

USPS-RM2020-7-1

Public Material Supporting Proposal Two

PREFACE

USPS-RM2020-7-1 provides public supporting materials for the analysis provided by Professor Michael D. Bradley on behalf of the United States Postal Service. It includes the SAS programs and Excel workbooks used to update the regular delivery time variabilities for volume shifts and to analyze the impact of the new variabilities on flats unit delivery time costs.

PURPOSE AND CONTENT

The purposes of USPS-RM2020-7-1 are three-fold. First, it implements the methodology for updating the regular delivery volume means as described in Professor Bradley's report. Second, it provides the SAS program used to recalculate the regular delivery time variabilities based upon the update volume means, as well as an explanation of the program. It also provides the associated SAS log and listing. Finally, it provides the Excel workbooks required for calculating the impact of the new variabilities on flats unit delivery costs.

CORRESPONDING NONPUBLIC FOLDER

Submitted concurrently with this folder is a nonpublic folder USPS-RM2020-7-NP1 containing related nonpublic material. The non-public folder contains the calculation of updated volume variable cost based upon the updated variabilities and the corresponding unit delivery costs for competitive products.

ORGANIZATION

This document first describes the process used for calculating the updated regular delivery variabilities and then describes the steps required for calculating the updated flats unit delivery costs.

I. Updating the Regular Delivery Variabilities

The regular delivery variabilities are updated to account for shifts in the volumes of the different types of mail delivered. The first step in the process is to calculate the updated mean volumes for each volume type. This is done in the Excel workbook entitled, Calculating Means Based upon FY 2019 Data.xlsx. The updated means are calculated by multiplying the FY 2019 CCCS volume proportions against the CCSTS average total letter and flat delivery volume.

The second step is to recalculate the regular delivery time variabilities using the updated means. This is done in the SAS program entitled, Calculate Variabilities With New Volume Proportions.sas. This is a slightly modified version of the original SAS program used to estimate the established regular delivery time variabilities in Docket No. RM2015-7. That program, entitled, Estim_varib_reg_del_time_sas, can be found in USPS-RM2015-7/1, in the Regular_Delivery_Equation directory, in the SAS_Programs subdirectory.

The program used to update the variabilities, Calculate Variabilities With New Volume Proportions.sas, is created by inserting the following lines of code into Estim_varib_reg_del_time_sas, in order to incorporate the updated volume means into the variability calculation.

```
**** Update the Delivery Volume Means for FY 19 Data ****;

data regmean; set regmean;
mdps=33210.30751;
mcm=9411.500526;
mseq=3131.601391;
mfss=1325.070569;
```

No other changes are made in the original program. The new program, Calculate Variabilities With New Volume Proportions.sas reads in the CCSTS based analysis data set, entitled, doiscv.sas7dbat, which is available in the same Regular_Delivery_Equation directory, but in the SAS_Data_Sets subdirectory. The program determines the number of ZIP Code days in the analysis data set, constructs the ZIP Code day observations, examines the sample statistics and distributions at the ZIP Code level, estimates the regular delivery time variability equation and calculates the marginal times and variabilities.

The SAS log and listing (containing the results) for this program are:

Calculate Variabilities With New Volume Proportions.log
Calculate Variabilities With New Volume Proportions.lst.

II. Calculating the Updated Unit Flats Delivery Costs.

The updated city carrier unit flats delivery costs are calculated in three steps. First, the updated variabilities are inserted into the public version of the city carrier cost model workbook, entitled, CS06&7-Public-FY19.xlsx. The workbook then recalculates the volume variable costs for the individual market dominant products. The modified workbook is titled, CS06&7-Public-FY19.New.xlsx. The Excel workbook entitled, UDCInputs19.xlsx is part of the Delivery Model contained in USPS-FY19-19. It assembles the necessary cost and volume inputs for calculating unit delivery costs. The updated version, UDCInputs19.New.v2.xlsx, reads in the update volume variable cost from CS06&7-Public-FY19.New.xlsx and then calculates the volume variable costs by shape. The last step in calculating separate unit flats costs for FSS and non-FSS zones

is done in an updated version of the FSS delivery cost model, entitled FSSDeliveryModel19.xlsx. This workbook, also found in USPS-FY19-19, disaggregates unit delivery costs for the relevant products destinating in FSS and non-FSS zones. The updated version, entitled, FSSDeliveryModel19.new.v2.xlsx, reads in the updated costs by shape from, UDCInputs19.New.v2.xlsx and then calculates the updated unit delivery costs for flats in FSS and non-FSS zones.

DIRECTORIES

There are two directories in USPS-RM2020-7-1

1. Directory - Calculating Updated Variabilities

This directory contains the Excel workbook and SAS program that calculates the updated variability

2. Directory – Calculating Updated Unit Flats Costs

This directory contains the Excel workbooks that calculate the update City Carrier unit flats cost.