

CAUSE-OF-LOSS REPORT · CASE 091 · SAMPLE

Dana Point cantilevered deck

Mechanism	ledger flashing decay
Level	at finished floor
Location	Dana Point, California
Prepared by	L3 Energy Construction, The Hydrotech Lab
Engineer of record	named separately where one is engaged

This is a sample report. It shows the form and depth of a Hydrotech Lab cause-of-loss report. The property, readings and outcomes are illustrative and do not describe a real client.

CHAPTER 1 · THE PATHOLOGY

A stain on the ceiling below the deck, and a wall that had been wet for two winters.

The deck looked perfect: ipe boards on a steel cantilever, cable rail, an open view. The only sign was a brown ring on the ceiling of the room below, which a painter had covered twice.

Behind the stucco the rim joist was soft enough to push a screwdriver into. Salt air had been carried in with every storm, and the fasteners at the ledger were bleeding rust.

OBSERVATION	FINDING
Deck age	11 years
Visible sign	ceiling stain below the door threshold
Ledger flashing	lapped the wrong way at two joints; no end dams
Membrane	stopped short of the rim, never terminated
Framing	rim joist and sill plate decayed over 9 ft
Cavity	visible mold on the sheathing

CHAPTER 2 · DIAGNOSTIC RECONSTRUCTION

How the path was established

We reproduced the leak on demand before removing any stucco, so the repair would be aimed at the actual path.

METHOD	PROCEDURE / STANDARD	WHAT IT SHOWED
Field spray test	ASTM E1105 at the ledger line and door sill	Water appeared inside within six minutes, at the ledger, not the door.
Moisture mapping	pin meter through the stucco at 12 in centers	Saturation followed the ledger and dropped off 18 in above it.
Borescope	two 3/8 in openings into the cavity	Confirmed the unterminated membrane and reverse-lapped flashing.
Thermal imaging	infrared from inside, after wetting	Cold band along the rim, matching the meter readings.

Recommended scope of repair

- Deck boards lifted at the house; ledger exposed and re-flashed with end dams and sheet-membrane termination at the rim.
- Decayed rim joist and sill plate replaced; steel connection cleaned and recoated.
- Wall cavity dried, cleaned and cleared before closing.
- Under-deck drainage added and tied to the perimeter line.

CHAPTER 3 · RESTORED STATE

Verification

The same spray test, at the same pressure, for the same duration. Nothing came through.

MEASURE	READING	STATE
Spray test at ledger	zero penetration	stable
Rim joist moisture	at ambient	stable
Under-deck drainage	tied to perimeter line	active
Fasteners	stainless, isolated from the steel	stable

Scope and limits. This report states the cause of water intrusion as established by the field methods listed, and a scope of repair a licensed contractor can bid from. It is not an engineering report. Structural, geotechnical or coastal engineering conclusions are the work of the engineer of record.