February 12, 2021

Mr. Brian J. Wagner  
President  
National Association of Postal Supervisors  
1727 King Street, Suite 400  
Alexandria, VA  22314-2753

Dear Brian:

As a matter of general interest, the Postal Service intends to test a proof of concept utilizing a robotics system to case manual flat letter mail.

The robotics system solution is intended to determine the feasibility of using robotics to sort manual flats to zip code sequence. Engineering Systems personnel will operate the robotic system to further evaluate operational efficiency and human interaction. There is no impact on bargaining employees.

The subject proof of concept is scheduled to begin late February for a duration of 120 days at the Dulles Processing and Distribution Center (P&DC) in Dulles, Virginia.

Enclosed for your review is a Power Point that provides an overview of the proof of concept.

Please contact April Cutchember at 240-321-4768 if there are any questions.

Sincerely,

Shannon R. Richardson  
(A) Manager  
Contract Administration (APWU)

Enclosure
02/09/2020

Proof of Concept
Robotic Flats Sorting (D8MT)
Delivery & Mobile Technology
Project Timeline

- Collect operational data in support of business case
- Develop machine installation, integration, and operation plans
- Determine operational methods design
- Conduct engineering tests to review/validate system

Project Goals

- Field testing and evaluation: March 2020 - May 2021
- Field installation and testing: Feb 2021
- Work cell design and development: Oct 2020 - Feb 2021
120 PSI Shop air
Female LT-30 Turn-Lock Connector
120 VAC 30A power drop with
Power and Air Requirements

Controller
Raspberry Pi system
Controls

Electrical and pneumatic
Interlocked access door

Safety guarding with

Cognex barcode reader

Incoming mail feed bin

Tooling (EOAT)

USPS Engineering
collaborative robot

Universal Robotics URF10

System Components
Cycle repeats until incoming feed bin is empty.

Pusher to extract mail piece into destination bin.

Robot moves to correct sort location and utilizes pneumatic end-of-arm-tool utilizes vacuum gripper to extract mail piece.

Robot Raspberry Pi controller transmits destination assignment to correct output case bin location.

Information from pre-programmed sort plan and determines destination zip code.

Raspberry Pi controller performs lookup of barcode zip.

Top read barcode camera scans barcodes and decodes.

Incoming mail is loaded into feed bin with label facing up.

System Operation Overview