



Composting Toilets in Large Buildings

Presented By:
2020 ENGINEERING
Mark Buehrer, PE
Colleen Mitchell, PE

The Bullitt Center

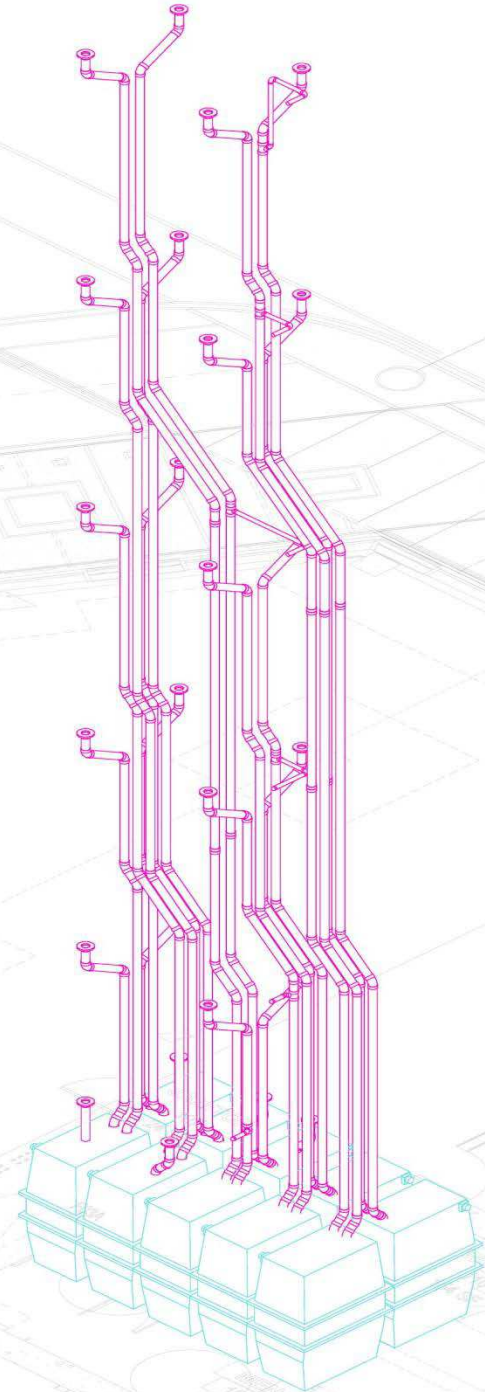


The Bullitt Center

- 6 Story Building + Basement
- 25 Foam Flush Toilets and 6 Waterless Urinals
- 10 Centralized Phoenix Model 201 Composters
- Assumed Occupancy:
 - 170 Full-time Occupants (assumed 80% occupancy on weekdays and 30% occupancy on weekends)
 - 98 Average Daily Visitors (meetings, events, etc.)
 - 100 Average Daily Classroom Occupants

The Bullitt Center: Conveyance Piping

- Foam Flush Toilets Allowed for 45 degree bends in piping – necessary for more compact plumbing chase
- Distributed Loads to Each Composter – distributed liquid input as much as possible
- Venting Considerations



The Bullitt Center: Compost & Leachate Management

- *“The product of a composting toilet falls under federal and state sewage sludge regulations (sewage sludge is referred to as ‘biosolids’ in Washington State).”*
- *“Neither the federal or state sewage sludge/biosolids rules provide any exemptions or allowances for small quantity generators from any parts of the rules...small composting toilets must be managed by the same regulations...as generated by the largest of generators.”*
- *“Area of Application – compost toilet residuals may only be applied to certain types of land, typically agricultural or forest land, but not to a ‘public contact site’, a ‘lawn’, or ‘home garden area {WAC173-308-270 (1)}.”*

*~Water Conserving On-Site Wastewater
Treatment Systems RS&G, WSDOH, July 2012*

Current Fixture Types for Composting Toilets in Large Buildings



- Flush Toilets

- Dry Toilets



- Foam Flush

- Vacuum Flush

