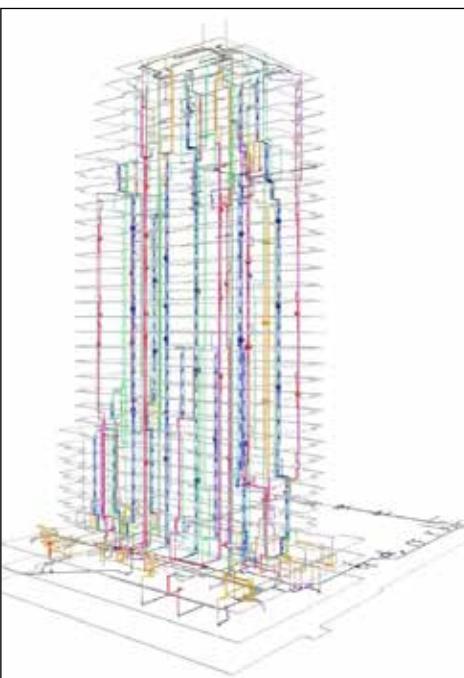
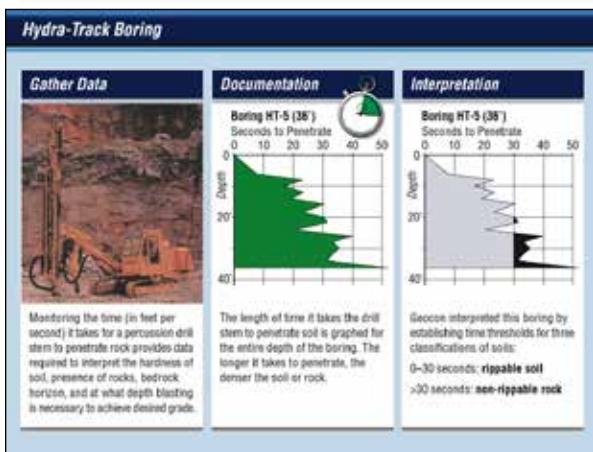
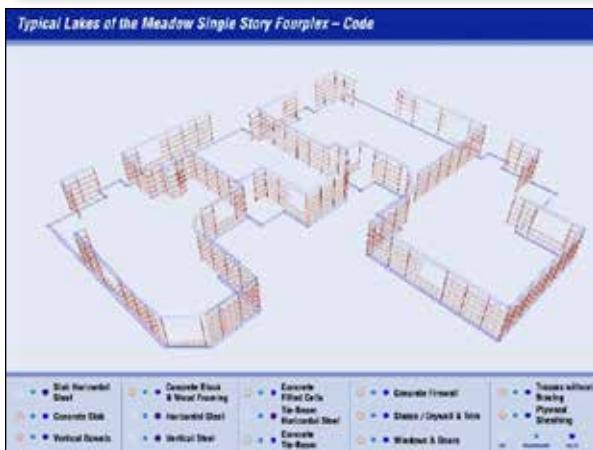
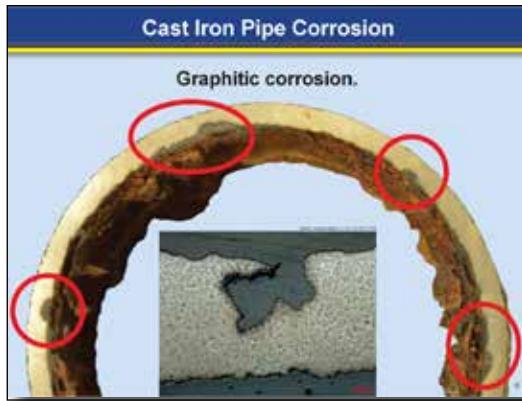


Legal Arts Guide to Persuasive Construction Litigation Graphics



What Every Construction Expert (and Attorney) Needs to Know

Introduction

Visual awareness

opens the door to
visual communication,
which can result in
visual persuasion.

How often do you use visual persuasion to illustrate your opinions, mediate a matter to resolution, negotiate a settlement, or try a case to verdict?

If you are a construction litigation expert or trial lawyer, you know visual communication is important. Some physical and all documentary evidence cannot be presented differently. Site documentation and destructive testing is always photographed and sometimes videoed, depositions are often recorded, mechanisms of failure and proposed remedies are sometimes illustrated.

But are you telling your story visually? Are you summarizing graphically? Are you creating indelible takeaways that influence outcome? Are you using graphics to persuade?

My goal is to help you master litigation graphics, one of the most powerful tools available to experts and trial advocates, in construction litigation.

I'm confident you'll learn a few tips that will benefit you on your next case. If you'd like more information about our services, please drop me a line.

Jim Gripp
President, *Legal Arts, Inc.*
jgripp@legalarts.com
619.239.1101
www.legalarts.com

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I. About Legal Arts

Founder Jim Gripp has produced construction litigation demonstrative exhibits since the 1970s. He entered the litigation support field over 45 years ago as a private investigation trainee specializing in scene documentation and reconstruction and founded *Legal Arts*, San Diego's oldest litigation graphics company, in 1979.

Jim has taken creative lead in thousands of cases in virtually every litigation practice area and provided expert testimony in over 40 civil, criminal, and military cases pertaining to scene reconstruction, photogrammetry, and computer animation.

For construction and real estate litigation, Jim has helped dozens of experts and lawyers successfully resolve cases in these areas:

- Design, materials, and construction defect litigation
- Geotechnology, soils, and subsidence
- Hydrogeology and drainage
- Excavation, grading, and paving
- Maritime dredging, capping, and marine engineering
- Mechanical and plumbing
- Waterproofing
- Fire and explosion causation
- Toxic contamination and remediation
- Odor contamination
- Construction delay
- Contractor liability
- Viewshed obstructions
- Breaches of contract and fiduciary duty by developers and contractors
- Construction accidents and premises liability relating to workplace safety, slips and falls, electric shock and electrocution, workplace exposure to toxins, and negligence
- Public utilities (electricity, gas, water and access easements)
- Condemnation, dedication, eminent domain, and easement disputes
- Historical property exemptions
- Zoning disputes
- Insurance coverage and broker liability
- Fraudulent real estate advertising and misrepresentation
- Real estate broker liability
- Real estate contracts and transactions
- Property valuation and forensic economics

II. Litigation Graphics Basics

Who benefits from litigation graphics?

The primary beneficiaries of litigation graphics are the people who influence and decide case outcomes: the claims adjustor, a mediator, your opponent, the judge, arbitrators, and jurors. Graphics help these people learn new information and comprehend unfamiliar subject.

Perception of need should always be viewed through a fact finder's lens whether or not trial counsel, experts, or claims adjustors feel the same.

The secondary beneficiaries are the presenters: experts and attorneys. Graphics help presenters organize, summarize, emphasize evidence and persuade fact finders and influencers

The graphics consultant's role is to balance the objectives of trial counsel, the desire of the expert to communicate informatively, and the learner's need to understand and use information to resolve the case.

Who sponsors litigation graphics?

While technical experts typically sponsor evidentiary and tutorial graphics, trial counsel is responsible for the demonstrative exhibits that tie the case together, such as timeline chronologies, deposition video excerpts, and summary graphics.

Who decides when to use demonstrative exhibits?

Understandably, the attorney might be justified in thinking when the expert perceives the need for a demonstrative, he or she will request or create one. Conversely, the expert might believe any decision about visual aids is strictly reserved for counsel because that's the lawyer's turf. While both might be correct, stasis might cause no decision when one is required.

The attorney is ultimately responsible because her focus is always on outcome. Expert input is helpful but deference for determining need is misplaced because if it incorrectly conveys perception of need is based on preference instead of what the learner actually needs.

The graphics consultant will help identify legitimate needs and prompt a dialogue about solutions. The product of these discussions prepare counsel to delegate responsibilities for completion and submit well-reasoned requests to the claims adjustor or plaintiff for cost approval.

What?

What is the objective?

Counsel and experts must persuade influencers and fact finders that their interpretation of the evidence and opinions relating to liability, scope, and remedy should prevail.

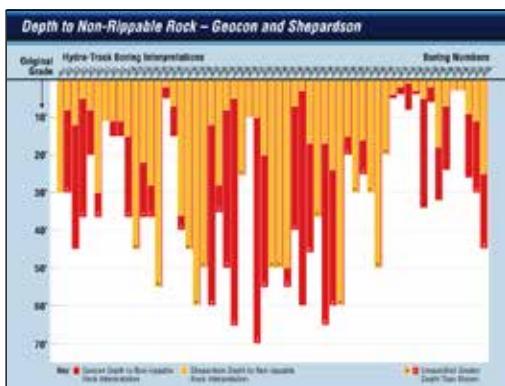
When this task involves visual communication, thoughtful consideration must perfect the message so it has the desired effect and can withstand scrutiny by opponents.

What are your options?

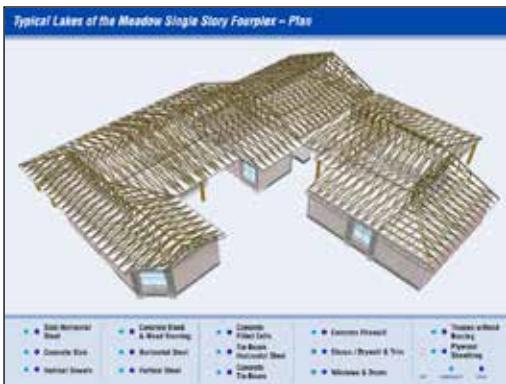
If you're not a visual communication expert (few lawyers, engineers, and architects are) the well of experience you draw from will likely determine how you construct visual communications. If limited, your options might be too. Collaboration between expert and lawyer will invariably expand your options and engaging a graphics consultant will widen them further.

A sharp consultant will likely recognize myriad opportunities to incorporate persuasive visual communications and will know the best medium for graphical production and presentation. Some examples:

Graphic design of charts and graphs.



3D-illustration and animation.



Interactive multimedia.



To-scale physical models.

- **Graphic design** of charts, graphs, timelines, aerial photos and maps, photo compilations, site and testing documentation summaries, documentary evidence, process charts, and the ubiquitous *PowerPoint* presentation
- **2D and 3D-computer illustrations and animations** of technical subjects, site diagrams, construction methods and materials, proper and defective performance, and mechanisms of failure and defect
- **3D-technical reconstructions** in lieu of poorly photographed physical evidence, and renderings of proposed remedies
- **Architectural and engineering renderings** and fly-through animations
- **Interactive multimedia** tutorials featuring progressive builds, interchangeable parts, and different outcomes
- **To-scale physical models**

What will it cost?

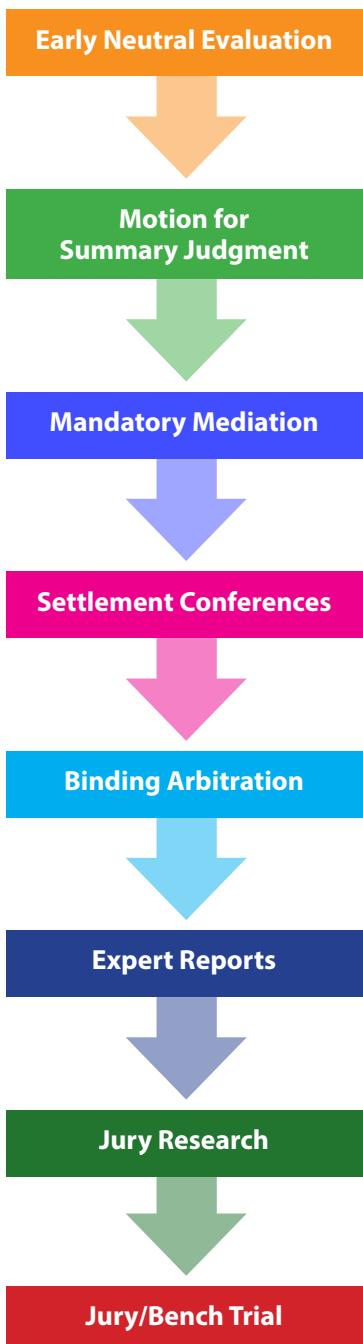
Litigation graphics are commonly priced by the hour for consulting, design, and production. Flat-fee pricing may be available for projects with predictable scope.

Graphics consulting typically comprises about a quarter of the total cost of engagement (less for very large projects). It includes research, the *creative review*, the *creative brief*, art direction (supervision), and project management.

Design and production encompass graphic design, 2D and 3D-illustration and animation, interactive multimedia, physical model making, and related work product.

See **Budgeting Graphics** on page 9 for more information.

Graphics Opportunities



When?

When should you use litigation graphics?

A common misconception about litigation graphics is they are only worth the time and cost to produce if trial is imminent. The old conventional wisdom was visual communication was unnecessary for people who understand basic engineering and construction methods.

Even if once true, that sentiment is outdated. Ask any judge, mediator, or arbitrator whether experts and lawyers use demonstratives exhibits as often as they should, or as effectively as they can, the answer will be a resounding “no.”

Decision-makers are practical and prefer clear and convincing visual communication when they perceive a need. If not met, you risk missing a prime opportunity to persuade.

One client who said his firm has “graphics in their DNA” uses visual communication tactically in virtually every case-resolution effort so by the time he gets to trial, the judge has seen his graphics five or six times and “he’s already used to relying on them.”

Across all litigation practice areas, including construction, visual communication is used intelligently in **case status presentations**, **motion practice** (especially **Summary Judgment**), **expert reports**, **depositions**, **mediations** and **settlement negotiations**, **domestic and international arbitrations**, **ENEs** (early neutral evaluations), **jury research and focus groups**, and **bench and jury trials**.

When should you get cost approval?

Obtaining cost approval for graphics might depend on any combination of your relationship with the approving authority, timing, the dollar amount of the request, or the exposure limit. I always recommend obtaining approval before you authorize work to commence and with clearly defined limits. No one likes surprises.

Often, the total money needed through the entire course of the engagement is unknowable because scope is undefined or contingent on unpredictable variables. The prudent choice is to wait until dis-

covery is closed or nearly completed or the subject for visual communication is resolved.

Phased budgeting is common when enough money is approved to meet reasonable milestones of completion and the protocol for seeking additional funding should be predetermined. Because cost reporting varies widely by provider, establish the ground rules for timekeeping, work descriptions, and invoicing in advance.

Cost overruns happen, so create a contingency plan if your anticipated needs will exceed the pre-approved limit.

Where?

Where can you see graphics from other cases?

Legal Arts publishes downloadable brochures and select case studies illustrating construction litigation graphics on our website at <http://www.legalarts.com>. We also maintain hundreds of additional graphics in our portfolio.

Where can you get help?

Jim Gripp will be your primary contact. He can be reached by email at or jgripp@legalarts.com or [619.239.1101](tel:619.239.1101).

Why?

Why are litigation graphics essential?

About 65% of the general population are primarily visual learners (including judges and other neutrals). Visualization aids comprehension and retention of information, especially for technical subjects and without graphics, people will fill gaps with their imagination. You don't want to miss a prime opportunity to control how perception is shaped or let your opponent have free rein in this space.



Graphical teaching in construction litigation serves very practical purposes by demonstrating proper versus improper construction, code compliance, mechanical processes, and translating building plans into tangible virtual creations. It is the perfect medium for presenting chronologies of events, and damages calculations.



Graphics can affect outcome even in the movies. Henry Fonda's character in the motion picture "12 Angry Men" uses a demonstrative exhibit during jury deliberations to explain why key eye witness testimony was probably false. (Alamy stock photo).

Why should the expert propose graphics concepts?

Trial counsel, clients, and fact finders expect experts to be masters of their domain and use graphics when natural opportunities arise. Experts who fail to capitalize on these expectations do so at their own risk.

But sometimes all experts need help identifying opportunities and articulating solutions so collaborating with the graphics consultant will ensure productive results. Your proactivity starting the process will also give counsel the confidence to adopt an appropriate supervisory role of verifying and refining concepts to fit the grand scheme of their case.

How?

How do graphics influence outcome?

Construction litigation graphics are influential because they simplify complex issues through demonstration, illustrate how and why defects occurred, explain mechanisms of failure, and justify remedies and damages. Visual evidence is commonly used during deliberation to justify decisions and judges sometimes incorporate digital graphics into written decisions for the same reason.

Substantial research concludes that while graphics-intensive presentations are not a panacea, "graphically immersive" expert testimony is better received and more influential on outcome than testimony supplemented by few or no graphics.¹

1. See the *Persuasive Litigator* blog series, "Show, Don't Just Tell: Continuity, Comprehension, Comparison, Centrality, Caution" (in five parts), available at <https://www.persuasivelitigator.com/2011/07/show-dont-just-tell-continuity.html> (last retrieved May 2020).

How will you know what to create?

An easily learned system I've termed *Visual Strategy* can be used to reverse-engineer a desired outcome and identify prime opportunities for visual messaging. The concepts developed by *Visual Strategy* can be summarized in a *creative brief* that sets forth the purpose, description, and intended takeaways of each proposed demonstrative exhibit. Drop me a line if you're interested in learning more about this system.

How do you get started?

Once you have a general idea what you'd like to develop, outline a *creative brief* (see below) to vet concepts with trial counsel and secure conditional approval. Once approved, the design process begins.

III. Creative Review

An exploratory *Creative Review* is conducted during the initial creative kickoff meeting with the expert, trial counsel, and the graphics consultant. We cover case background, scope of engagement, and preliminary graphics concepts.

- **Case Background.** SWOT analysis for each party, the venue, litigation schedule, financial exposure, discovery status and key evidence, insurance defense housekeeping (when applicable), and assembly of background materials for review and / or analysis
- **Objectives.** The case theme, identification of each expert and his or her role, overview of the evidence, description of desired outcome and how it will be achieved
- **Initial concepts.** Identify and vet initial concepts, review or identify supporting materials, conceive areas for development
- **Action plan.** Schedule site visitation, delegate tasks, responsibilities, and reporting protocol, identify needed source materials

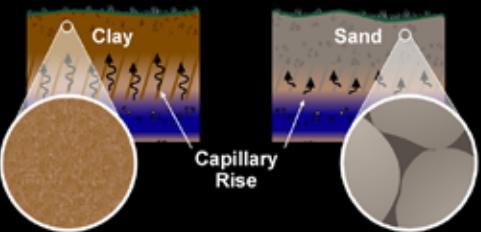
What Is Soil Nailing?

Soil nailing is a technique used to reinforce and strengthen existing ground by placing "passive inclusions" called "nails" into a slope or excavation as construction proceeds from the top down.



- Soil is normally excavated four or five feet deep in trenches about 100' long.
- Long nails are inserted into the exposed soil face at a downward angle about 5' apart.
- The face is covered with wire mesh and shotcrete.
- Additional excavations are made and the process repeated for deeper sites.

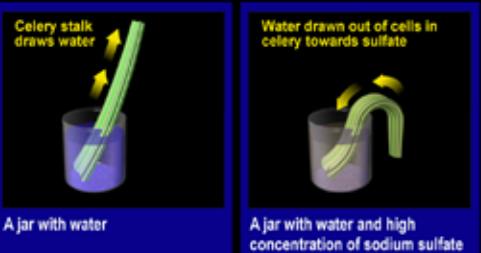
What is Capillary Rise?



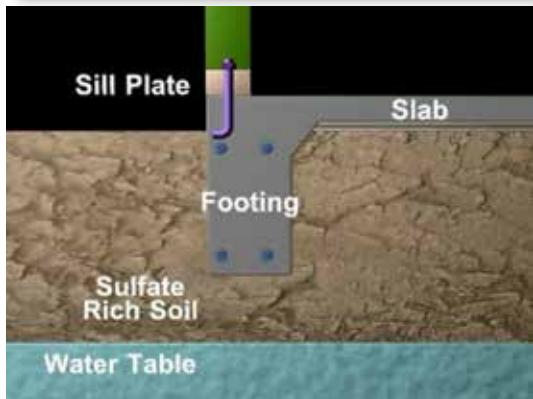
The height above the water table to which water is drawn by sulfate tension of water in soil

How do Salts (Sulfates & Chlorides) get into the Water?

Salt molecules attract water molecules. Together they combine to form a new compound (10:1 ratio).



A jar with water A jar with water and high concentration of sodium sulfate



Tutorial graphics and animation demonstrating principles related to salt and water migration for a case involving contaminated soils.

- Time and budget.** Establish a calendar for first phase milestone events and due dates. Discuss budget development, authorization, and payment plans

IV. The Creative Brief

The *Creative Brief* (or concept report) is based on the *creative review* and background materials and customarily comprises a summary of party positions and a proposal of demonstrative exhibits. The *Creative Brief* is evaluated by trial counsel and experts, modified as necessary, and conditionally approved before cost estimation.

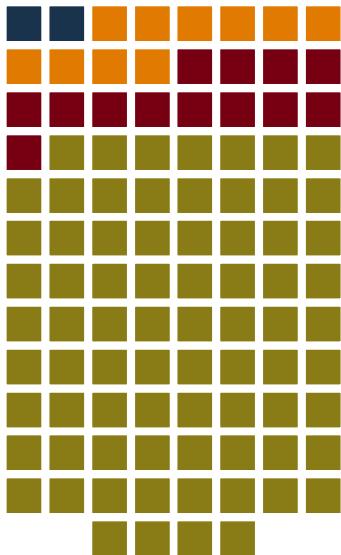
Each proposed concept should describe the purpose it will satisfy, general content, the medium, and desired takeaways. Here are some commonly proposed concepts:

- History of the project and identification of the builders, owners, and tenants
- Excerpts of building codes and regulations, descriptions of industry customs and generally accepted expectations for quality and performance
- Maps and photographs of the property
- Quality photographs and video of problem areas, *in situ* and removed physical evidence, destructive and performance testing
- Manufacturing, technology, and construction tutorials describing materials and systems manufacturing, fabrication, installation, usage, performance, and maintenance
- Tutorials demonstrating investigation methodologies, destructive testing, and analysis of physical evidence

- Illustrations of the building, floor plans, internal systems, and architectural details
- Photographic or illustrative comparisons of proper and as-built conditions
- Demonstrations of mechanisms of failure
- Quantification and summaries of defects
- Descriptions and costs of proposed remedies

The goal of the *creative brief* provides an overview of *potential* demonstrative exhibit concepts for the expert and trial lawyer to consider before costs are estimated. For larger cases the creative brief might be refined and narrowed based on trial team input.

V. Budgeting Graphics



Typical case budget for construction litigation graphics (each square \$250):

■	Creative Review – \$500 (2%)
■	Creative Brief – \$2,500 (10%)
■	CD/PM – \$3,250 (13%)
■	Graphics – \$18,750 (75%)

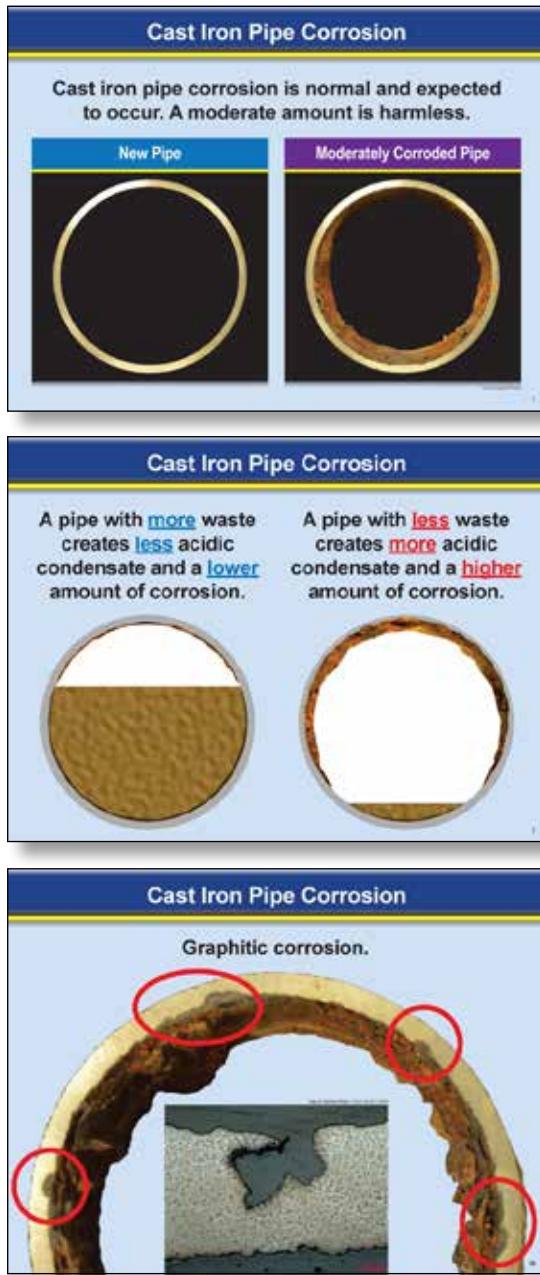
Cost estimation is usually performed after a subset of demonstrative exhibit concepts from the *creative brief* are conditionally approved to promote merit-based selection.

Sometimes carriers are more comfortable paying fewer experts so it is common for us to fold our cost estimates into an expert's budget. For instance, animation of proper or as-built drainage performance might be submitted by the plumbing expert. Limiting the number of vendors also reduces the temptation to target an independent graphics specialist as non-essential for cost-reduction.

Costs are usually estimated on an hourly basis but flat fee ceiling costs, or value-pricing, is commonly provided, typically in a range from low to high, based on either information known to date or anticipated.

The creative review should be budgeted at \$500 and the creative brief \$2,500. Graphics consulting is commonly in the \$200 per hour range and graphics production \$150 to \$200 per hour.

Projects typically average one-part consulting (including art direction (supervision) and case management) and four or five-parts design and production. Small construction defect cases generally usually top out at \$25,000. Complex cases may run well into six-figures.



Graphics from a tutorial about the mechanism of cast iron pipe corrosion.

VI. Graphics Consulting

Graphics consulting includes concept development, project management, and creative direction. The **graphics consultant** is a highly experienced expert in visual communication.

- **Concept development ("CD").** The consultant develops concepts for a defined objective, vets every concept, and develops the cost estimates.
- **Creative direction.** Once concepts are approved, the consultant or a separate art director supervises the design and production of demonstrative exhibits. Instructions are drafted, animation scripts and storyboards written, preliminary sketches or designs created, and onsite photography and videography is supervised. Well-rounded consultants conduct creative direction and might design some of the creative work besides supervising animators, technical illustrators, and other designers.
- **Project management ("PM").** The consultant keeps the project on track, on budget, and serves as primary liaison between you and/or the client and the creative talent.

VII. Design and Production

- **Design.** Experts should be engaged in the design process and take ownership of the results. We need your help to establish the scope of coverage, develop content, and approve the look and feel of demonstrative exhibits.
- **Production.** Experts provide guidance during production and are responsible for final approval.

VIII. Post-production and Presentation

Creative work doesn't stop after the graphics are created. Post-production might include "old-school" display board printing and mounting, *PowerPoint* special effects or video production, settlement brochure editing and hyperlinking, and in-session hot-seat operation.

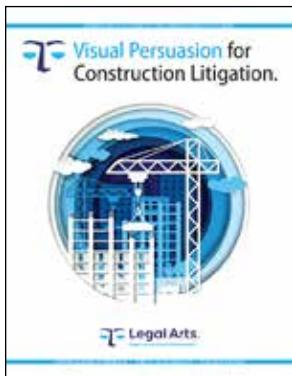
IX. Archiving and Repurposing

Archiving is more than saving the work if the case revives. Graphics repositories can be referenced by experts and attorneys involved in similar types of cases, re-purposed with or without modification in future litigation, and reproduced in sanitized form for expert or law firm promotional purposes.

Conclusion

Old school "just the facts" oral explanation was never very effective, and in today's world of information and cognitive overload, it's guaranteed to lose your audience. You must communicate visually to teach people technical subjects, and you have to do it well to persuade them to believe you and not the other side.

So, the debate is over, and the results are in: the people who decide your client's fate in construction litigation want and need a lot of visual information. When you fulfill this need, you increase the odds of obtaining a positive outcome.



Construction



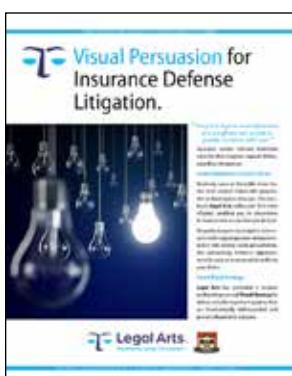
High-Rise Condo Study



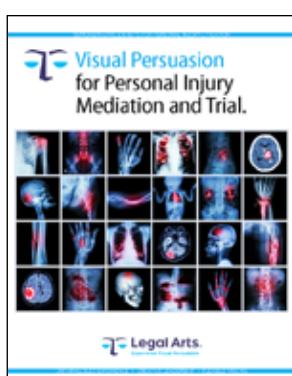
Insurance Coverage



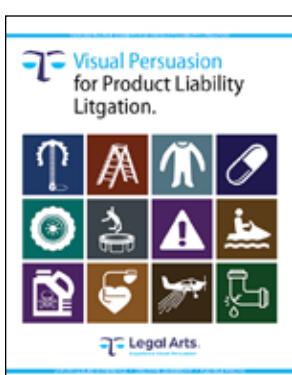
Mid-Rise Condo Case Study



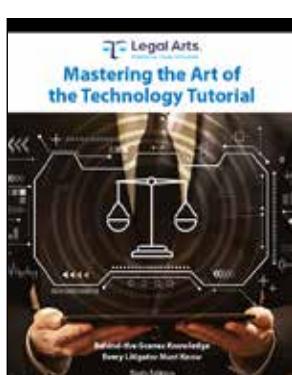
Insurance Defense



Personal Injury



Product Liability



Comprehensive Guide to Mastering Technology Tutorials for Litigation (45 pages)



For more information or to discuss a pending matter, please contact:

Jim Gripp, CEO
jgripp@legalarts.com

619.239.1101 phone
888.305.1101 toll free
619.316.5672 direct

3755 Avocado Blvd. #207, La Mesa, CA 9194
www.legalarts.com

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