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LaCroix Davis LLC

California State Board of Equalization
450 N Street, Sacramento, California

Mold Remediation – 6th Floor
April 1 – May 5, 2010
Closure Report

Project No. 2372.02-572

Prepared for:
State of California Department of General Services
707 Third Street, 3-305
Sacramento, California 95605

Prepared by:
Chris Corpuz, MS, CIH
Senior Associate
LaCroix Davis LLC

Report Date:
June 29, 2010

Building Environmental EHS Consulting
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APPENDICES

1.0 Introduction

On July 2, 2008, LaCroix Davis LLC (LCD) was contracted by the State of California, Department of General Services (DGS), Real Estate Services, Project Management Branch (RES, PMB) to provide building and environmental forensic services at the Board of Equalization (BOE) building located at 450 N Street, Sacramento, California. The BOE building was substantially completed in December 1992 and has experienced a variety of water-related events throughout its history.

On October 29, 2009 LCD's original contract was amended to include the following activities to support the Mold Remediation Project for the BOE Building:

- Designate a project team;
- Conduct BOE staff interviews;
- Review photographs taken during the McGinnis-Chen Associates (MCA) Spandrel Panel Survey in 2005;
- Perform a supplemental water damage assessment (WDA);
- Provide onsite monitoring for the project;
- Compile all relevant project documents in a closure report for each floor.

Under the project management of Mr. Chris Corpuz, Senior Manager, the LCD field project team was staffed by personnel from various LCD offices:

- Stephen Davis, Principal;
- Benjamin Heckman, Senior Manager;
- Theodore Ice, Senior Associate.

2.0 BOE Staff Interviews

Prior to Floor 6 being released to the DGS Mold Remediation Project Team for remediation, BOE staff currently and previously working on Floor 6 were interviewed regarding historic events on the floors. Many of the interviewed BOE staff members have worked on the same floor since the building was placed in operation in 1993. BOE staff participation in the interviews was strictly voluntary. The interviews were performed by LCD staff on March 30, 2010. Table 1 in the Table Section summarizes the interview findings. Water and mold-related findings are depicted in Figure 1 in the Figure Section.

3.0 Photograph Review – MCA Spandrel Panel Survey

LCD reviewed photographs taken by MCA during their 2005 Spandrel Panel Survey. There are approximately 15-25 photographs for each spandrel panel. The north and south sides of the building each have 30 spandrel/vision glass panels. The east and west sides of the building each have 24 spandrel/vision glass panels. Floor M has no spandrel panels; and Floors 22, 23, and 24 have fewer panels because the floor size decreases for these upper floors. LCD reviewed photographs of only the spandrel panels on each floor to determine whether these photographs showed evidence of water staining, mold growth, or no issues on the exterior side of the

building perimeter wall. A summary of these conditions is shown in Table 2, Photograph Review – McGinnis-Chen Associates Spandrel Panel Survey.

The Spandrel Panel Survey information was used to help interpret any water staining or material damage that was observed during the supplemental WDA of the curtain wall and punch-out windows. When interior wall surface water staining was corroborated by similar water staining in the spandrel panel photographs for the same wall area, the area was subjected to additional investigation and testing. This was done to ensure that no visible mold growth (VMG) had developed as a result of the observed historical water staining.

4.0 Supplemental Water Damage Assessment

LCD performed a supplemental WDA to inspect areas of the building that had been visually obscured during LCD's initial assessment by a variety of furniture, wall hangings, cubicle walls, personal belongings, supplies, and equipment. The WDA for Floor 6 included a more detailed assessment of the carpet found on this floor that was performed in accordance with the Carpet Removal Remediation Protocol (Appendix A). The protocol was developed during the assessment and removal of carpet on Floor 21.

JLS Environmental Services Inc. (JLS) prepared the floor by moving furniture and cubicle components away from walls, taking supplies out of storage rooms, and removing sections of carpet and cove base. The preparation allowed LCD to visually inspect areas that were obscured from view during LCD's initial assessment in late 2008 and early 2009.

On receiving Floor 6 for remediation from the BOE Management Team, LCD conducted a walk-through of the floor to locate areas of concern. The findings were used to corroborate the information compiled from the BOE staff interviews and the MCA photograph review. This process allowed the LCD team to identify areas to be addressed by additional investigation, mold mitigation, or remediation work.

Identified areas were subjected to sampling. Using a combination of surface tape lift and bulk samples, LCD tested stains on walls and other building materials to determine if the stains were indicative of VMG. The sample locations are depicted in Figure 2.

Surface tape lift and bulk samples were submitted to EMLab P&K (EMLab) for direct microscopic examination. EMLab is accredited by the American Industrial Hygiene Association for mold analyses. The laboratory reports were reviewed by the LCD team. Laboratory findings of "mold growth, minimal mold growth, and mold growth in vicinity" were classified as mold growth and the tested surfaces/areas were considered actionable.

Areas and materials that were identified to contain mold growth were subsequently placed under containment and subjected to an appropriate mitigative or remedial action. These actions were taken to eliminate or minimize potential exposures to VMG by personnel that may later access the subject area. The containment locations are shown in Figure 2.

5.0 Onsite Project Monitoring

On behalf of DGS, the LCD team of industrial hygienists provided on-site monitoring of the mold remediation activities in the form of:

- Testing and identifying areas for subsequent mold mitigation or remediation;
- Inspecting JLS-constructed containment structures prior to disturbance of any mold-contaminated materials by JLS;
- Providing periodic area air monitoring to confirm the protective efficacy of JLS containment structure and work practices;
- Inspection of the mitigated/remediated areas, prior to collecting final clearance air samples to confirm that the contaminated areas/materials within the containment had been adequately cleaned.

6.0 Closure Report Documents

The Closure Report was compiled from site monitoring and testing data prepared and accumulated during the mold remediation activities for this floor. Figures 1 through 3 identify findings from a revised WDA, carpet inspection locations, sample and containment locations, and areas where mold growth may potentially exist. Figure 3 should be consulted before walls or ceilings in these areas are penetrated for any reason in the future. Tables 1 through 3 summarize findings from BOE staff interviews, a review of photographs from the MCA Spandrel Panel Survey, and the revised WDA.

The following documents, as applicable to Floor 6 are included in the Closure Report appendices:

- **Protocols** – Provide the procedures for conducting mold-related activities on the subject floor (Appendix A);
- **Daily Logs** – Summarize the daily mold-related activities pertaining to the subject floor (Appendix B);
- **Laboratory Reports** – Present the analytical results for mold-related samples collected on the subject floor (Appendix C);
- **Correspondence** – Document communications between the LCD and the DGS project teams (Appendix D);
- **DGS Meeting Minutes** – Summarize the progress of scheduled and unplanned project activities as discussed in weekly meetings (Appendix E).

7.0 Limitations and Qualifications

The assessment performed by LCD does not include or cover the following matters: Matters that are subsequently discovered that could not have been reasonably foreseen or detected, using industry standards, during the performance of the assessment; matters that could not have been discovered by LCD because of barriers, lack of access or other matters affecting accessibility; matters that were not disclosed to LCD prior to, during, or after the performance

of the assessment; any new deficiency that arose after the completion of the assessment by LCD.

To the extent that additional information becomes available to LCD, LCD reserves the right (without any obligation to do so) to modify its evaluation and/or this report at any time, based upon further review and analysis of any such additional information or data.

Certain items mentioned in the report were performed by others not involving the supervision of, or management by, LCD, but were relied upon by LCD in making its evaluation and assessment.

The assessment performed by LCD is not meant or intended to supplement, modify, or extinguish any warranty or representation made or given by third parties performing any of the recommended corrective work.

When consultation involves microbiological growth, or any assessment thereof, such microbiological growth may reoccur if the source of the growth is not remedied. All remediation of fungi in indoor environments can be inherently limited in the sense that conclusions are drawn and recommendations developed from information obtained from limited research and site evaluation. Except as may be noted in the assessment performed by LCD, subsurface areas, latent defects, or non-accessible areas and conditions were not field investigated and may differ from the conditions implied by the surface observations. Additionally, the passage of time may result in a change in the environmental characteristics at the subject property and the surrounding properties. No investigation or assessment can absolutely rule out the existence of any microbiological growth at any given site. LCD does not remediate or remedy sources of microbiological growth.

This Report and the assessment/survey conducted by LCD is prepared, and was performed, solely for the use and benefit of the client identified at the beginning of this report. No other party may rely on this report for any other purpose.

Report prepared by,

Chris Corpuz

Chris Corpuz, MS, CIH
Senior Manager
LaCroix Davis LLC

Report reviewed by,

Andrea Steinbach for SC Davis

Stephen C. Davis, MPH, CIH
Principal
LaCroix Davis LLC

FIGURES

KEYED SHEET NOTES

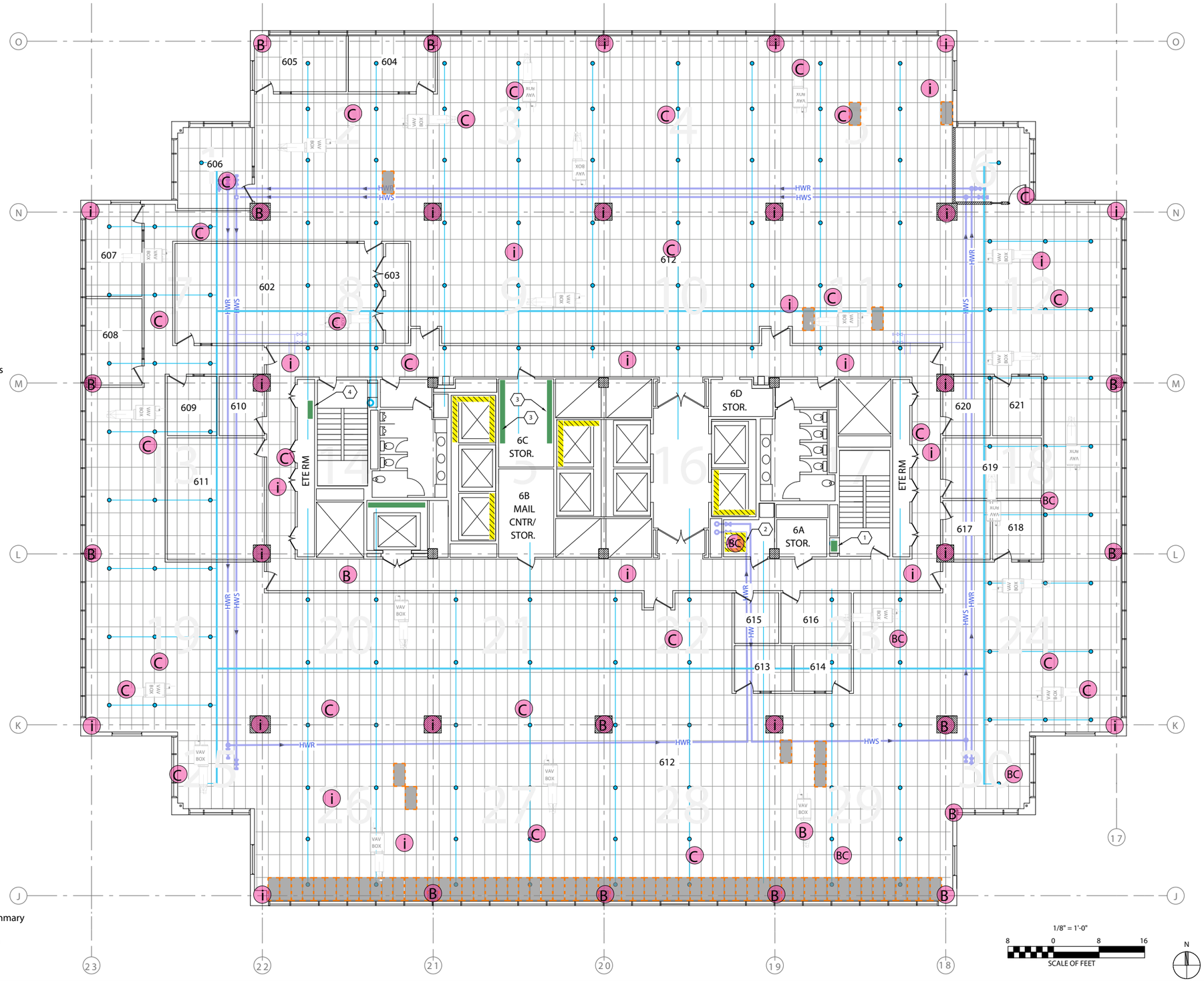
1. Visible mold growth 10 sq. ft. on South and West walls
2. Water stain on ceiling, extensive water damage
3. Visible mold growth 100 sq. ft. above ceiling
4. Visible mold growth 1 sq. ft.

GENERAL NOTES

1. LCD inspection locations are approximate.
2. The locations of LCD inspections and VAVs (terminal units) are approximate.

LEGEND

- Active water leak
- Current water stained surface
- Historic water leak/ stained surface
- Current mold growth
- Historic mold growth
- Current water on floor
- Historic water on floor
- Destructive testing location (historic)
- 325 Room number
- (i) LCD inspection location no findings
- (A) LCD inspection location active leak
- (B) LCD inspection location water stain
- (C) LCD inspection location other notation - see WDA summary
- (BC) LCD inspection location with multiple findings "A", "B", or "C" as indicated



LaCroix Davis LLC

State of California
Department of General Services
(DGS No. 125828)
(AGMT. No. 3126150)
(LCD No. 2372.02-572)

Water Damage Assessment - Revised

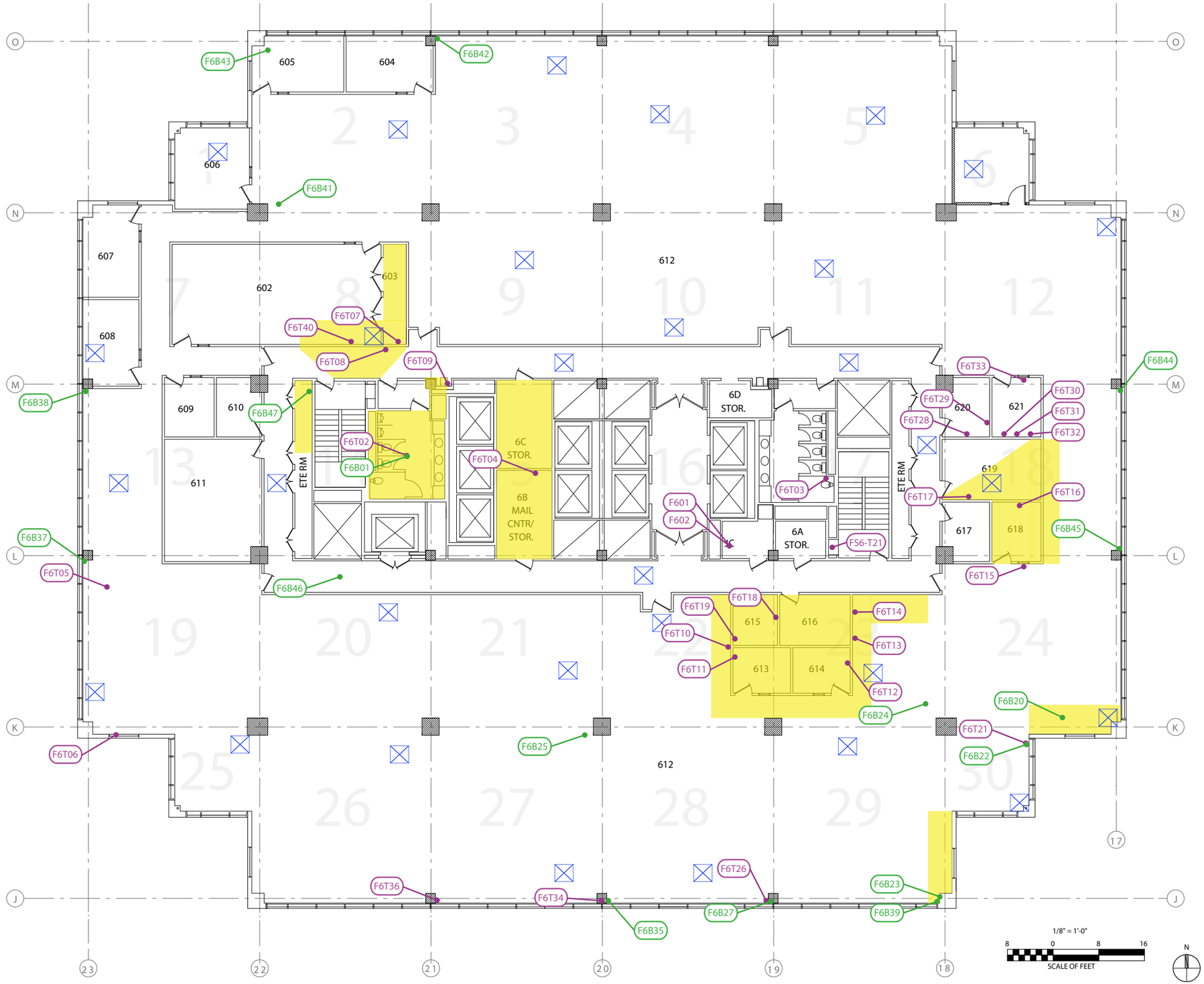
Board of Equalization Building, Mold Remediation
450 N Street, Sacramento, California

6th Floor

Figure 1

LEGEND

- Carpet inspection location
- Containment location
- F6B43 Bulk sample location
- F6T15 Tape lift sample location



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Containment and Sample Locations

Board of Equalization Building, Mold Remediation
450 N Street, Sacramento, California

6th Floor

Figure 2

LEGEND

Suspect mold location

FULL SIZE PLOT:
1/8" = 1'-0"

8 0 8 16
SCALE OF FEET

N

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Department of General Services
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(LCD No. 2372.02-572)

Suspect Mold - May 2010

Board of Equalization Building, Mold Remediation
450 N Street, Sacramento, California

6th Floor

Figure 3

TABLES

Table 1: BOE Staff Interviews - Historical Observations Floor 6
Conducted by Chris Corpuz on March 30, 2010

Name	Position	Time with BOE	Time on Floor	Event Date	Location on Floor	Observations	Other Floors Worked on	Other Comments Related to this Floor
No staff volunteered to be interviewed at the scheduled time.								

LaCroix Davis LLC

Table 2: Photograph Review - MCA Spandrel Panel Survey - NORTH Elevation

BOE Building, 450 N Street, Sacramento, California

LCD No. 2372.02-572
BOE Mold Remediation

N-PENT																																
N-24-*.*		S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	
N-23-*.*		S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	
N-22-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
N-21-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
N-20-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
N-19-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
N-18-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
N-17-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
N-16-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
N-15-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
N-14-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
N-MAINT																																
N-11-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
N-10-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
N-09-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
N-08-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
N-07-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
N-06-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
N-05-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
N-04-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
N-03-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
N-02-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
N-01-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2

KEY

Visible mold
Water staining on gypsum board
Water staining on ceiling tile
Water staining on gypsum board and ceiling tile
Water staining on fireproofing
Water staining on gypsum board and fireproofing
Panel photos inspected, no issues detected.
Missing photographs

S-* = Spandrel panel
P-* = Punch-out window
PENT = Penthouse level
MAINT = Maintenance level
N- = North
E- = East
S- = South
W- = West
N-04 = Shading indicates completion of photograph review for this floor.

Table 2: Photograph Review - MCA Spandrel Panel Survey - EAST Elevation

BOE Building, 450 N Street, Sacramento, California

E-PENT																										
E-24-*.*		S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	
E-23-*.*		S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	
E-22-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
E-21-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
E-20-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
E-19-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
E-18-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
E-17-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
E-16-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
E-15-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
E-14-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
E-MAINT																										
E-11-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
E-10-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
E-09-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
E-08-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
E-07-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
E-06-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
E-05-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
E-04-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
E-03-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
E-02-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
E-01-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2

KEY

Visible mold
Water staining on gypsum board
Water staining on ceiling tile
Water staining on gypsum board and ceiling tile
Water staining on fireproofing
Water staining on gypsum board and fireproofing
Panel photos inspected, no issues detected.
Missing photographs

S-* = Spandrel panel
P-* = Punch-out window
PENT = Penthouse level
MAINT = Maintenance level
N- = North
E- = East
S- = South
W- = West
N-04 = Shading indicates completion of photograph review for this floor.

Table 2: Photograph Review - MCA Spandrel Panel Survey - SOUTH Elevation

BOE Building, 450 N Street, Sacramento, California

S-PENT																																
S-24-*.*		S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	
S-23-*.*		S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	
S-22-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
S-21-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
S-20-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
S-19-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
S-18-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
S-17-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
S-16-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
S-15-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
S-14-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
S-MAIN																																
S-11-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
S-10-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
S-09-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
S-08-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
S-07-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
S-06-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
S-05-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
S-04-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
S-03-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
S-02-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2
S-01-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	S-25	S-26	S-27	S-28	S-29	S-30	P-2

KEY

Visible mold	S-* = Spandrel panel
Water staining on gypsum board	P-* = Punch-out window
Water staining on ceiling tile	PENT = Penthouse level
Water staining on gypsum board and ceiling tile	MAINT = Maintenance level
Water staining on fireproofing	N-04 = Shading indicates completion of photograph review for this floor.
Water staining on gypsum board and fireproofing	
Panel photos inspected, no issues detected.	
Missing photographs	

N- = North
E- = East
S- = South
W- = West

Table 2: Photograph Review - MCA Spandrel Panel Survey - WEST Elevation

BOE Building, 450 N Street, Sacramento, California

W-PENT																										
W-24-*.*		S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	
W-23-*.*		S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	
W-22-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
W-21-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
W-20-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
W-19-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
W-18-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
W-17-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
W-16-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
W-15-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
W-14-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
W-MAINT																										
W-11-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
W-10-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
W-09-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
W-08-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
W-07-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
W-06-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
W-05-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
W-04-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
W-03-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
W-02-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2
W-01-*.*	P-1	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21	S-22	S-23	S-24	P-2

KEY

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S-* = Spandrel panel
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PENT = Penthouse level
MAINT = Maintenance level
N- = North
E- = East
S- = South
W- = West
N-04 = Shading indicates completion of photograph review for this floor.

Table 3: Revised BOE Water Damage Assessment Summary

Location			Above Ceiling Tiles					Below Ceiling Tiles / Room Area	
Floor	Grid / Column	Room	Tiles (left above ceiling)	Fiberglass insulation (left above ceiling)	Ceiling (visible issues)	Comments	Observer	Comments	Observer
Floor 6									
6	1	606	N	Y	N	Fiberglass insulation over ceiling, limited visibility.	TMI		
6	2	612	Y	Y	N	FP delaminated in NW corner at beam (in Room 605). VAV box in vicinity of historic leak but no signs of water staining. Multiple abandoned tiles. fiberglass insulation over offices.	TMI		
6	3	612	N	Y	N	Clumps of fiberglass and dust balls.	TMI		
6	3	612	Y	N	N		TMI		
6	4	612	N	Y	N	Clumps of fiberglass and dust balls.	TMI		
6	5	612	Y	N	N	VAV box in vicinity of historic leak. Loose tiles, clumps of fiberglass and dust balls.	TMI		
6	5	612	N	N	Y	Oil stain on ceiling tile.	TMI		
6	5	612	N	N	N		TMI		
6	6	612	Y	Y	N	Exposed fiberglass near perimeter wall. Clumps of fiberglass and dust balls.	TMI		
6	7	612	N	Y	N	Fiberglass insulation over office ceilings. Dust balls.	TMI		
6	7	612	N	Y	N	Fiberglass insulation over office ceilings. Oil stain on ceiling tile.	TMI		
6	8	North Hallway	Y	N	N	Small amounts of dust balls.	TMI		
6	8	602	N	Y	N	Fiberglass insulation over office ceilings. Oil stain on ceiling tile.	TMI	Stains on GB wall under cove base.	TMI
6	8	603					TMI	Stains on GB wall under cove base.	TMI
6	8	North Hallway	N	N	N		TMI	Stains on GB wall under cove base.	TMI
6	9	612	N	N	N		TMI	A total of 6 wall cores were drilled. No VMG.	TMI
6	10	612	Y	N	N		TMI		
6	10	North Hallway	N	N	N		TMI		
6	11	612	N	N	N	VAV boxes in vicinity of historic leaks.	TMI		
6	11	612	N	N	N		TMI		

Table 3: Revised BOE Water Damage Assessment Summary

Location			Above Ceiling Tiles					Below Ceiling Tiles / Room Area	
Floor	Grid / Column	Room	Tiles (left above ceiling)	Fiberglass insulation (left above ceiling)	Ceiling (visible issues)	Comments	Observer	Comments	Observer
6	11	North Hallway	N	N	N		TMI		
6	11	East Hallway	N	N	N		TMI		
6	12	612	N	N	N	Numerous dust balls.	TMI		
6	12	612	N	N	N		TMI		
6	13	612	N	Y	N	Fiberglass insulation over offices. Dust balls.	TMI		
6	14	West Hallway	NA	NA	NA	HVAC Duct over ceiling. No visible access.	TMI		
6	14	W ETE	NA	NA	NA	Stained FP beam in W electrical and telephone equipment room.	TMI		
6	14	South Hallway	N	N	Y	Stained FP.	TMI		
6	15	Mail Center	N	N	Y	10 sq.ft. VMG on N-wall of Room 6B	TMI		
6	16	Janitor Rm.	N	N	Y	Damaged, stained ceiling GB. Medium construction debris and heavy dust and other debris.			
6	16	South Hallway	N	N	N		TMI		
6	17	East Hallway	NA	NA	NA	HVAC Duct over ceiling. No visible access.	TMI		
6	17	E ETE	NA	NA	NA	Stained FP beam in E electrical and telephone equipment room.	TMI		
6	18	612	N	Y	N	Water staining delaminating FP about 6' in from perimeter wall. About a SF fallen material. Chunks of fiberglass and dust balls.	TMI		
6	18	618						VMG behind GB wall behind cove base.	TMI
6	18	619						VMG behind GB wall behind cove base. A total of 3 wall cores were drilled. No VMG.	TMI
6	18	621						A total of 6 wall cores were drilled. No VMG.	TMI
6	19	612	N	Y	N		TMI		
6	19	612	N	N	Y	Oil stain on ceiling tile. Heavy dust and debris.	TMI		
6	20	612	N	N	N	Square filter in rectangle duct.	TMI		
6	20	South Hallway	N	N	Y	Stained FP on deck.	TMI		

Table 3: Revised BOE Water Damage Assessment Summary

Location			Above Ceiling Tiles					Below Ceiling Tiles / Room Area	
Floor	Grid / Column	Room	Tiles (left above ceiling)	Fiberglass insulation (left above ceiling)	Ceiling (visible issues)	Comments	Observer	Comments	Observer
6	21	612	N	Y	N	Small amounts of dust balls and clumps of fiberglass.	TMI		
6	22	612	Y	N	N	Ceiling tile debris and other debris. Dust balls.	TMI		
6	22	612						A total of 3 wall cores were drilled at N wall. No VMG.	TMI
6	22	613/615						VMG behind GB wall behind cove base.	TMI
6	23	612	Y	Y	Y	Small amount of water staining on FP. fiberglass insulation over interior office ceiling.	TMI	VMG behind GB wall behind cove base.	TMI
6	23	614/616						VMG behind GB wall behind cove base.	TMI
6	24	612	N	Y	N	Chunks of fiberglass and dust balls.	TMI		
6	24	612	N	N	Y	Oil stain on ceiling tiles. Medium dust and debris.	TMI	VMG behind GB wall behind cove base.	TMI
6	25	612	N	Y	N	Dust balls.	TMI	Stain on sill of S facing punch-out window.	TMI
6	26	612	N	N	N	VAV box in vicinity of historic leak.	TMI		
6	26	612	N	N	N		TMI		
6	27	612	Y	Y	Y	Clumps of fiberglass and dust balls.	TMI		
6	28	612	N	Y	N	Minimal amounts of dust balls. No signs of water intrusion.	TMI		
6	29	612	N	N	Y	White circles on FP around ceiling grid hangers. May be water staining. Minimal dust balls. No other signs of water intrusion.	TMI		
6	29	612	N	N	Y	Stained ceiling tiles.	TMI		
6	30	612	N	N	Y	Rust spots on angle metal supports attached to beams near corners. Water staining on GB around corner column (SE corner). Dust balls.	TMI		
6	30	612	N	N	Y	Stained FP on deck, stained GB.	TMI		
6	O22	605	N	N	Y	Stained FP on deck.	TMI		
6	O21	604	N	N	Y	Stained FP on column.	TMI		
6	O20	612	N	N	N		TMI		
6	O19	612	N	N	N		TMI		
6	O18	612	N	N	N		TMI		
6	N23	607	N	N	N		TMI		
6	N22	612	N	N	Y	Stained FP on deck.	TMI		
6	N21	612	N	N	N		TMI		
6	N20	612	N	N	N		TMI		
6	N19	612	N	N	N		TMI		

Table 3: Revised BOE Water Damage Assessment Summary

Location			Above Ceiling Tiles					Below Ceiling Tiles / Room Area	
Floor	Grid / Column	Room	Tiles (left above ceiling)	Fiberglass insulation (left above ceiling)	Ceiling (visible issues)	Comments	Observer	Comments	Observer
6	N18	612	N	N	Y	Light stain on FP on deck.	TMI		
6	N17	612	N	N	N		TMI		
6	M23	608	N	N	Y	Stained FP on column.	TMI		
6	M22	610	N	N	N		TMI		
6	M18	620	N	N	N		TMI		
6	M17	612	N	N	Y	Stained FP on column.	TMI		
6	L23	612	N	N	Y	Stained FP on column.	TMI		
6	L22	611	N	N	N		TMI		
6	L18	617	N	N	N	Stained FP on deck between Columns K and L.	TMI		
6	L17	612	N	N	Y	Stained FP on column and nearby deck.	TMI		
6	K23	612	N	N	N		TMI		
6	K22	612	N	N	N		TMI		
6	K21	612	N	N	N		TMI		
6	K20	612	N	N	Y	Stained FP on deck.	TMI		
6	K19	612	N	N	N		TMI		
6	K18	612	N	N	Y	Stained FP on deck between Columns K and L.	TMI		
6	K17	612	N	N	N		TMI		
6	J22	612	N	N	N		TMI		
6	J21	612	N	N	N	Stained FP on column.	TMI		
6	J20	612	N	N	Y	Stained FP on column.	TMI		
6	J19	612	N	N	Y	Stained FP on column, stained GB.	TMI		
6	J18	612	N	N	Y	Stained FP on column, stained GB.	TMI		

Abbreviations: FP = Fireproofing GB = Gypsum Board LF = Linear Feet NA = Not Applicable for WDA NC = North Core NSC = No Suspended Ceiling SC = South Core SF = Square Feet VAV = Variable Air Volume

Directions: N = North NE = Northeast NW = Northwest E = East S = South SE = Southeast SW = Southwest W = West