Postal Rate Commission
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Image 3 – Square samples being accepted as automation compatible letter mail

Image 3 shows a number of envelopes that have successfully bypassed an over-size, over-weight culling operation. All of the GCA samples reached this point and continued on to be processed as letter mail.

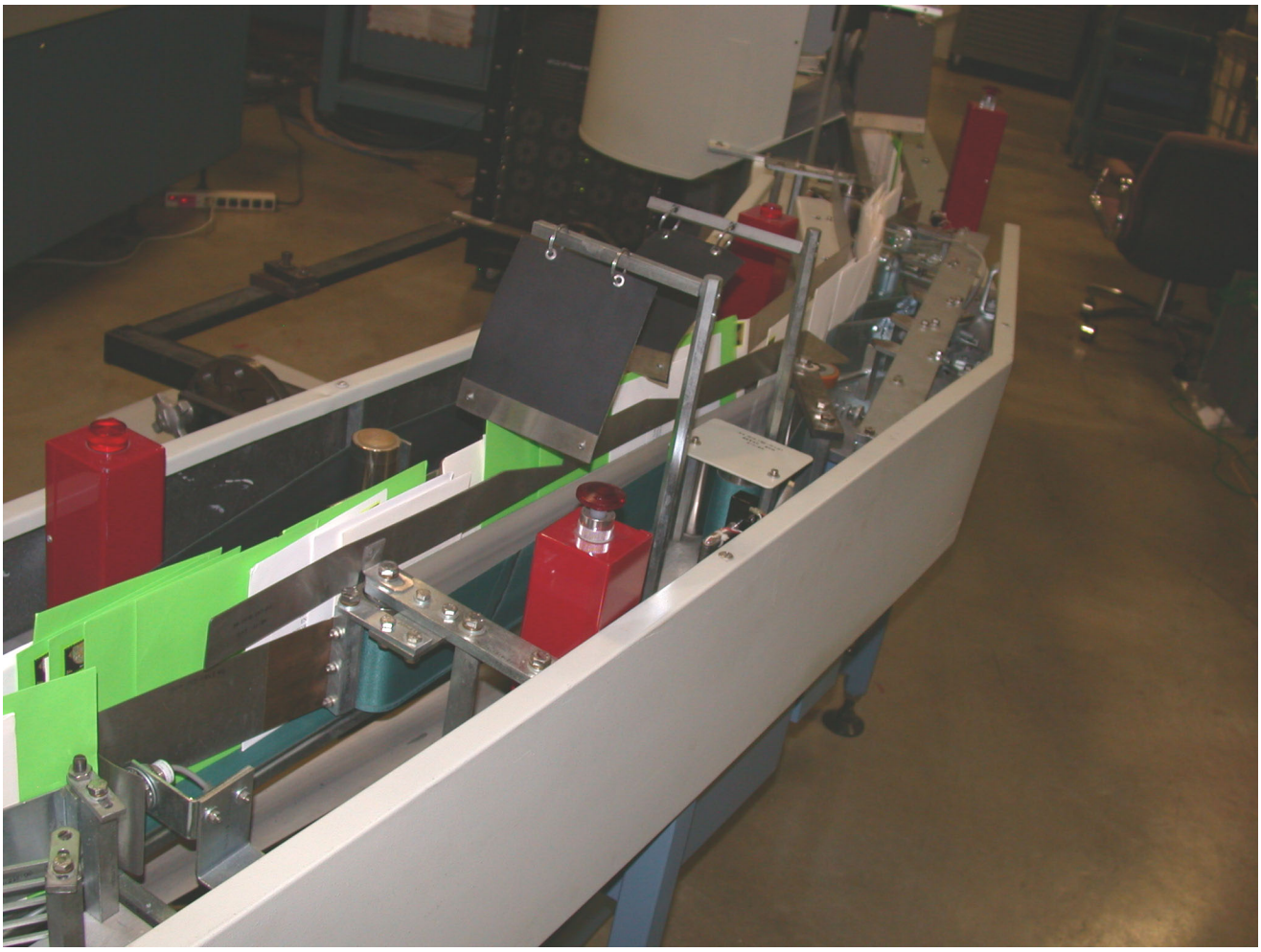

Image 4 – Square samples without a long edge cannot be oriented properly

This image shows the orientation section of the AFCS. It is within this section that mail meeting the aspect ratio requirement is oriented so that either the top or bottom of the mail piece is oriented at the bottom of the feed channel. Square samples, without a long edge, exit this section incorrectly on their right or left edge down as often as they exit correctly oriented, with their top or bottom edge down. Note the two green samples exiting this section with the stamp incorrectly positioned in the upper left corner because the sample is traveling on its left edge.

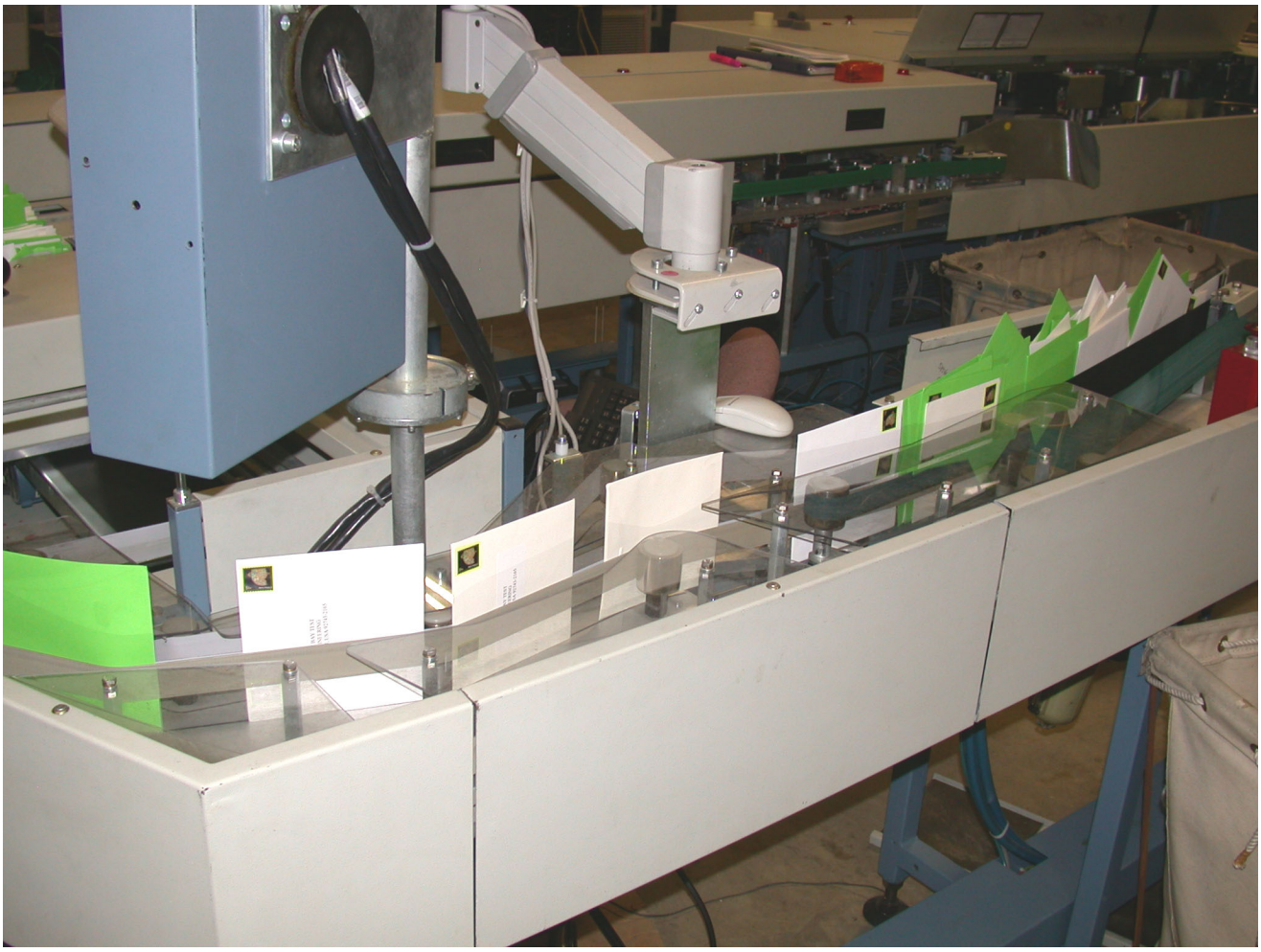

Image 5 – Square samples, in random orientation, approach the feed stacker

Image 5 shows another series of samples with incorrect stamp placement approaching the feed stacker. The two light colored samples on the left will be placed incorrectly in the feed stacker and subsequently inducted into the indicia detection section of the AFCS with the left edge of the sample down. The sample will then be inverted in the indicia detection section so its right edge is down and the opposite face of the sample will be scanned. In both cases, this will result in the failure of the indicia detection process to find a indicia where needs to be in order to sort the sample to either a “stamp leading” or “stamp trailing” output stacker.

The limitation of two stackers for each mail piece type precludes modification of the equipment to recognize indicia on the opposite facing lower corner because doing so would result in mail facing both forward and backwards in the output stackers. The AFCS is the only piece of USPS equipment that currently reads both the front and back of mail.

Image 6 – Square samples are prone to rotation in mail transport systems

Image 6 shows the undesirable tendency of the square samples to rotate in the leveling section that is common to the mail transport section of many different types of mail processing equipment. The resultant skew of the samples prior to scanning stations often adversely affects the image, character recognition and address interpretation processes that follow.

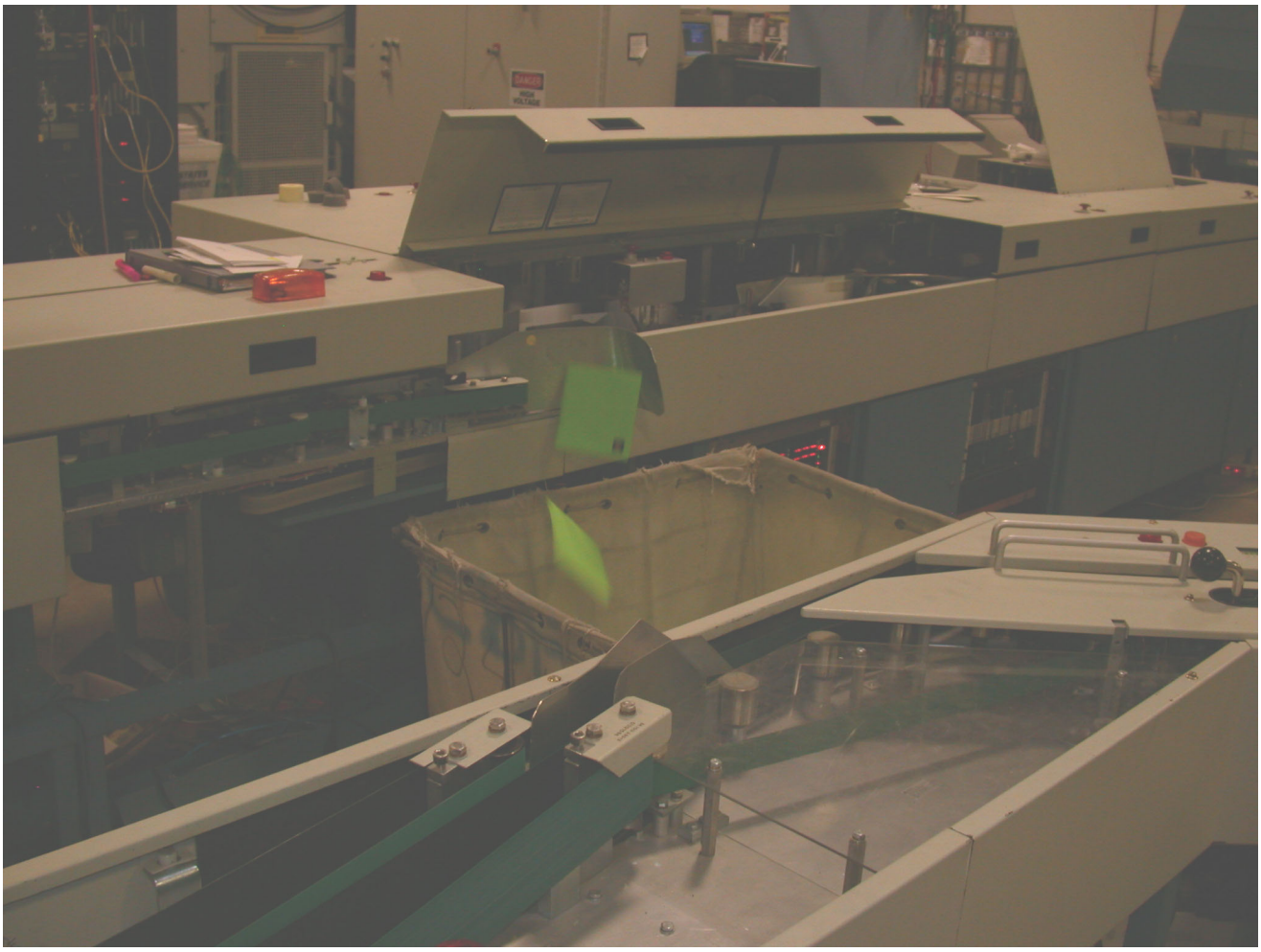

Image 7 – Square samples that are over-height are rejected to prevent damage to the mail

This image shows the automatic rejection of over-height mail done to prevent jams and damage. This is done prior to the inversion section of the AFCS where clearances are particularly critical. The green samples shown are 1/8 of an inch over legal height at 6 ¼ inches.

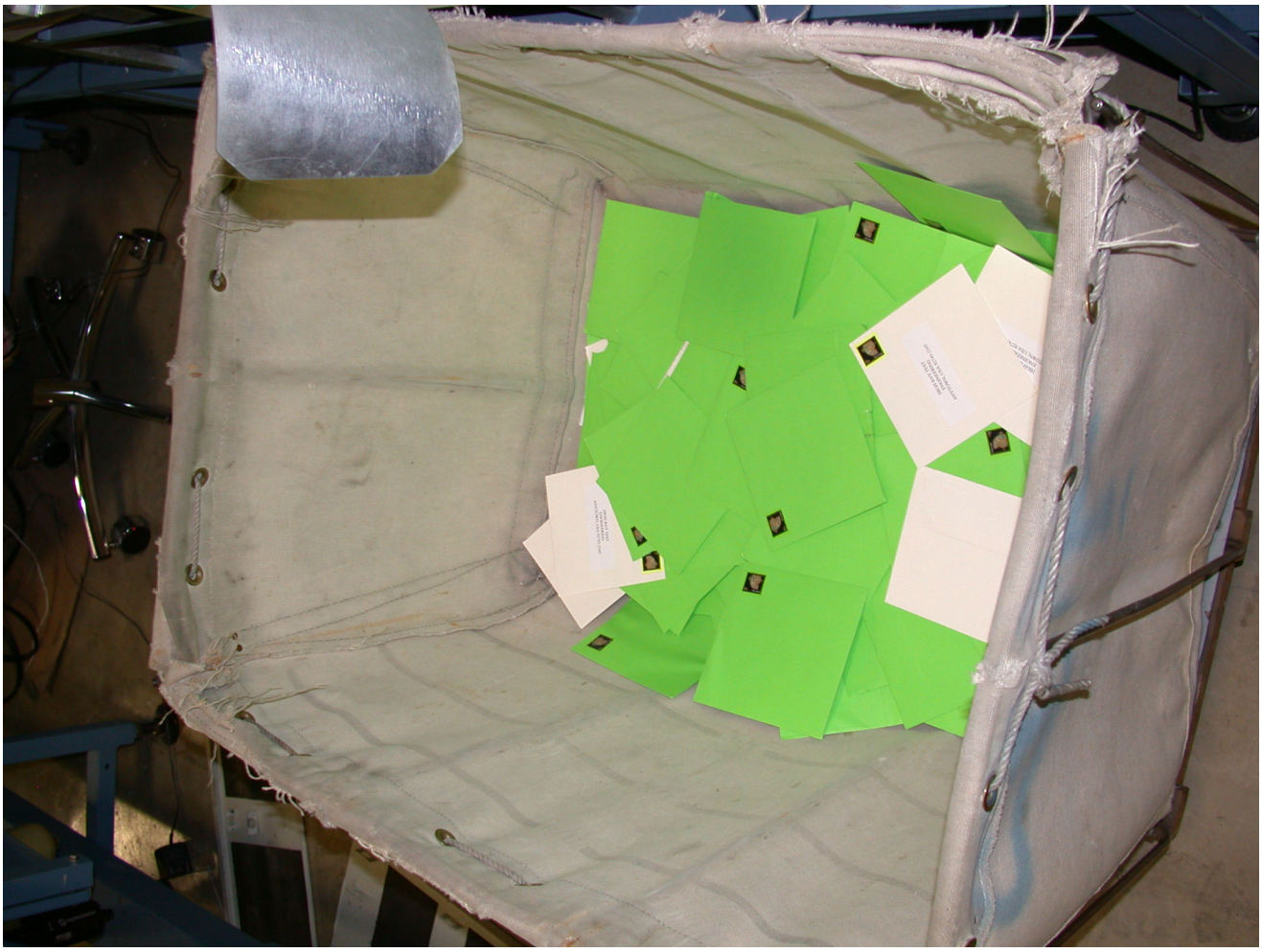

Image 8 – All of the over height pieces are a few legal height samples are culled

Image 8 shows all of the over-height samples and a few legal height samples that were also rejected. Due to earlier rotation, some of the square samples have not been fully leveled and are also rejected because they ride so high in the transport that they trigger the over height detection used to prevent jams. While this can happen with all mail, it is more pronounced with the square samples that fail to level more frequently than mail meeting the aspect ratio requirements.

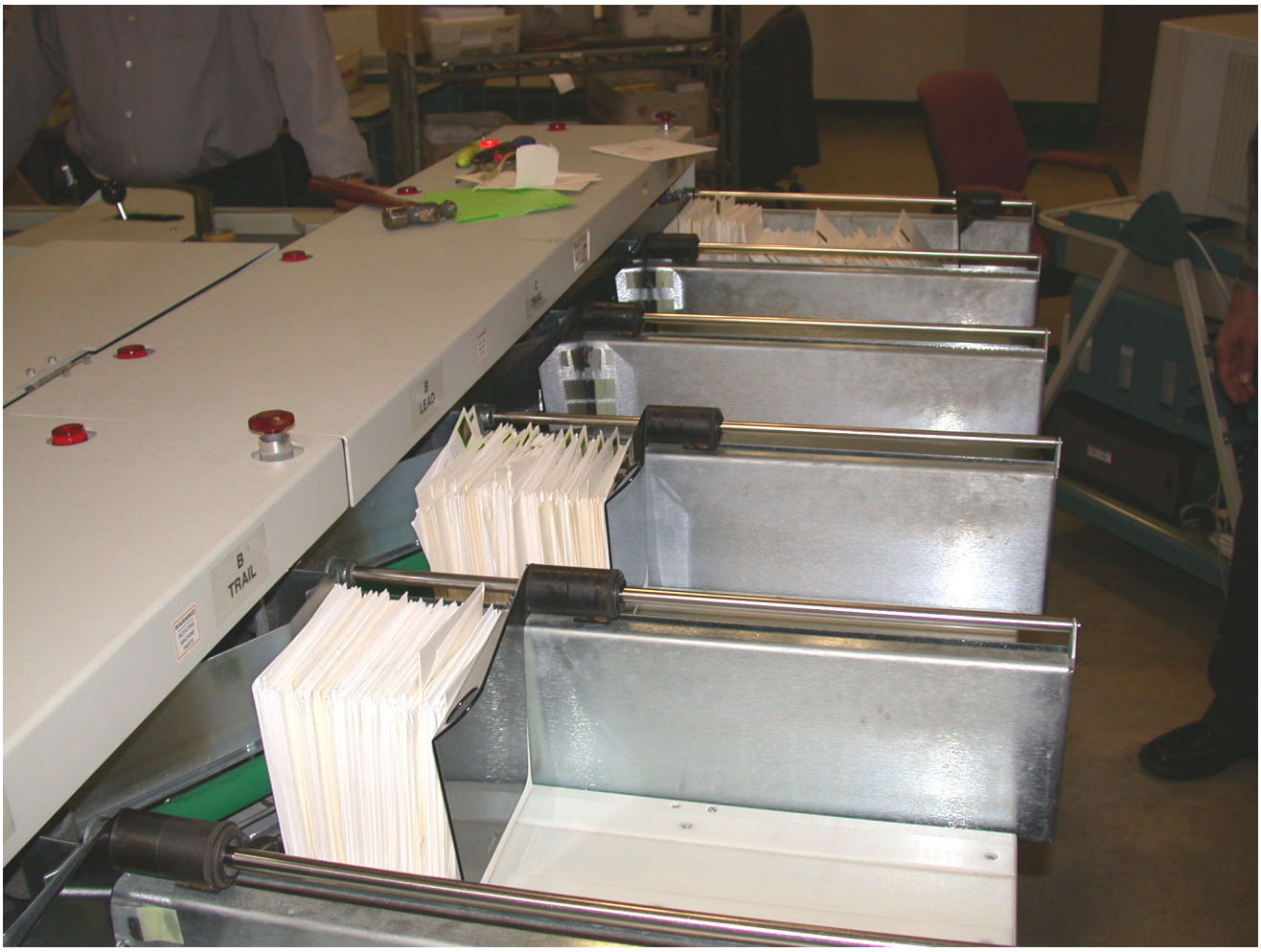

Image 9 – Canceled pieces (bottom two stackers), and not-cancelled samples (top stacker)

Image 9 shows all of the three square samples in the output stackers of the AFCS after they were processed. Note that all of the over-height (green) samples have been culled.

The samples in the two foreground stackers have been correctly canceled. Those in the closest stacker found indicia in the “stamp trailing” position. The next stacker back contains the samples where the indicia was found in the “stamp leading” position. The AFCS can only properly face and cancel the mail that is inducted in one of the four orientations possible with address in a horizontal position.

The last stacker has all the samples that were not cancelled because the indicia could not be detected where it was expected. Specifically, these samples were inducted from the feed stacker on either the left or right edge rather than the top or bottom edge. These samples are removed from the automation mail-stream, thereby incurring significant additional costs.

Image 10 – The not-cancelled stacker has samples with the address positioned vertically

This image shows the samples that were not cancelled – slightly separated for viewing. Some of the samples have the stamp and the address visible and facing outwards. The remaining samples had the stamp and address facing in toward the machine. In all cases, the address was positioned vertically indicating the reason these pieces were not cancelled was improper orientation.

Image 11 – Successful cancellation of "stamp leading" orientation

Image 11 shows all the samples where the indicia was found in the "stamp leading" position. Note that the first sample has managed to rotate after being cancelled.

Image 12 – Successful cancellation of "stamp trailing" orientation

Image 12 shows all the samples where the indicia was found in the "stamp trailing" position.