

Government Center Maintenance

**Columbus Consolidated Government | Patricia
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An old building is like an old car...

- You can have routine maintenance done - such as fluid checks, tire pressure, change filters, etc.
- Periodic servicing- balance tires, replace belts, etc.
- Major repairs as needed-

You will still have breakdowns even if you do everything the manufacturer recommends...

Background...

- The Government Center Building was opened in 1971.
- There was no certificate of occupancy issued at that time.
- To my knowledge, the building did not meet code at that time.
- Built with an open concept – cubicles
- Not completely built out

Background...

- As time passed, space was chopped up more and more.
- We have only a handful of the original drawings.
- Fire alarms were blocked by walls.
- The air conditioning wasn't modified when the walls were moved.
- Electrical was run from any convenient location.

Background (Continued)...

- Prior to my arrival in 2011, changes were made to the building without any drawings or permits
- Alerted management of the fragility of the system in 2012.
- Significant issues existed with security, utilities, fire, safety, etc.

Background(continued)...

- Council Executive session took place in 2012.
- Full assessment was done by 2WR and Faithful and Gould in 2013.
- They evaluated cost for renovation and multiple replacement options at \$100 Million to \$120 Million.

Background(continued)...

- They confirmed that every system in the building needed replacement or significant upgrade.
- Additional presentations made to council.
- Commission formed to study alternatives.

Background(continued)...

- In 2012, I instructed that no work could be done by my staff or any other occupant without a permit, and architect's seal.
- **That rule continues in effect!!!**
- Several items identified during the assessment that were within the scope of the Facilities Staff and were corrected.
- Backflow preventer was installed
- The need for pressure reducing valves evaluated.

Facilities Maintenance...

- Facilities maintenance task is to do the needed routine maintenance and repair on all buildings, and other infrastructure to include custodial work.
- Facilities has four plumbers
- 600+ facilities
- 400+ sprinkler systems
- 500+ other infrastructure
- They do a phenomenal job given the limitations of resources!!!

Facilities Maintenance(continued)...

We have contracts in place to help with:

- Elevators
- Mechanical systems
- Roofing systems
- Fire protection systems
- Generators
- Etc.

Every Day...

- Walk the mechanical rooms
- Walk outside the building twice daily
 - Flame
 - Trash
 - Check fountain
 - Generator electrical lines
- Check elevator computer for status
- Check lift station

Other Maintenance/ Checks on a Schedule

- Take infrared readings identify hot spots in mechanical rooms because worn bearings will heat up
- Infrared check of electrical system every 3 months
- Load test on generator once per month
- Run generator once per week
- HVAC – check/ change filters as needed monthly
- Check freon and have contractor recharge

We don't just patch...

- We always analyze cause
- This resulted in identification and repair of some serious issues
 - Hot water line - dissimilar metals
 - Overloaded electrical circuits – Install LED lighting system in order to reduce the load on the electrical system



Picture shows a crack on the 11th Floor



Picture of Generator



Operational Challenges:

- Plumbing work is most problematic and complicated
- We have cut off valves on all
 - 196 sinks
 - 197 toilets
- They are fragile and need to be changed
 - replace all gate valves with ball valves

At this time, when we have to do plumbing repairs...

Before

- Tour the building to identify any problematic areas
- Schedule for weekend

At this time, when we have to do plumbing repairs...

On Saturday

- Drain entire building
 - Open all faucets and flush toilets
 - 3 hours to drain down to 2nd floor
- Start repairs at the top and chase the water
- Once water is down we have 45 minutes until we have to start filling again so cooling towers don't drain and alarms start

Continued...

- Once complete or time runs out
 - Turn on water leaving all faucets open to vent air
 - Follow water down and shut off faucets
 - Then flush toilets, since they don't vent air
 - Check everything again
- Leave the building
- Note: Flushing doesn't necessarily release all the air. Later flushes can result in blow-outs.

Solution Needed...

- We need shut off valves for every floor
- Without drawings we have not yet determined proper locations for the new valves
- Inspections and Codes Director, John Hudgison, is attempting to find a contractor for this work but contractors are reluctant

Work Needed in Short Term....

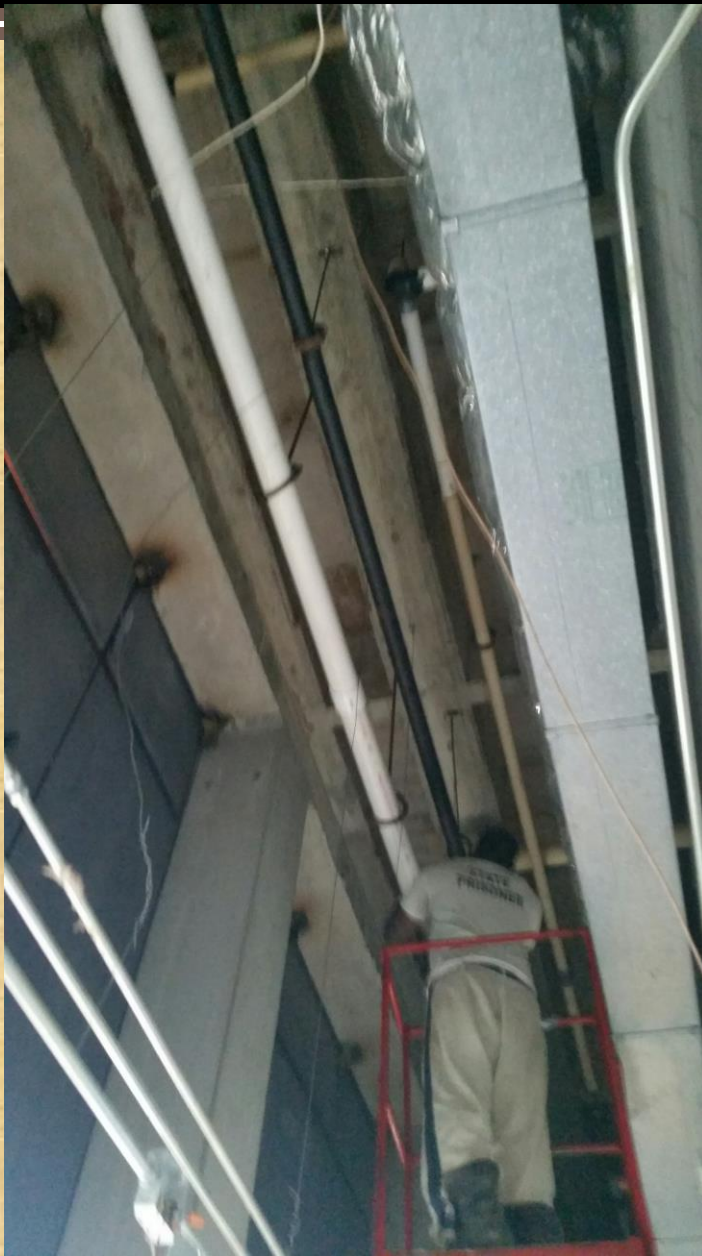
1. Replace all drain lines to include roof drains
 - All cast iron and they split
 - Weekend and night work
 - Time and materials contract
 - Pray no one uses the facilities above you during repairs



Picture of plumbing pipe split



Picture of pipe decay



Picture of 11th floor pipe repair split



2. Building Access -

- many occupants have installed their own locks
- roughly \$50,000 to change just those locks

3. Pressurize the stairwells

- install vent fans and replace doors

4. Fire Alarm system

- core infrastructure and upgrade fixtures

5. A/C Controls

Short Term...Operational/Utilities

1. Valves on each floor:

- Hot, cold and recirculating \$50,000.00

2. Gate Valves to ball valves \$80,000.00

3. Lock Replacement \$50,000.00

4. Drain line replacement \$2,500,000.00

5. A/C Controls \$800,000.00

Total Amount: \$3,480,000.00

Short Term...Fire/Safety

1. Fire Alarm System	\$600,000
2. Pressurize Stairwell	\$850,000
3. <u>Sprinkler System</u>	<u>\$1,000,000</u>

— Total: \$2,450,000

Grand Total: \$5,930,000

Long Term...

- Council needs to make a decision to either:
 1. Renovate
 2. Tear down

QUESTIONS???