost for Parcel Post in FY 2001, assuming the FY 2001 Parcel Post volume mix. This unit cost is estijmated by multiplying the FY 2001 mail processing unit cost of each rate category by its respective FY 2001 volume, and then dividing the sum by total Parcel Post FY 2001 volume.

Step 3. Subtract the unit cost in step 1 from the unit cost in step 2. This is the unit cost differential between the average unit cost assuming FY 2001 volume mix and the average unit cost assuming base year volume mix.

Step 4. Multiply the cost differential calculated in step 3 by Parcel Post volume in FY 2001. This is the mail processing Parcel Post final adjustment for FY 2001. If this number is positive, this is the amount that will be added to the roll-forward cost. If this number is negative, this is the amount that will be subtracted from the roll-forward cost.

C. Summary

The summary of the final adjustment results is shown in Table X-1 below. The model is displayed in LR-J-64, Attachment I.

Table X-1: Final Adjustments ($000)

	2001	2002	BR 2003	AR 2003
Mail Processing (c/s 3.1)				
First-Class Presort	(46,416)	(74,572)	(86,802)	(85,463)
First-Class Presort Cards	(2,024)	(2,173)	(2,719)	(3,955)
Priority (For Presort)	(514)	(4,141)	(4,514)	(4,254)
Standard Regular	(157,667)	(210,860)	(251,229)	(262,810)
Parcel Post	(23,587)	(49,975)	(70,147)	(80,186)
Window Service (c/s 3/2)				
First-Class Presort	99	93	89	239
Standard Regular	67	67	70	44
Parcel Post	338	(1,642)	(3,116)	(3,549)
City Carrier (c/s 6 & 7)				
First-Class Presort	(7,675)	(14,173)	(18,520)	(18,302)
First-Class Presort Cards	(207)	(298)	(443)	(412)
Standard Regular	(26,835)	(31,752)	(35,928)	(38,263)
Vehicle Service Driver (c/s 8)				
First-Class Presort	230	217	208	557
Standard Regular	(2,402)	(2,395)	(2,541)	(2,727)
Parcel Post	(4,615)	(8,596)	(11,787)	(12,552)
Rural Carrier (c/s 10)				
First-Class Presort	(2,111)	(3,221)	(3,970)	(4,343)
First-Class Presort Cards	(47)	(67)	(100)	(93)
Standard Regular	(14,424)	(16,975)	(19,208)	(20,441)
Transportation (c/s 14)				
First-Class Presort	3,973	3,059	2,770	7,415
Standard Regular	(14,862)	(14,309)	(14,637)	(15,702)
Parcel Post	(18,709)	(53,098)	(78,379)	(87,901)
Total				
First-Class Presort	(51,899)	(88,598)	(106,226)	(99,897)
First-Class Presort Cards	(2,278)	(2,538)	(3,262)	(4,460)
Priority (For Presort)	(514)	(4,141)	(4,514)	(4,254)
Standard Regular	(216,124)	(276,224)	(323,472)	(339,897)
Parcel Post	(46,573)	(113,312)	(163,429)	(184,187)
Total For All Classes	(317,387)	(484,812)	(600,902)	(632,695)