

**State of Oregon
Building Codes Division
Interpretive Ruling No. 97-6**

**USE OF ACORN/EVAC VACUUM TOILET SYSTEM AT SITE ONE
WOMEN'S PRISON AND INTAKE COMPLEX, WILSONVILLE, OREGON**

Requested By: JIM WOMBLE
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QUESTION

Should the ACORN/EVAC Vacuum Toilet System be permitted as an alternate material and method of installation in place of a conventional gravity drain waste and vent plumbing system for new construction of Site One Women's Prison and Intake Complex, Wilsonville, Oregon?

BACKGROUND

EVAC has been involved with vacuum sewage systems since 1973. This is the second request made for use of the system in an Oregon correctional facility. The systems are in use in various installations in Europe and other states. Southern Building Code Congress International and Building Officials and Code Administrators, Inc., have approved these systems. Testing data has been provided by Stevens Institute certifying compliance with the American Society of Mechanical Engineers (ASME) A112.19.2M-1990, Vitreous China Plumbing Fixtures, and ASME A112.19.6-1990, Hydraulic Requirements for Water Closets and Urinals. This request is specific only to approval of the system at the Site One Women's Prison and Intake Complex, Wilsonville, Oregon.

FINDINGS

Installation and design information have been provided by the manufacturer. This ruling is for a complete plumbing system and includes the use of piping and fittings approved for use within a building. The requested installation includes the drain, waste and venting systems for all plumbing fixtures excluding kitchen and laundry facilities at the site.

Engineering and design data provided by the manufacturer show the proposed design is satisfactory and complies with the intent of the code and the material offered is for the purpose intended, in quality, strength, effectiveness, durability and safety to that specifically prescribed in the code under Plumbing Specialty Code Section 301.0.

DISCUSSION AND CONCLUSIONS

Authority. ORS 455.060 authorizes the Division to issue binding interpretive rulings on the building codes and on acceptability of materials, design or method of construction. Advice received from the Attorney General in OP #5208, October 1, 1981.

Code or factual issues to be resolved. Current Plumbing Code Section 709.0 requires gravity drainage wherever practicable. However, many advantages may be realized for this type of system when installed in a correctional facility. Due to the above technical and scientific facts, the Plumbing Board finds the materials and construction of the ACORN/EVAC Vacuum Toilet System, manufactured to the specifications submitted, and designed by a person actively registered as an Oregon-registered engineer, are equivalent in quality, strength, effectiveness, durability and safety as other approved plumbing systems.

ANALYSIS

The ACORN/EVAC Vacuum Toilet System, when designed for installation by a person actively registered as an Oregon-registered engineer specifically for installation at Site One Women's Prison and Intake

Complex, Wilsonville, Oregon, Building Codes Division Job No. 970021, is an acceptable alternative method in place of a gravity drainage waste and vent system installed under the provisions of the Oregon State Plumbing Specialty Code. This ruling is limited to installation of vacuum toilets, lavatories, showers, floor drains, and other gray water drainage connections, but does not include laundry and kitchen facilities at the Site One Women's Prison and Intake Complex, Wilsonville, Oregon.

CONCLUSION

When designed and installed within the limitations of this ruling, the use of the ACORN/EVAC Vacuum Toilet System is equivalent to other code-approved methods for gravity drainage waste and vent installations.

(signed June 20, 1997)

Arthur G. Atchison, Chairman
Plumbing Board

Date

The recommendations and findings of the Board are accepted and the interpretation is adopted effective immediately.

(signed June 23, 1997)

Joseph A. Brewer III, Administrator
Building Codes Division

Date