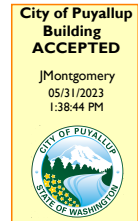
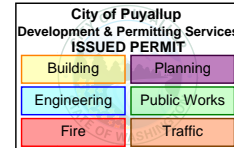




3/17/2023

Sopheap Hille  
Burgess Design  
1200 Fifth Avenue, Suite 400  
Seattle, WA 98101



Subject: Puyallup 1  
Effect of Mechanical Unit Replacement on Existing Structure

Dear Sopheap:

I am writing this letter to state structural conclusions about the ongoing HVAC unit replacement at the Puyallup 1 site. The structure in question is a large, single-story warehouse located at 1601 Industrial Park Way in Puyallup, WA presumably consisting of concrete tilt-up panel walls and a steel joist framed roof with wood sheathing. It is unknown exactly when this building was constructed, but the existing HVAC units have occupied the roof for many years creating no known structural deficiencies.

### **HVAC UNIT REPLACEMENT**

Per the existing building code (IEBC) section 502.5, changes to a structure that do not add more than 5% of gravity loads to the existing structure will not count as a "substantial alteration" and therefore do not need to be evaluated for structural deficiencies.

As shown in the As-Built mechanical drawings for this site, the existing unit has a weight of 2,550 lbs. Therefore, this unit could be replaced by one weighing up to 2,677 lbs with the same footprint and be found structurally adequate per the Code. Per the proposed mechanical permit documents in this region (sheet M1.2), this unit is to be replaced with one weighing 855 lbs. The required curb adapter will weigh approximately 300 lbs, bringing the total new replacement weight in this area to 1,155 lbs.

Since 1,155 lbs is significantly less 2,677 lbs and the footprint of the new unit is equal or less than the existing, the existing structure is still adequate by inspection.

In conclusion, the Puyallup 1 building will be structurally adequate with the replacement of this mechanical unit since the total combined weight of the assembly is less than the existing. If you have any questions, please feel free to call me at (206) 926-0710.

Sincerely,

John Shapley, P.E.  
Structural Project Engineer

THE APPROVED CONSTRUCTION PLANS, DOCUMENTS AND ALL ENGINEERING MUST BE POSTED ON THE JOB AT ALL INSPECTIONS IN A VISIBLE AND READILY ACCESSIBLE LOCATION.

FULL SIZED LEDGIBLE COLOR PLANS ARE REQUIRED TO BE PROVIDED BY THE PERMITEE ON SITE FOR INSPECTION

**PRCTI20230310**