

# AB 6308 City Hall Closure Update

Mercer Island City Council | July 18, 2023





## Part 1

- Overview and Purpose
- Timeline
- Asbestos 101
- Testing and Results
- Findings

## Part 2

- Re-occupancy of the building:
  - Anticipated Scope of Work
  - Estimated Cost
  - Estimated Timeline



## Staff & Consultants

- **Jessi Bon** | City Manager
- **Jaime Page** | Support Services Manager
- **Alaine Sommargren** | Deputy Public Works Director
  
- **Tim Ogden** | Principal | PBS Engineering & Environmental
- **Aaron Young** | Partner | Northwest Studio
- **David Cutler** | Partner | Northwest Studio
- **Allan Montpellier** | Principal | PAE Engineers

# Overview & Purpose

- The purpose of this agenda item is to present an overview of the City Hall closure, including the anticipated scope of work necessary to abate the asbestos detected in the HVAC system and re-occupy the building.
- The preliminary cost estimate to abate and re-occupy City Hall is \$10 million with an estimated timeline of nearly two years to complete the work. This will be further detailed in the second half of the presentation.
- We are also underway with a Facilities Conditions Assessment (FCA) for City Hall and several other City facilities. The FCA has identified other issues that need to be further evaluated (e.g. structural and seismic issues) for consideration in a future renovation project.
- This is our first presentation on the City Hall closure. We will be back in early fall with an update and to further discuss policy decisions related to the City Hall facility, including whether or not to re-occupy the building.

# Overview & Purpose

- The closure of City Hall has been very impactful on City staff teams, who are making do with temporary accommodations.
- We will continue to work on short-term solutions to meet operations and customer service needs while discussions with the City Council are ongoing related to re-occupancy of the building.
- City Hall will remain closed to employees and the public.

# Timeline - Discovery

## April 17

- Broken tiles and tile adhesive in the basement Mechanical Room of City Hall were identified as possibly containing asbestos.
- The tiles were discovered by a staff person while inspecting the Mechanical Room and may have been in that condition for some time.
- Same-day tests confirmed that both the tiles and adhesive contained asbestos.
- The Mechanical Room also contains an air handling unit for the City Hall HVAC system.
- City Hall was immediately closed to further investigate.

**Picture:** Broken tiles in Mechanical Room



# Timeline – Early Investigation

## April 18 – April 21

- The asbestos abatement contractor performed an initial building walk through.
- Additional floor tiles on the Main Floor of City Hall also tested positive for asbestos. These tiles are intact, undisturbed, and under carpet tiles, and do not present an immediate hazard. However, they will require abatement in the event of a renovation involving the floor plate in the areas where present.
- The contractor conducted initial air quality testing throughout the building; there were no positive tests for airborne asbestos.

**Picture:** Asbestos-containing tiles under carpet floor tiles on first floor of City Hall.



# Timeline – In-Depth Testing

## April 21 – July 7

- The City hired PBS Engineering and Environmental to develop and perform comprehensive testing protocols.
- Extensive testing was conducted, including air samples, settled dust, and bulk materials.
- A thorough investigation of the HVAC system as conditions allowed was conducted.
- Other possible sources of asbestos were also evaluated.

## May 15 - 19

- Boiler room flooring materials abated (pictured)

## June 27

- Good Faith Inspection performed.

**Picture:** Basement mechanical room post-abatement.







# Asbestos 101

- Asbestos was widely used in a range of goods, including building materials and fire retardants, from the late 1800s through the 1980s.
- Common sources of asbestos in older buildings include flooring, insulation, roofing, adhesives, and ceiling tiles.
- When materials are disturbed or damaged, fibers can become airborne, and be inhaled. Significant exposure over time may cause serious health issues.
- In 1989, the EPA issued a ban on most asbestos-containing products.

A black and white scanning electron micrograph (SEM) showing a dense field of thin, needle-like asbestos fibers. The fibers are oriented in various directions, some appearing as long, straight lines while others are more fragmented or curved. The background is dark, making the light-colored fibers stand out.

# Asbestos 101 (continued)

## Regulations

- Unlike air and bulk materials, no regulatory threshold exists to determine safe levels of asbestos in settled dust.
- Research on workers responding to the collapse of the World Trade Centers established non-regulatory thresholds for asbestos concentrations in settled dust.
- Depending on the environment, ‘background’ levels of asbestos in dust can range from 1,000 structures per  $\text{cm}^2$  to 10,000  $\text{s}/\text{cm}^2$ .
- Concentrations over 10,000  $\text{s}/\text{cm}^2$  are considered ‘above background’ for any environment.
- Each organization must determine their own allowable threshold – 1,000  $\text{s}/\text{cm}^2$  is a commonly applied standard.

# Testing and Results

- Some testing data has been updated since the Agenda Bill was published. Updates are denoted with an asterisk (\*).
- 180\* total samples collected and processed:
  - Air - 20 samples
  - Settled dust – 73 samples
  - Bulk materials – 87 samples
- Presenting a high-level summary of testing procedures and results.

# Testing and Results

## Air Testing

- Air testing for asbestos collects interior air to screen for airborne asbestos fibers.
- 20 samples were collected throughout City Hall and tested using high volume air pumps.

## Results

- No asbestos fibers were identified in any air testing samples.

**Picture:** Air sampling performed in City Hall kitchen.



# Testing and Results

## Settled Dust Testing

- This testing method evaluates settled surface dust in the building and in the HVAC system for asbestos fibers.
- 73\* samples were collected and tested using a device similar to what is shown in the picture.
- Results indicate the asbestos concentration based on the area sampled.

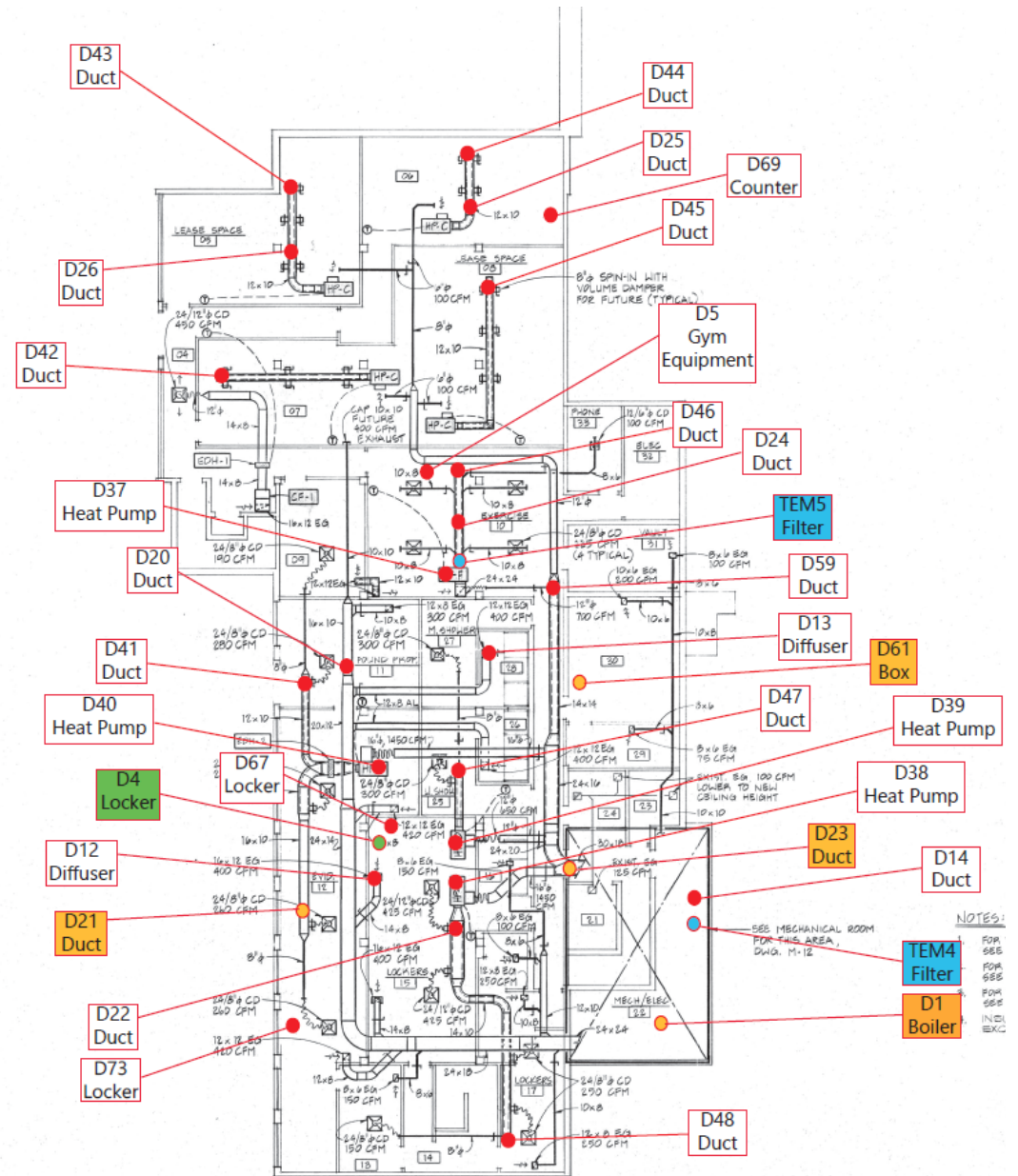
## Results

- Asbestos detected in 11\* settled dust samples from 10\* locations:
  - Five samples:  $>10,000$  s/cm<sup>2</sup>
  - One sample:  $>13,000,000$  s/cm<sup>2</sup>



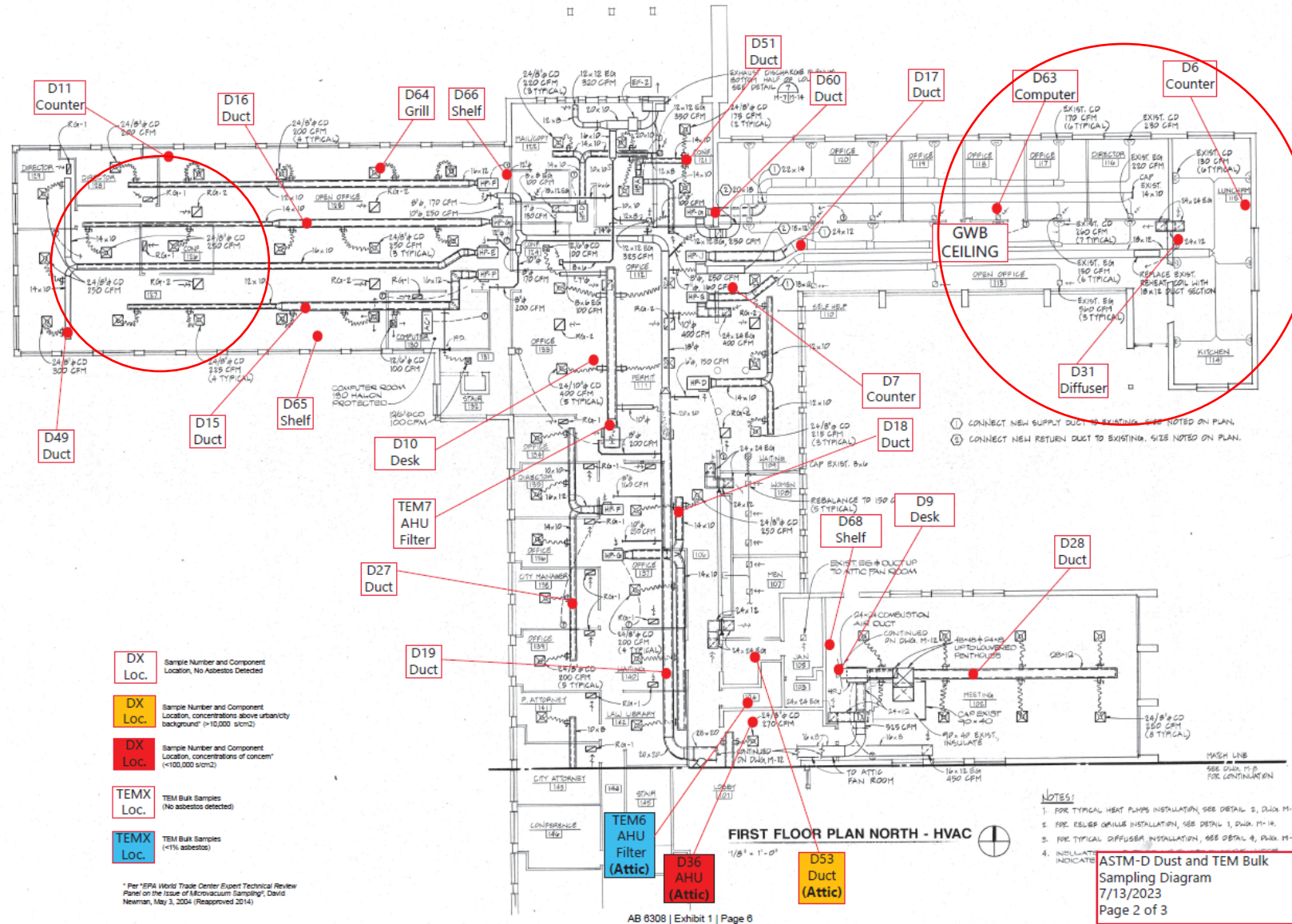
# Sampling Diagrams: Basement

- Exhibit 1 to the AB shows mechanical drawings with dust and bulk sampling results.
- No air samples are recorded on these diagrams.
- Color coding indicates the absence or concentration of detected asbestos.
  - White: No asbestos detected
  - Green: Dust <1,000 s/cm<sup>2</sup>
  - Yellow: Dust <10,000 s/cm<sup>2</sup>
  - Orange: Dust >10,000 s/cm<sup>2</sup>
  - Blue: Bulk sample with a positive detection
- The basement had several positive dust and bulk material tests:



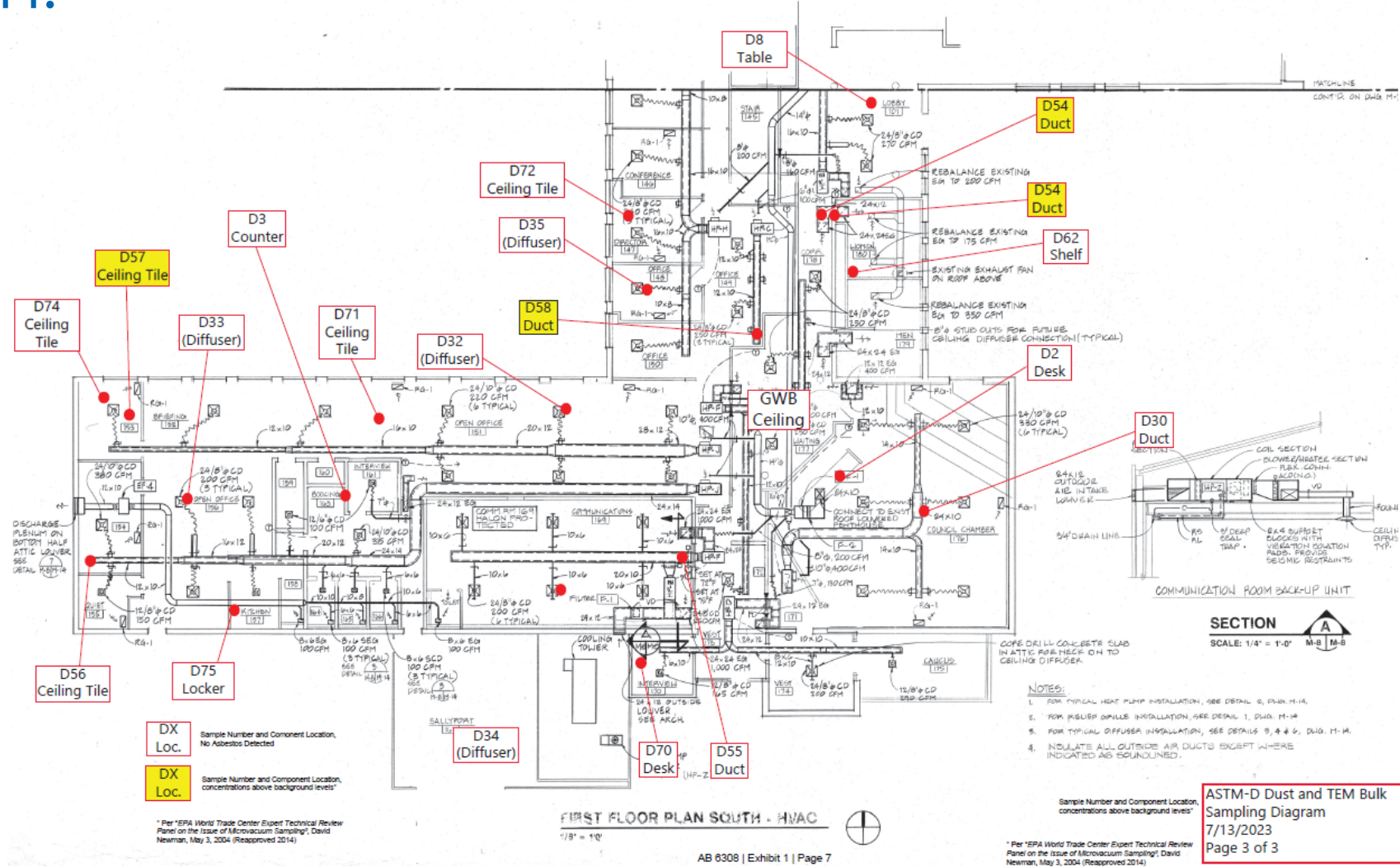
# Sampling Diagram: First Floor, North

- Area includes CPD, Finance, City Manager, and Municipal Court.
- Area around Municipal Court had several positive tests:
  - White: No asbestos detected
  - Orange: Dust >10,000 s/cm<sup>2</sup>
  - Red: Dust >100,000 s/cm<sup>2</sup>
  - Blue: Bulk sample with a positive detection
- Ceiling construction in northeast and northwest corners of building limited access for duct sampling.



# Sampling Diagram: First Floor, South

- Area includes Police Department and Council Chambers
- Several positive dust samples:
  - White: No asbestos detected
  - Yellow: Dust <math>< 10,000 \text{ s/cm}^2</math>





# Duct Conditions



**Picture:** Example of lined duct in attic mechanical room.



**Picture:** Dust build-up in an unlined duct in the attic mechanical room (sample D53).

# Testing and Results

## Bulk Material Testing

- Bulk material testing involves the removal of materials to be tested. Actual materials are removed and tested
- 10 samples were collected and tested.
  - HVAC filter, ceiling tile, mastic, floor tile, sheet flooring

## Results

- Bulk testing identified asbestos in two HVAC system filters and one sample of flooring.
- As previously noted, approx. 10,000 sq ft of asbestos tiles were known to be present throughout City Hall, but most are undisturbed.



# Testing and Results

## Good Faith Inspection

- A Good Faith Inspection surveys all potential asbestos-containing materials in a building.
- The investigation of City Hall was limited by access issues in the ceiling and attic (pictured).
- This work included 77 additional bulk samples.

## Results

- 13\* samples were positive, including:
  - Three types of flooring (additional 20,000 sq ft)
  - Flooring adhesive
  - Window putty
- 31 interior fire doors visually identified as asbestos-containing\* (pictured)



# Findings

- It is unlikely that the basement floor tiles are the sole source of the asbestos found in the HVAC system. However, additional sources of asbestos have not been identified.
- It is possible that the asbestos contamination within the HVAC system occurred prior to City ownership or during a renovation project in the late 1980s - early 1990s.
- Significant destructive investigation (e.g. full removal of the City Hall ceiling) is required to fully confirm conditions.
- Requirements to abate and re-occupy the building are anticipated to be costly and extensive and will be further detailed in the second part of the presentation.



# Questions

Next:

Re-occupancy of City Hall: Estimated Scope, Cost, and Timelines