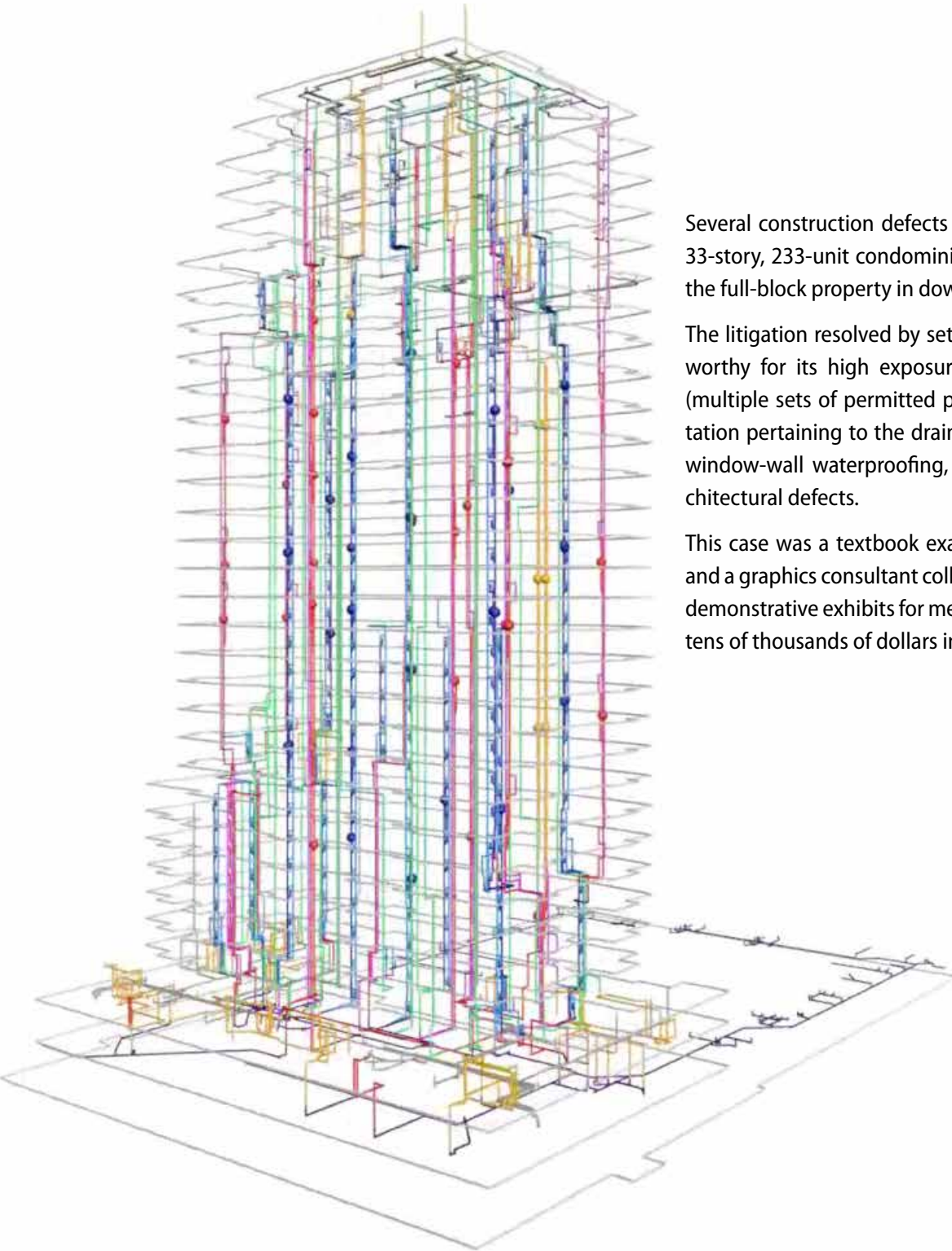


## Visual Persuasion for Construction Litigation

## Case Study: High-rise Condominium Tower



Several construction defects were alleged in the tower of a 33-story, 233-unit condominium high-rise occupying half of the full-block property in downtown San Diego.

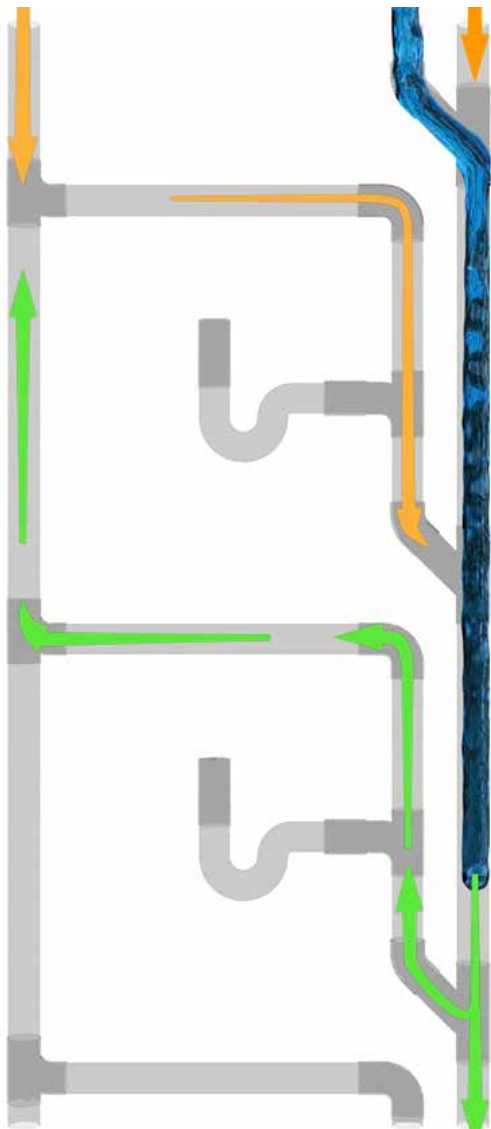
The litigation resolved by settlement in late 2017 was noteworthy for its high exposure, a murky permitting history (multiple sets of permitted plans), plumbing code interpretation pertaining to the drain-waste-vent plumbing system, window-wall waterproofing, and other mechanical and architectural defects.

This case was a textbook example of how counsel, experts, and a graphics consultant collaborated to develop persuasive demonstrative exhibits for mediation and trial, saving carriers tens of thousands of dollars in expert fees.

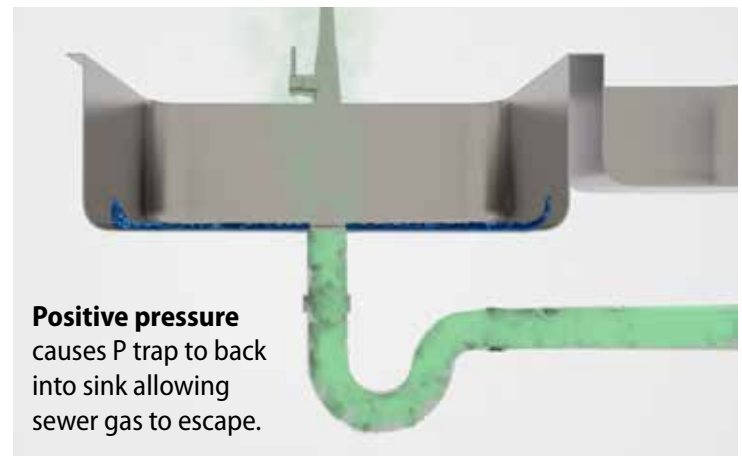
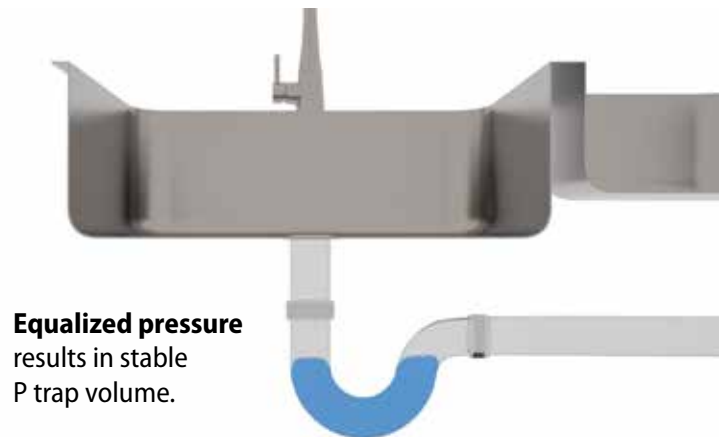
## Challenge: teach basic performance principles

When basic understanding of plumbing principles cannot be left to chance, computer animations transform technical testimony into clear and convincing explanations.

**Right:** four variations of kitchen drainage and venting principles and P trap performance.

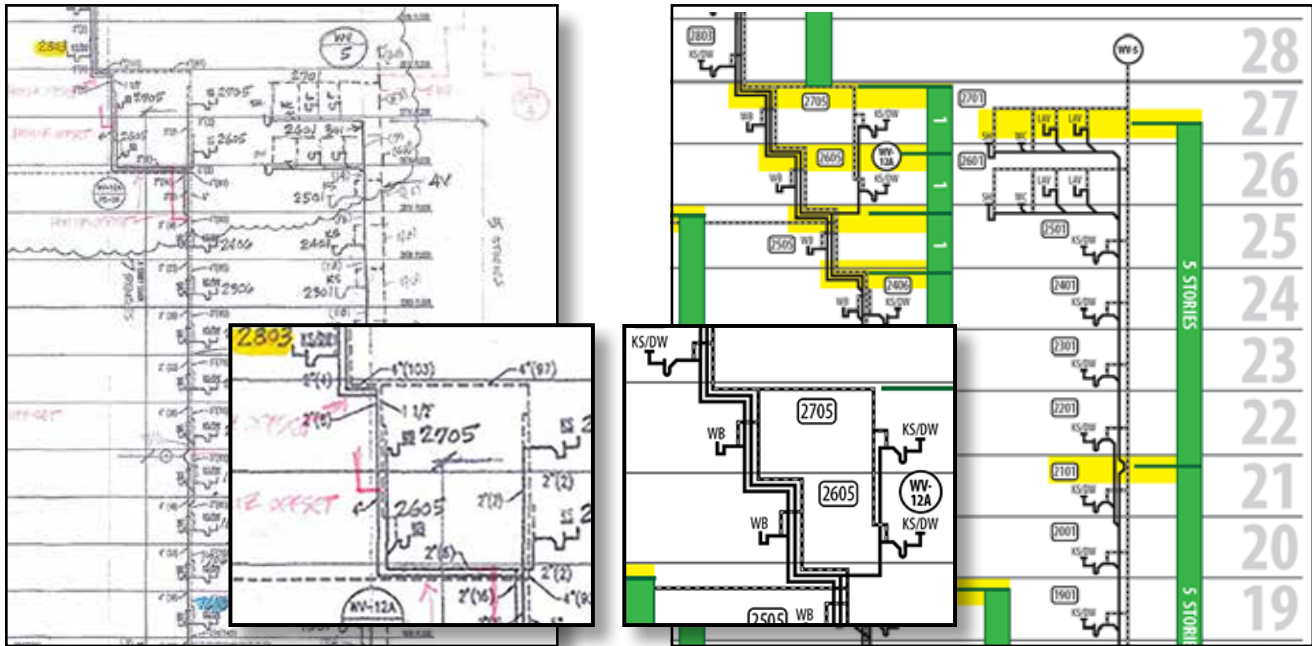


**Above:** explanation of cyclic venting through two floors of laundry plumbing with branch vents on every floor in lieu of yoke vents.



## Challenge: demystify building plans and notes

Building plans, field notes, and other documents must be clearly understood for evidentiary purposes. In their native state, plumbing plans were incomprehensible to lay jurors, so we employed graphical techniques to ensure every cryptic document revealed its secrets.

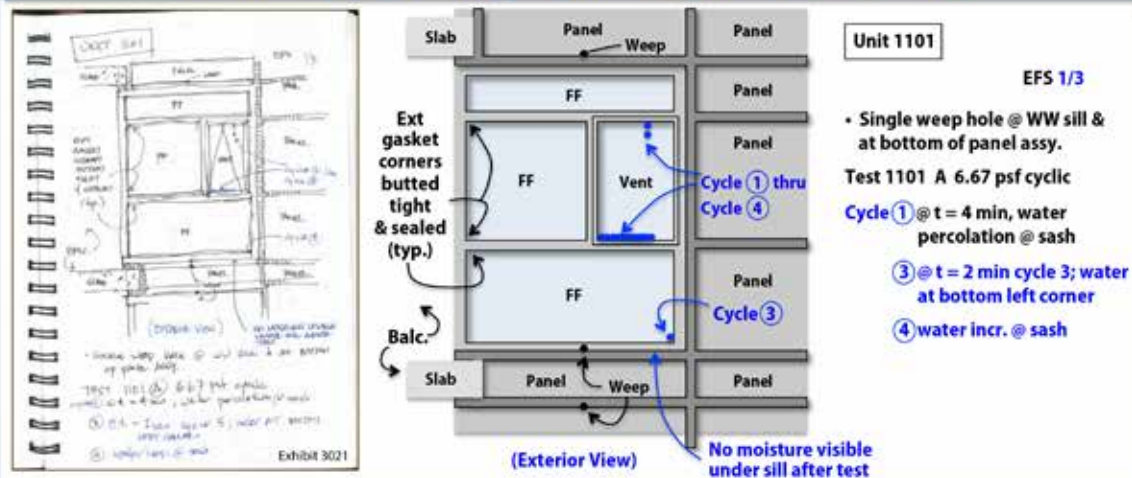


**Above:** before and after illustrations of as-built condition, horizontal offset locations, and the stories between offsets.

**Below:** a literal translation of an expert's field notes transforms an illegible document into an understandable graphic.

### Defense Testing – Unit 1101

#### Summary of Testing – Window Wall Field Notes

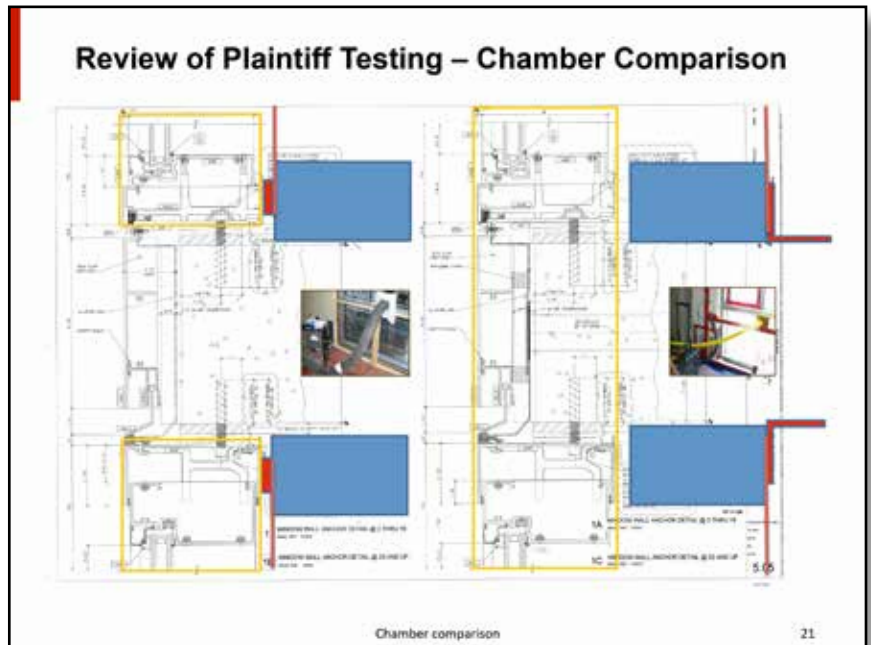


## Challenge: enhance expert testimony with graphics

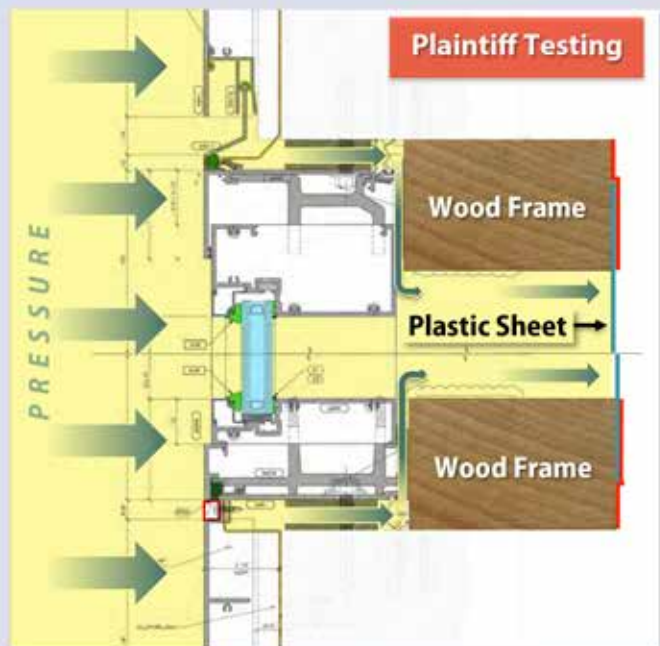
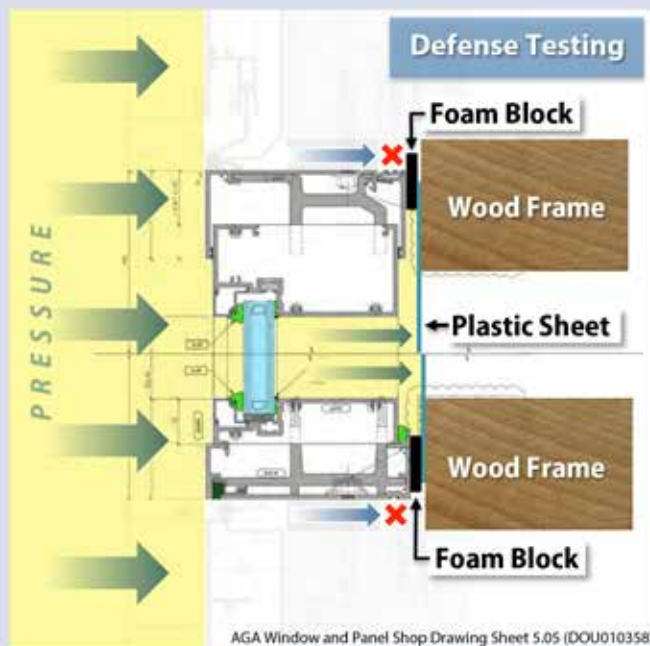
When the key to resolving your case is comparing proper versus improper methods, we turn your expert's just-the-facts presentations into compelling demonstrations of right versus wrong.

**Right:** while technically accurate, this expert's illustration fails as a demonstrative exhibit.

**Below:** a few graphical improvements make the expert's demonstration pop and the message much clearer.



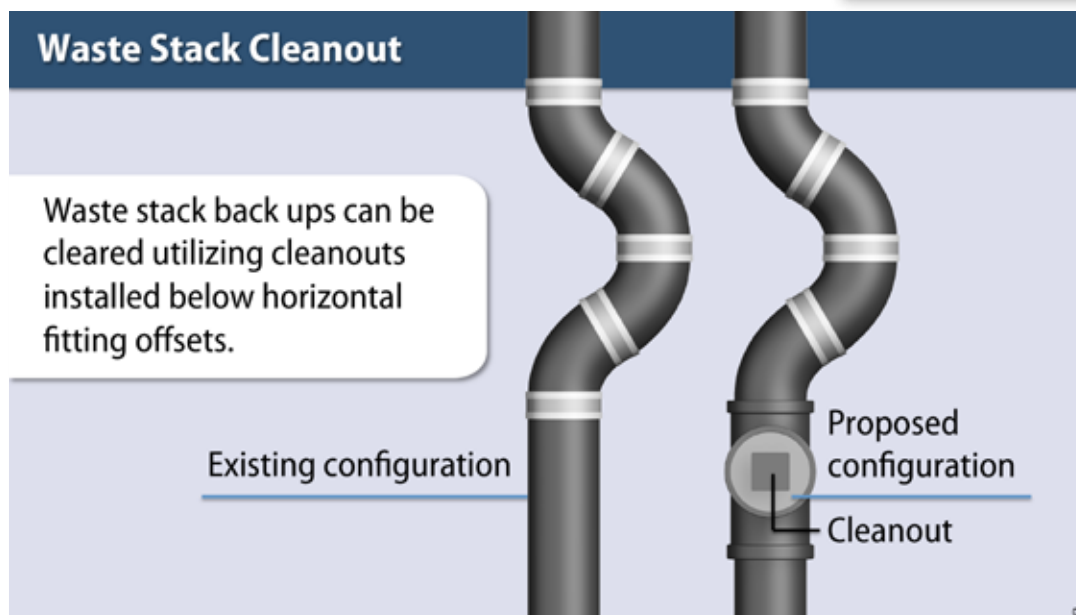
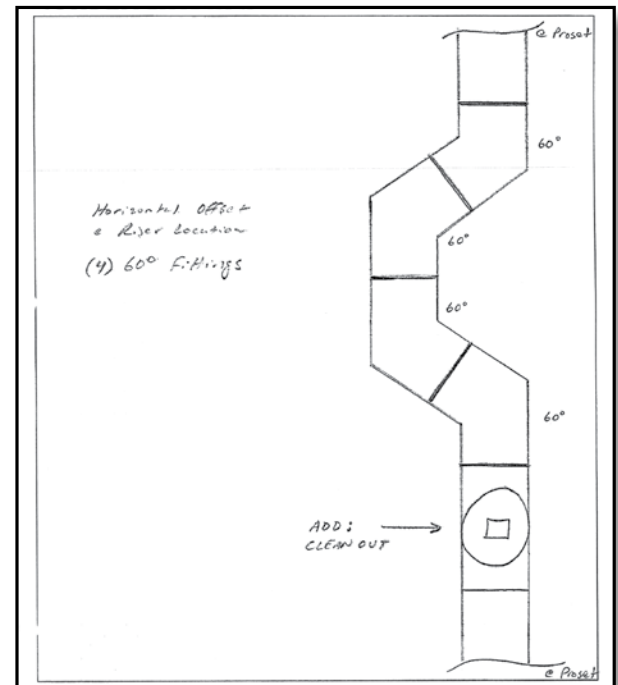
## Chamber Testing Comparison



## Challenge: demonstrate reasonable remedies

With millions of dollars at stake, compelling demonstrative evidence is the best way to promote reasonable remedies.

Mediators crave logical explanations that influence resolution and alternative methods resonate with trial juries who need very clear and understandable demonstrations why a proposed remedies meet the "reasonable" threshold.



**Above:** this expert's sketch was adequate to illustrate a basic piping concept for deposition but not trial.

**Left and below:** based on the sketch, we prepared these graphics to demonstrate explain how the proposed remedy solved a recurring problem.



## Challenge: create persuasive conclusions

Designing comprehensive expert presentations requires more than showing their work product (e.g., photos of testing and samples, tables of data, and technical graphs).

Fact finder-friendly presentations demonstrate thorough methodology and culminate in clear explanations of how and why test results justify reasonable conclusions.

In this case, the biggest cost issue was whether to replace miles of cast iron pipe allegedly improperly manufactured, specified or installed. Plaintiffs argued it was doomed to failure and had to be replaced. The defense needed a compelling demonstration why plaintiffs' proposed remedy was overkill.

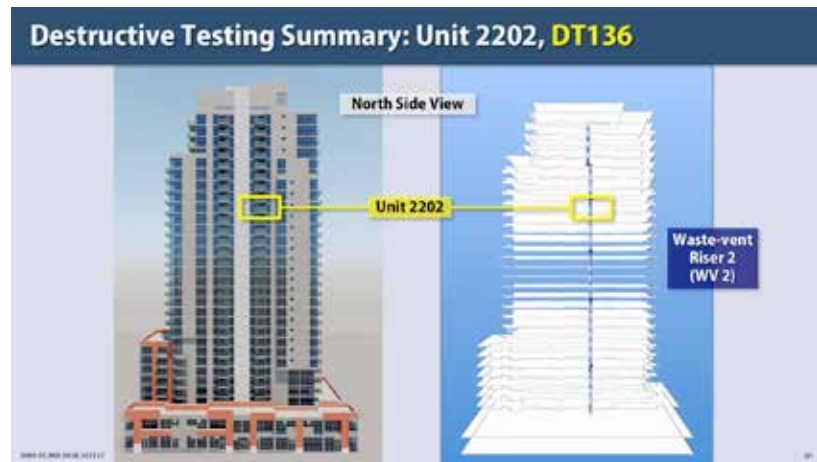
With the defense metallurgist, we created dozens of "storyboards" demonstrating how destructive testing revealed repairs, not replacement, was the most practical and reasonable remedy.

**Top right:** exterior and interior 3D models began each storyboard by identifying unit locations and risers subjected to destructive testing of drain-waste-vent, Sovent, and storm drain risers.


**Upper right:** photos of removed, cleaned, and sectioned pipes prior to testing and analysis.

**Lower right:** scanning electron micrographs of a ring section analyzed for the presence and extent of graphitization and corrosion.

**Bottom right:** graphical summary describing the remaining useful life at or exceeding the accepted standard.



Destructive Testing Summary: Unit 2202, DT136

About This Sample	Most Reasonable Remedy									
<p>Occlusion Rating: 1</p> <p>Diameter 3"</p> <p>Riser ID WV 2</p> <p>Service: Laundry</p> <p>Location: Wall cut</p> <p>Type: 36.875" vertical waste main pipe</p> <p>Sample: vertical ring</p> <p>Flow direction through sample</p> 	<p>Repair <input checked="" type="checkbox"/> OR Replace <input type="checkbox"/></p>									
Annual Corrosion Rate and Remaining Life										
	<table><thead><tr><th></th><th>Actual</th><th>Post-Repair</th></tr></thead><tbody><tr><td>Annual corrosion rate (mils/year) (Standard: 3 mils/yr)</td><td>4 mils</td><td>3 mils</td></tr><tr><td>Projected remaining life (Standard: 30 years)</td><td>28 Years</td><td>38 Years</td></tr></tbody></table>		Actual	Post-Repair	Annual corrosion rate (mils/year) (Standard: 3 mils/yr)	4 mils	3 mils	Projected remaining life (Standard: 30 years)	28 Years	38 Years
	Actual	Post-Repair								
Annual corrosion rate (mils/year) (Standard: 3 mils/yr)	4 mils	3 mils								
Projected remaining life (Standard: 30 years)	28 Years	38 Years								

## Challenge: stretch the defense dollar

We created two very versatile 3D computer models: an internal layout of all drain-waste-vent risers and an exterior façade. Tower renderings for dozens of demonstrative exhibits from different viewpoints with many combinations of risers illustrated the testimony of plumbing, building envelope, metallurgy, and repair cost experts.



### Destructive Testing Summary: Unit 2007, DT130



### Impact on Waste System



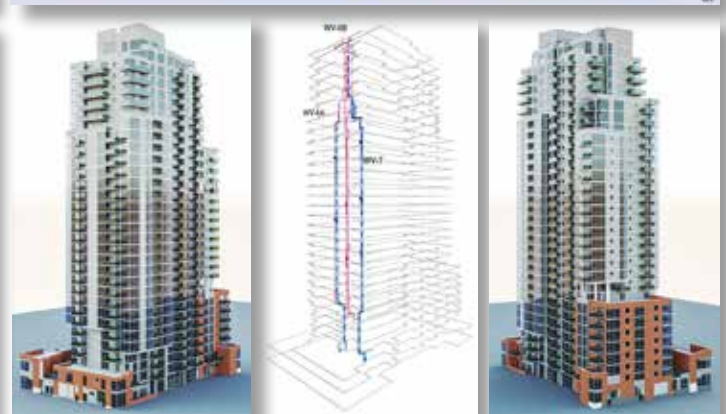
### Spandrel Access



### Defense Testing



### Defense Testing - Unit 303



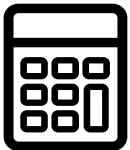
## Challenge: keep costs under control

### What you can do



#### Request cost estimates in phases

Flexible cost estimation manages expectations when project scope is unpredictable or circumstances change during litigation.



#### Provide a budget range

Budget guidance is tailored to the most sensible solutions within your global litigation budget.



#### Discuss costs at the outset

Costs on the table keeps everyone vigilant, regardless if scope is unpredictable or the budget is wide open.



#### Obtain pre-approval from the carrier

Meeting our “no surprises” goal depends on obtaining carrier approval before the engagement begins.



#### Facilitate expert interaction

Experts vary greatly in timely preparation, jury empathy, and perceived need for visual communication. Exert control by bringing us together early to eliminate duplicative effort and cost.

### Leverage our experience

Take advantage of our four-decades litigation support experience crafting visuals that significantly influence outcome on your behalf.



**Get ideas flowing.** Even if you routinely delegate creative work to experts, our involvement will prioritize the process for the benefit of everyone.



**Advocate for the fact finder.** We anticipate fact finder needs for graphics, devise the best solutions, and continuously vet concepts to ensure they meet your objectives.



**Conceive compelling stories.** We craft storylines that resonate with the jury and maximize the impact on outcome.



**Leverage our experience.** We've participated in more trials to verdict than any lawyer will try in a lifetime, and in more areas than any single expert witness can possibly master. Leverage all of this experience every time we're engaged.



**Enhance expert testimony.** Construction experts are rarely expert visual communicators. We make them look good.



**Benefit from value-added products and services.** We provide organizational tools, searchable graphics compilations, ultra-secure cloud-based graphics repositories, and expert trial presentation services.

## Visual Persuasion for Construction Litigation

## Practice areas and creative solutions

- 
- Construction and Design Defect
  - Contractor/Professional Liability
  - Condemnation and Dedication
  - Construction Accidents and Workplace Safety
  - Construction Delay
  - Construction Method Tutorials
  - Drainage
  - Dredging & Capping and Marine Engineering
  - Easement Disputes
  - Electric Shock and Electrocution
  - Eminent Domain
  - Excavation, Grading, and Paving
  - Fire and Explosion Causation
  - Geotechnology
  - Historical Property Exemptions
  - Hydrogeology
  - Insurance Coverage and Agent Liability
  - Mechanical and Plumbing
  - Malodor Contamination
  - Public Utilities (Electricity, Gas, Water, Easements)
  - Real Estate Advertising and Misrepresentation
  - Real Estate Broker Liability
  - Real Estate Contracts and Transactions
  - Soils
  - Subsidence
  - Toxic Contamination and Remediation
  - Valuation and Forensic Economics
  - Viewshed Obstructions
  - Waterproofing
  - Workplace Exposure to Toxins
  - Zoning
- 
- Graphics Consulting
  - Graphic Design
  - PowerPoint Presentations
  - Interactive Multimedia
  - 2D/3D Technical & Scientific Illustration and Animation
  - Physical Models
  - Professional Photography & Video
  - Interactive Factual and Process Tutorials
  - Expert Foundational Testimony
  - Courtroom Technology
  - Graphics Library and Database Management
- 

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