



Philip HELMES

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Senior Principal

CONTACT

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ABOUT

Phil Helmes has over 45 years of practical project management experience. He has performed over 350 independent analyses and evaluations on project types and issues ranging from mid-sized private initiatives to complex multi-billion-dollar capital project engagements, acting as design engineer, contractor, independent project inspector, owner's representative, and developer. His project forensic analysis services span all stages of project development, from preliminary planning through final closeout. His specialty includes root cause and investigative analysis, engineering and construction project management assessments, scheduling and productivity analysis, cost estimating and damage analysis, and technical expertise in the engineering, construction, and permitting sectors. His portfolio includes projects in the commercial, residential, hospitality, cultural, manufacturing, oil & gas, energy/power, infrastructure and transportation, and water/wastewater treatment sectors.

Additionally, Phil provides expert witness testimony in the areas of engineering and construction project management, schedule delay, productivity losses, project management standard of care, and damages. Testimony settings include depositions, mediations, arbitrations, hearings, and trials. In addition, he is adept at identifying and managing technical experts, developing trial exhibits, and providing consulting support in engineering, construction, and real estate developments.

PROFESSIONAL EXPERIENCE HIGHLIGHTS

15 YEARS WITH FIRMS | 45+ YEARS IN INDUSTRY

SOCOTEC

2021 – Present | Senior Principal
2008 – 2020 | Managing Principal (formerly Helmes & Co. LLC)

QUALIFICATIONS

EDUCATION

- Master of Business Administration – University of Connecticut
- Bachelor of Science in Civil and Structural Engineering – Syracuse University

PRACTICE AREAS

- Root Cause Analysis
- Expert Witness Testimony
- Preparation & Evaluation of Claims
- Project Management Assessment & Standard of Care Opinions
- Schedule / Delay Analysis
- Acceleration / Disruption Analysis
- Productivity Analysis
- Cost Estimating & Damages
- Owner's Representative & Developer

PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers (ASCE)
- Boston Society of Civil Engineers (BSCE)
- MOLES 22 Year Member

PROFESSIONAL REGISTRATIONS,

- Professional Engineer in: CT, FL, LA, MA, MD, NJ, NY, SC, OH, TX, WA, WY

TESTIMONY FORUMS & VENUES

- State Courts
- American Arbitration Association (AAA)
- ICC Arbitration Forum

PUBLICATIONS

- Helmes, P., Crow, D., Long, C., "Rules of Engagement: Effective Construction Scheduling," DRI for the Defense, March 2016.

REPRESENTATIVE PROJECTS

- **Central Artery/Tunnel Project, Boston, MA** - Led an independent project management review of the \$13.8 billion Central Artery/ Tunnel Project in Boston and continued to perform a range of assignments, including: restructuring of the payment and change order processes, designer audits, schedule analysis and root-cause investigations associated with cost-recovery efforts, development of performance-analysis dashboards for senior management, and independent project status reports.
- **Brightwater Treatment Plant and Conveyance Project, Seattle WA** – As part of an oversight team, provided independent project-management reviews, including structuring, communications, budgeting and construction management, for Seattle Water and Wastewater Authority, including ongoing oversight for a \$1.5 billion new treatment facility and conveyance system.
- **Landbridge Project, Saudi Arabia** - Served as pursuit manager for a Kuwait-based project sponsor to manage and assemble a team to pursue a finance-design-build and operate a freight rail system from Jeddah to Riyadh, Saudi Arabia. Managed the entire team of consultants, engineers, contractors and related participants, including setting up a company structure with a CEO.



R E P R E S E N T A T I V E P R O J E C T S

- **Cleveland I-90 Innerbelt Bridge Project, Cleveland, OH** - Assessed an errors and omissions claim against the designer on a phase of a multi-billion-dollar heavy civil project.
- **I-26 Widening and Rehabilitation Project, Lexington and Calhoun Counties, SC** - Retained by counsel on behalf of the Engineer to perform an independent review and analysis of alleged errors and omissions and schedule impacts being set forth by the Design-Build Contractor. Provided an expert report and testified at deposition.
- **Loop 375 Border Highway West Extension Project, El Paso, TX** - Provided independent schedule analysis and damages valuation services on a new \$450 million. Design/Build/Maintain highway project. Assessed the performance of the Designer and its effect on disruptions and delays experienced during construction in arbitration.
- **New York State Public Service Commission, Albany, NY** - Performed an independent project-management audit on the internal controls for Consolidated Edison Company of New York associated with \$5 billion of NYC street utility work occurring over a 9-year period. This audit was prompted by a government investigation of fraud and kickbacks between certain utility company personnel and contractors.
- **Washington State Department of Transportation I-5 Everett HOV Lanes Design-Build, WA** - Assessed the designers project management standard of care on a portion of the bridge-widening work on this \$220 million project that involved replacing 23 bridges; improving ramps and exits, lighting and sign surveillance; and installing noise walls and ramp meters.
- **Longfellow Bridge Rehabilitation Project, Boston, MA** - Assisted the engineer in the development of a change order to recoup the additional effort expended in the design of the project. Worked directly with engineer's staff to better understand the nature of the extended work and assisted in explaining the entitlement to the additional costs to the builder.
- **Precast Cable-Stayed Bridge Project, Puerto Rico** – Performed an evaluation of the acceleration reasonableness of related remedial construction activities and the time-related costs submitted for reimbursement to the insurance company that allegedly stemmed from the collapse of a form traveler during the initial launch procedure of a cable- stayed bridge.
- **John F. Kennedy International Airport Terminal, New York, NY** – Performed an independent evaluation of the project management actions of the design team and construction professionals on a new \$1.4 billion international airport passenger terminal.
- **Marblehead Landfill and Transfer Station, Marblehead, MA** - Served as the engineering firm agent in facilitating the completion of the project by managing relationships with the town and the contractor, investigating the root cause of project issues, and planning and executing solutions to allow the project to complete successfully.
- **FedEx Airbus 380 Shipping Terminal, Memphis, TN** - Performed a forensic analysis of the performance of the contractor on the construction of a new shipping terminal.
- **New York MTA Long Island Railroad East Side Access, New York, NY** - Analyzed the root cause of delays and over \$100 million in cost overruns on a multi-billion- dollar public works project. alleging claims from the owner that the engineer breached the professional standard of care and caused the delays and cost overruns.
- **California High-Speed Rail Authority, Design-Build Construction Package 1 Fresno to Madera Project, CA** - Assisted the engineer in the development of a fee claim to recoup the additional effort expended in the design of the project.
- **Confederation Line Extension, Ottawa, Canada** - Assisted the engineer in contract negotiations to recoup the additional effort expended in the design of the project due to design review comments received from the Owner.

REPRESENTATIVE PROJECTS

- **Pea Protein Processing Facility, Manitoba, Canada** – Performed and testified as an independent expert in project management of an EPCM's performance on a claim asserted by the Owner for breach of standard of care. The Project was developed through a flawed FEL process. The Owner held the contracts with vendors and subcontractors; the EPCM entity was responsible for detailed engineering development, procurement support and construction management and testified at Arbitration.
- **Johnson Matthey, Inc. Pharmaceutical Plant, West Deptford, NJ** - Investigated a new bulk pharmaceutical plant project to determine potential exposure to the professional liability insurance carrier for the designer-builder. Subject matter expert at mediation.
- **Petrobras vs. KBR Brown & Root, FPSO EPC Contract, Brazil** - Performed delay analysis of the drivers of the delay associated with the performance of the EPC contractor on this \$2.5B offshore floating oil and gas production, storage and offloading facilities. Assignment involved a process analysis and impact analysis along with production deficiencies. A presentation and report was prepared which eventually led to a settlement.
- **Kendall Cogeneration Station, Cambridge, MA** - Performed root cause analysis associated with the new installation of a Back Pressure Steam Turbine and an Air-Cooled Heat Exchanger and associated constraints involving the environmental permits. Utilized technical expertise to perform specialized analysis for rotating equipment elements of the process.
- **BP Canada Energy Company v. CH2M Hill Canada Energy Ltd., Noel Major Project, British Columbia, Canada** - Evaluated construction costs claimed by the owner against the project designer in the design and installation of approximately 210 km of small-diameter pipe for the collection and transportation of natural gas from multiple wells in eastern British Columbia.
- **Cannon Corporation v. ERG Resources LLC, et al./Cat Canyon Oil Field, Santa Barbara, CA** - Investigated the root cause of a flare being inadvertently de-rated during permitting and design, resulting in the owner's being assessed fines for permit violation.
- **Edson Gas Storage Facility, Edson, Alberta, Canada** - Analyzed claims submitted by the owner against the designer regarding the design and construction of a 725 MMSCFD (million standard cubic feet per day), \$93.8 million CAD gas storage facility. Focused on the schedule delay claims and engineering errors and omissions memorialized in field change notices to determine whether the designer satisfied its standard-of-care obligations as outlined in its contract with the owner. Provided an exposure assessment on professional liability and participated at mediation.
- **Fuel Cell Plant, Turlock, CA** - Performed a root-cause analysis to identify the reasons a new \$11 million, 1.2 MW fuel cell plant failed to operate within the guidelines established by the engineer's design and specifications. Confirmed the feasibility of the project and that the standard of care had not been breached by the engineer's design.
- **MAPLE Research Reactors Chalk River Laboratories, Toronto, Ontario, Canada** - Performed a root-cause analysis for a significant and complicated dispute between a nuclear facility owner and the designer-builder/operator to identify specific issues related to both performance and technical elements. Provided an expert report.
- **Seward 521 MW (net) Nominal Total Energy Power Plant, Seward, PA** - Developed a comprehensive schedule, cost and productivity analysis. Provided an expert report and deposition testimony.
- **Petronius Offshore Compliant Tower Project, Gulf of Mexico** - Evaluated the accuracy and reasonableness of the adjusted costs for an insured accident. Ensured the adjustment process was consistent with industry practice. Provided an expert report and testimony at deposition.
- **IPSCO Steel Mill EPC Assessment of Project Management Standard of Care, Axis, AL** - Performed a root cause analysis on this \$240 million steel production facility on behalf of the insurance company. The evaluation involved process analysis and delay impact analysis related to the performance of the EPC contractor to determine responsibility and corresponding damages.

REPRESENTATIVE PROJECTS

PROCESS & ENERGY (CONT'D)

- **Chemical Pipeline Jetty Construction, Indian Ocean** - Provided a damages assessment and expert report on a \$60 million, 2 km, pile-supported jetty in the Indian Ocean constructed to support pipelines carrying liquid chemicals from the onshore processing facility to the offshore mooring station.
- **Water and Wastewater Treatment, Boston Harbor Project, Boston, MA** – Assisted the project/construction manager of the \$3.5 billion Boston Harbor Wastewater Treatment facility in a review of construction claims and change orders. For the outside counsel of the owner, Massachusetts Water Resources Authority (MWRA), reviewed and provided independent analysis of various claims submitted by both tunnel contractors on the project with an aggregate value of \$90 million.
- **Metropolitan St. Louis Sewer District Sewage Conveyance Project, St. Louis, MO** - Provided expert consulting services and perform a forensic investigation of the performance of the Engineer and Contractor on \$8 million sewage conveyance project. Within a year of the installation of 13,000 linear foot sewerage system, comprised of 36", 42" and 48" RCP pipe, it experienced numerous pipe joint failures. Provided an expert report, testified at deposition and testified at trial.
- **Maricopa County Durango Juvenile Court and Detention Facility, Phoenix, AZ** – Performed an independent evaluation of claims from the general contractor against the design professionals for an alleged breach of professional duties on this new \$37M juvenile court and detention facility. Analysis included a review of the project documents and development of defenses for mediation. Provided an expert report and participated at mediation.
- **Winnie Palmer Hospital for Women & Babies, Orlando, FL** - Performed a root cause and delay analysis, and provided a corresponding expert report and participated at mediation regarding a dispute involving this new \$111 million 11-story, 400,000 sq. ft facility.
- **Seattle Central Library, Seattle, WA** – Performed an independent evaluation of claims from the general contractor against the design professionals for alleged breach of professional duties on a \$100 million public library project.
- **Gaillard Performing Arts Center, Charleston, SC** – Performed independent evaluation claims by the Contractor including schedule delay, cost overruns, and alleged design errors and omissions in the renovation of an existing historical theatre and office building, and in the construction of an 1,800 seat, world-class performance hall with an adjoining 80,000 sq. ft. of office space and 38,000 sq. ft. of exhibit hall space within a demanding time frame. Provided expert report and testified at deposition.
- **Connecticut Science Center, Hartford, CT** - Performed forensic investigation of ~\$46M in cost escalation between the architect's proposal and submission of the construction manager's GMP for a 154,000 sq. ft. facility.
- **Peabody Essex Museum, Salem, MA** - Analyzed the project schedule and submitted change orders on a \$47.5 million museum expansion project. Participated at mediation.
- **Glenstone Museum** – On behalf of the Owner, performed an independent examination of the performance of the construction manager with respect to defective work caused by management/administration failures. Provided an expert report and testified at deposition.
- **Frost Miami Science Museum, Miami, FL** - On behalf of the Executive Architect and its insurer, performed an independent evaluation of claims asserted by the initial construction manager for alleged errors and omissions for a state-of-the-art, world class, multi-use and multi-level 250,000 sq. ft. science and technology museum, planetarium and aquarium.
- **Westin Hotel, Austin, TX** - Retained by counsel on behalf of the hotel owner and operator to assist in the review and analysis of the schedule impact set forth by the General Contractor. Provided an expert report and testified at deposition.
- **AC Hotel by Marriott, New Orleans, LA** – Performed an analysis of the rationality and relevancy of remediation repair costs being set forth by the hotel's current owner. Further, retained to opine on the Standard of Care expected of the Owner and its representatives during the renovation work performed prior to the hotel's sale. Provided an expert report and testified at deposition.

BUILDINGS

REPRESENTATIVE PROJECTS

- **Fontainebleau Miami Beach Hotel, Miami, FL** - Performed a root-cause analysis of the delay in the completion of the renovation of an iconic hotel. Provided an expert report.
- **Miami Beach Convention Center Renovation and Expansion, Miami Beach, FL** - independently evaluated claims asserted by the Construction Manager for alleged breach of Owner's Representative standard of care. The Project was delivered through a Construction Manager At-Risk Agreement for a final GMP in the amount of \$493M. Provided an expert report.
- **Boston Convention and Exhibition Center, Boston, MA** – Performed an independent examination and offered opinions on a \$40 million claim presented by the owner against the design team on a \$530 million convention center project. Provided an expert report, testified at deposition and provided subject matter expertise at mediation.
- **Phoenix Convention Center, Phoenix, AZ** - Assessed the validity of an owner's claim against the designer for recovery of damages due to cost overruns on a \$600M renovation and expansion project.
- **MGM National Harbor Casino, Oxon Hill, MD** - Performed an independent evaluation of the designer's performance related to construction claims including schedule delays, cost overruns, and alleged design errors and omissions for a \$1.4B hotel and casino.
- **Gillette Stadium, Foxboro, MA** - Performed an independent analysis of claims from the designer-builder against the design professionals for alleged breach of professional duties on a new \$300M NFL stadium.
- **Time Warner Center, New York, NY** - Assessed professional negligence and error and omission claims brought by the owner against MEP/FP engineering designer of the \$1.7B Time Warner Center. Participated at mediation.
- **EXP US Services, Inc. v. Skidmore, Owings & Merrill, LLP/Qatar Petroleum's World Headquarters, Doha, Qatar** - Performed an independent evaluation of the architect's performance regarding alleged add services on the development of a corporate headquarter complex.
- **Case Western Reserve University North Residential Village, Cleveland, OH** - Performed an evaluation of the construction manager's allegations that it had incurred cost overruns from schedule delays and acceleration efforts due to alleged errors and omissions and actions of the owner on a \$111M, 414,000 sq. ft. project. Participated at mediation.
- **University of California, Berkeley, Stanley Hall, San Francisco, CA** - For the insurer providing professional liability coverage to the MEP designer, assessed the merits of the claim asserted by the construction manager and its subcontractors regarding a 290,000 sq. ft. educational facility. Examined the MEP designer's performance and assessed their exposure. Participated at mediation.
- **University of Pennsylvania, Sansom Common, Philadelphia, PA** - Evaluated the validity of the claims against the A/E team; provided an exposure assessment outlining the potential range of damages and the associated strengths and weaknesses of the design team's case related to a significant amount of mold growth within a new \$120 million mixed-use space. Participated at mediation.
- **Albert Einstein College of Medicine Michael F. Price Center, New York, NY** - Provided expert consulting services and performed a forensic investigation of the performance of the design team on a new \$220M university hospital research building.
- **Johns Hopkins University Broadway Research Building, Baltimore, MD** - Assessed the validity of the claims presented by the construction manager of a \$100 million state-of-the-art medical and animal research facility at a leading US medical teaching and research university. Provided an expert report and testified at deposition.
- **West Virginia University, Life Sciences Building, Morgantown, WV** – Assessed the validity of design-related claims and the performance of the design team on a new \$50M life sciences building. Provided an expert report and testified at deposition and participated in mediation.

ADDITIONAL EXPERIENCE

DESIGN

- **Fredric R. Harris Inc. (Currently known as AECOM)** - Performed hydrology and hydraulic studies and design, bridge and foundation design, site engineering and drainage.
- **The Helmes Group (Architects, Engineers and Project Management)** - Performed site grading, steel design, foundation design and wood design involved with commercial and high-end residential structures. Site-related engineering included soil investigations for septic system design, subdivision design and permitting. Served as engineer in charge. Also performed site observations and payment requisition evaluations and approvals.
- **Testwell Craig Laboratories (Testing and Inspection Company)** - Served as independent inspector for footing bottom-bearing capacity for foundations, reinforcing steel placement, vibration monitoring, structural steel inspections and soil classifications resulting from boring sampling.
- **Helmes & Company (Engineering and Project Management)** - Provided site and building plan reviews. Performed site inspections for general conformance to project documents and to reviewed and certified payment applications. Provided turnaround and advisory services for select projects. Also provided property assessments for private developer's site conditions, and soils assessments for design and construction considerations.

INSPECTION OWNER REPRESENTATIVE

CONSTRUCTION

- **Morrison Knudsen Co (Construction Company)** - Performed quantity take-offs and estimating on a hydro-dam structure, 11-mile-long shipping canal and highway work. Assisted in the bid preparation and reconciliation with two other joint venture partners for a 100 million cubic yard canal excavation. Subsequently served as chief cost engineer for Ten-Tom Constructors.
- **Fairchester Builders (Commercial General Contractor)** - Served as a project manager responsible for estimating, bidding and managing small commercial and high-end residential projects. Also responsible for direct management of carpenters and laborers.
- **Walsh Construction Company (Construction Management Company)** - Served as project engineer for a 1 million sq. ft. engine manufacturing and assembly facility for Caterpillar Tractor Company. Subsequently served as construction manager for a 1.2 million sq. ft. urban corporate campus with four levels of underground parking. Served as project manager on the closeout of an industrial aircraft paint facility.
- **Helmes & Company (Project Management/ Construction Management)** - Performed project management site improvements on three residential sub-divisions. Managed, with an ownership interest in, the construction of two homes, plus managed the construction of a sizable residential project, golf club and museum. Gained hands-on experience with the trades, including grading, paving, drainage, concrete, masonry, demolition and carpentry.