

Staff Responses to Council Questions 1/11/2022

Manager's Report - A. Facilities Replacement and Sustainability Plan discussion regarding exterior design and environmental attributes.

1. Please explain the Mechanical HVAC Enhancements included in the recommendation for environmental attributes? What are the benefits?

The recommended HVAC System Enhancements include the use of a Variable Air Volume (VAV) system with hot water reheat and energy recovery.

A VAV system is an all-air system. A single air handling unit delivers air to both condition the space and provide adequate ventilation (or outdoor) air. Air returned from the space is blended with ventilation air and delivered to the space. A VAV system controls space temperature by first varying the quantity of air delivered and then tempering the air to prevent overcooling the space. The VAV system is the most commonly applied HVAC system because of industry experience, simplicity and centralized maintenance.

The VAV system with energy recovery uses a wheel to help recover heat from the system before exhausting to help preheat or cool the fresh outdoor air being brought into the building prior to being distributed. This helps to reduce overall energy required to heat and cool the outside air.