

# Building Defect Analysis Report

## Root Cause Analysis

Report Generated: 1/28/2026, 9:44:35 AM

Property ID: P6

Historical Data Analyzed: 3 records

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### 0 Identified Root Causes

#### 1. Differential Foundation Settlement

Confidence: HIGH

Reasoning: High severity diagonal crack with recent movement indicates foundation instability.

**Affected Systems:**

- Structural System
- Foundation System
- Building Envelope

#### 2. Defective Plumbing System Component

Confidence: HIGH

Reasoning: Significant water damage and mold near bathroom strongly indicate an active plumbing leak.

**Affected Systems:**

- Plumbing System
- Interior Finishes
- Building Envelope
- Indoor Air Quality

#### 3. Inadequate Maintenance/Delayed Remediation

Confidence: MEDIUM

Reasoning: Mold growth indicates prolonged moisture, suggesting delayed detection or inadequate response to the leak.

**Affected Systems:**

- Maintenance Procedures
- Building Envelope
- Indoor Air Quality

## Ø=Üj Immediate Action Recommendations

1. Immediately engage a structural engineer to assess foundation stability and structural integrity for R1.
2. Locate and repair the active plumbing leak in R2 immediately to prevent further water damage.
3. Engage a certified mold remediation specialist for R2 to safely remove mold and thoroughly dry affected areas.
4. Implement crack monitoring for R1 and investigate external drainage around the foundation.



