

FORENSIC ENGINEERING



McLaren
ENGINEERING GROUP



McLaren Engineering Group – Headquarters
530 Chestnut Ridge Road, Woodcliff Lake, NJ 07677
Ph: 1-800-420-6401

49
STATES
LICENSED

20k+
PROJECTS
COMPLETED

45
YEARS OF
APPLIED INGENUITY

11
OFFICES
WORLDWIDE



About Us

McLaren Engineering Group is a leading full-service engineering firm renowned for its trusted, high quality, and innovative approach to solving complex challenges. With industry experts in multiple technical disciplines, our team has provided customized solutions for over 20,000 projects through consultation, design, inspection, and construction management. With over four decades of experience, a staff of 200+, and 11 offices worldwide, McLaren addresses every project's specific needs with technical excellence and creative innovation.



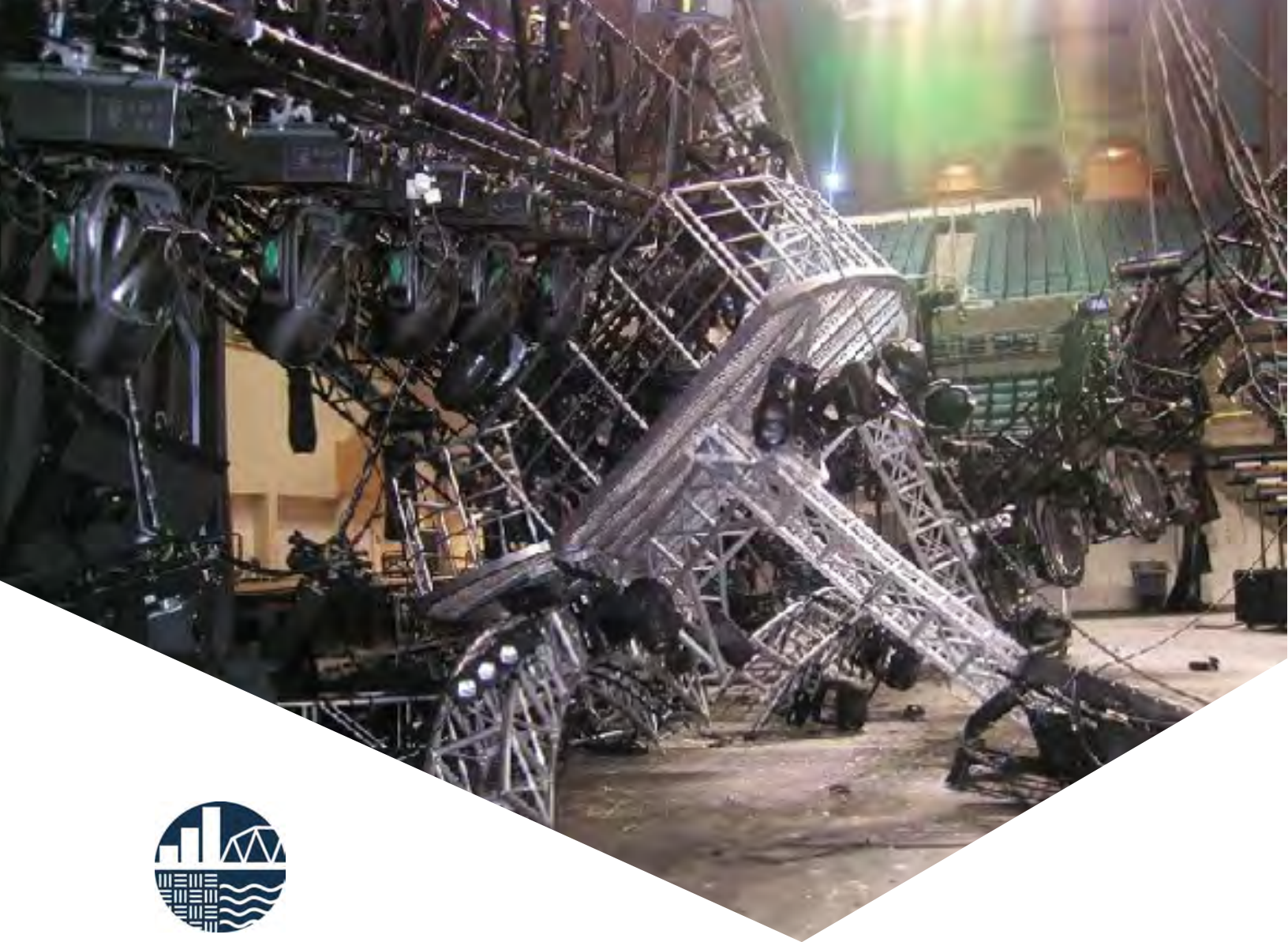
MALCOLM MCLAREN, PE

Founder + Forensic Lead

MMcLren@mgmclaren.com

Core Technical Divisions

STRUCTURAL | CIVIL + SITE | MARINE + COASTAL | BRIDGE, HIGHWAY + RAIL
ENTERTAINMENT | GEOTECHNICAL | FACADE + BUILDING ENVELOPE
CONSTRUCTION ENGINEERING | FORENSICS | SURVEY + MAPPING



FORENSIC ENGINEERING

Founded on our diverse multi-discipline technical engineering capabilities, McLaren's forensic experts are renowned for investigating, analyzing, simulating, and presenting evidence in some of the nation's most well-known collapses, failures, accidents, disputes, and deficiencies.

Headed by CEO and founder Malcolm McLaren, PE, our forensics division is focused on investigating the root cause of an incident, analyzing who/what is responsible, and identifying what can be done to mitigate reoccurrence.

In addition to our standard forensic investigation services, our practice offers full litigation support. Our services include detailed analyses using in-house high-tech capabilities, narrative reports, demonstrative evidence, and expert witness testimony.

FORENSIC DISCIPLINES

STRUCTURAL

CIVIL

FACADE

CONSTRUCTION
ENGINEERING

MARINE

BRIDGE HIGHWAY

ENTERTAINMENT

GEOTECHNICAL

GEOMATICS

www.mgmclaren.com

STRESS + FAILURE ANALYSIS

STRUCTURAL ANALYSIS

FORENSIC METALLURGY

LABORATORY ANALYSIS

MATERIAL FAILURE ANALYSIS

NON-DESTRUCTIVE TESTING

CRANE COLLAPSE
INVESTIGATION

FACADE INVESTIGATION

SITE COLLAPSES

STRUCTURAL INVESTIGATION

Conducting investigations to determine the cause and origin of structural collapses, failures, damages, and defects, our expert forensic engineers are experienced in all structure types. From residential, commercial, institutional, and industrial structures to bridges, railways, and infrastructure, we prepare clear, concise, cohesive, and accurate reports.



FIU PEDESTRIAN BRIDGE COLLAPSE

APPLIED INGENUITY



Accident Reconstruction

I-40 BRIDGE COLLAPSE-WEBBERS FALLS, OK



BOARDWALK HALL SUPER GRID 2 COLLAPSE, NJ



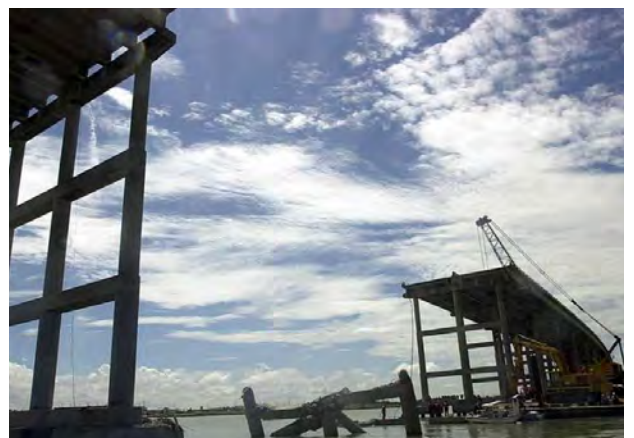
BUILDING COLLAPSE - YONKERS, NY



FACADE + WINDOW INVESTIGATION



SITE COLLAPSES



QUEEN ISABELLA CAUSEWAY, TX

SIDEWALKS + WALKWAYS

CODE COMPLIANCE

DRAINAGE + STORMWATER

FOUNDATIONS + BUILDING
SETTLEMENT

UNDERGROUND UTILITIES

TRAFFIC STUDIES

ROADWAY INVESTIGATIONS

FLOODPLAIN IMPACT STUDIES

SITE PLANNING + LAYOUT

CIVIL ENGINEERING INVESTIGATION

With a unique understanding of roads, sidewalks, underground utilities, foundations, and stormwater systems, our forensic engineers provide clients with top-notch civil analysis. From slip and falls to traffic accidents, McLaren can provide detailed narrative reports, code compliance analysis, easy to understand demonstrative exhibits, and expert testimony.



APPLIED INGENUITY



SIDEWALK + WALKWAY ANALYSIS



TRAFFIC STUDIES



UNDERGROUND UTILITIES



DRAINAGE + STORMWATER INVESTIGATION



CODE COMPLIANCE



FOUNDATION ANALYSIS + BUILDING SETTLEMENT

UNDERWATER PE DIVER
INSPECTIONS

MARINAS + MARINE FACILITIES

PIERS, DOCKS, + WHARFS

INDUSTRIAL PORTS

PILE + BULKHEAD INSPECTIONS

SHIP ALLISIONS

BOATING ACCIDENT
RECONSTRUCTION

MARINE INVESTIGATION

With a robust reputation in the maritime industry, McLaren's distinctive forensic offerings include a team of PE divers, a fleet of inspection boats, and marine engineers that can provide responsive investigation services. With the latest equipment and inspection capabilities, we provide innovative analysis whether it be a maritime forensic consultation or complex litigation.



APPLIED INGENUITY



UNDERWATER PE INSPECTIONS



STEEPLECHASE PIER STORM DAMAGE, NY



INDUSTRIAL PORT INVESTIGATIONS



PORT OF FREEPORT - FREEPORT, TX



PIER 34 COLLAPSE FORENSIC INVESTIGATION, PA



MARINA, DOCK, PIER + WHARF INVESTIGATIONS

CRANE COLLAPSES

CONSTRUCTION SITE INVESTIGATION

CONNECTION FAILURES

SITE COLLAPSES

CODE COMPLIANCE

SLIP + FALL INSPECTIONS

MACHINERY FAILURE

STEEL, CONCRETE + TIMBER ANALYSIS

REALITY CAPTURE SURVEYS

CONSTRUCTION INVESTIGATION

From crane collapses to connection failures, site accidents to materials failure, our team can help determine the root cause of any construction accident. With a team of specialized construction engineers who understand the intricacies of large infrastructure projects to buildings and specialty structures, providing unsurpassed forensic support.



APPLIED INGENUITY



CONSTRUCTION SITE INVESTIGATION



CRANE COLLAPSES



CONNECTION FAILURES



SITE COLLAPSES



CODE COMPLIANCE



SLIP + FALL INSPECTIONS

FAILURE ANALYSIS
SITE RUNOFF + DRAINAGE
SOILS TESTING ANALYSIS
SLOPE STABILITY ANALYSIS
FOUNDATION ANALYSIS
PAVEMENT ANALYSIS
GEOPHYSICAL EXPLORATION
UNDERGROUND PIPELINE
FAILURE ANALYSIS
SITE CONDITION DISPUTES
SITE QUANTITY ANALYSIS

GEOTECHNICAL INVESTIGATION

Our geotechnical engineers specialize in analyzing the behavior of earthen materials and how they interact with man-made elements such as foundations, flatwork, and pipelines. Forensic geotechnical investigations involve the analysis of a claim through site condition observation, inspections, analysis, and testing. Geotechnical investigations serve to provide a scientific root-cause analysis to support litigation claims.



95 WALSH RETAINING WALL

APPLIED INGENUITY



3D SCANNING / LIDAR

ALTA/ASCM

CORE SYSTEM SURVEYS

FACILITY SURVEYS

HYDROGRAPHIC SURVEYS

MULTIBEAM SURVEY MAPPING

TITLE ROW SURVEYS

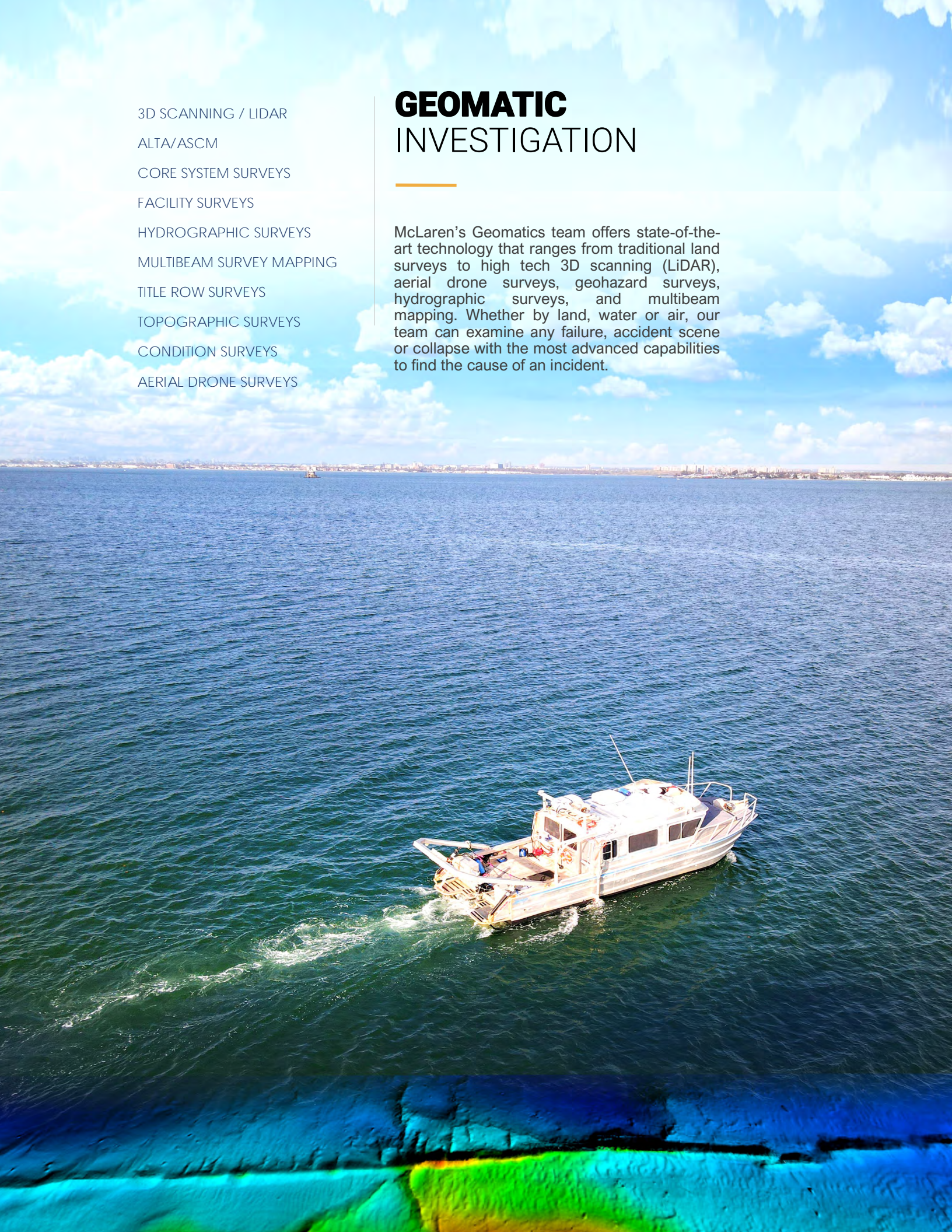
TOPOGRAPHIC SURVEYS

CONDITION SURVEYS

AERIAL DRONE SURVEYS

GEOMATIC INVESTIGATION

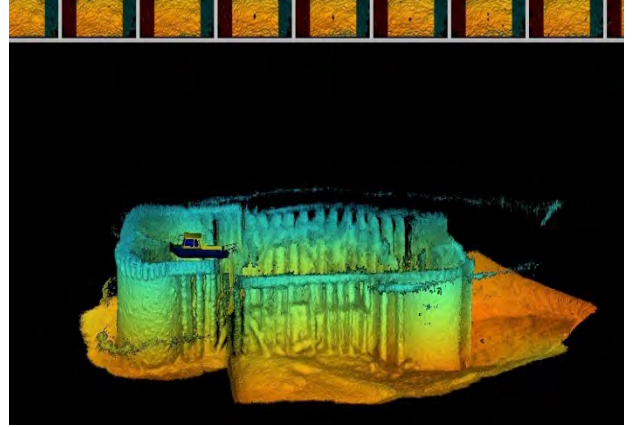
McLaren's Geomatics team offers state-of-the-art technology that ranges from traditional land surveys to high tech 3D scanning (LiDAR), aerial drone surveys, geohazard surveys, hydrographic surveys, and multibeam mapping. Whether by land, water or air, our team can examine any failure, accident scene or collapse with the most advanced capabilities to find the cause of an incident.



APPLIED INGENUITY



3D SCANNING LIDAR STRUCTURAL SURVEY



HYDROGRAPHIC IMAGING



BOUNDARY SURVEY



CONSTRUCTION SITE SURVEY



GEOHAZARD SURVEY

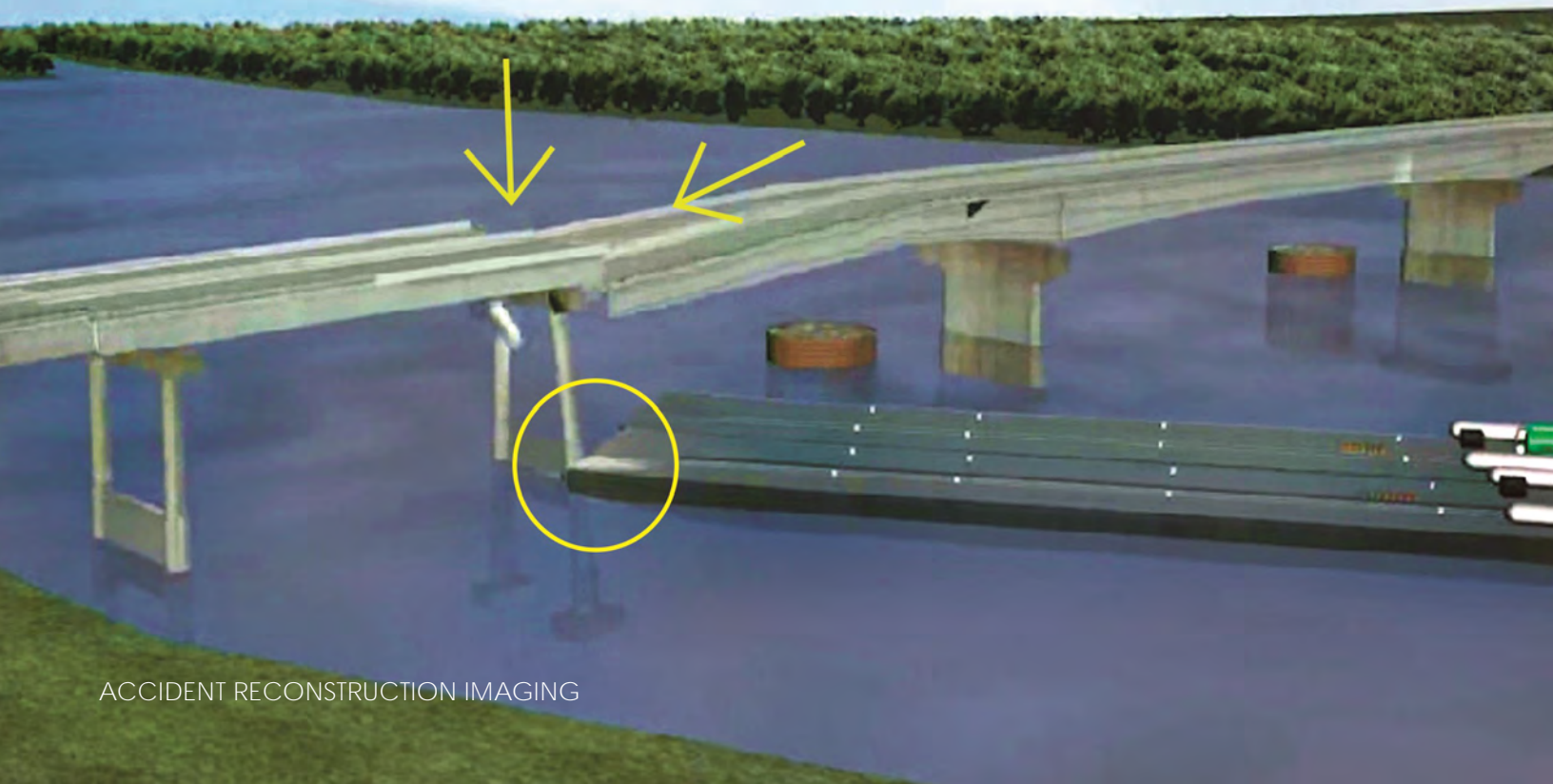


COMPILED SONAR IMAGING

ACCIDENT RECONSTRUCTION
INVESTIGATIVE ENGINEERING
NARRATIVE REPORTS
DEMONSTRATIVE EVIDENCE
EXPERT WITNESS TESTIMONY
IN-HOUSE GRAPHIC MODEL-
ING
DIGITAL PRE-VISUALIZATIONS

LITIGATION SUPPORT

McLaren's technical expertise, cutting-edge capabilities and trustworthy reputation in the industry has enabled us to provide unparalleled litigation support services. Our in-house expert engineers range in technical disciplines, allowing us to provide high quality investigation, analysis, litigation support, reports, demonstrative evidence and expert testimony. Using cutting edge investigative capabilities and graphic modeling applications, McLaren finds the cause of an incident, analyzes who/what is responsible and identifies what can be done to mitigate reoccurrence.





MALCOLM MCLAREN, PE

Founder + Forensic Division Leader

With over 40 years of design, engineering and inspection experience for structural, bridge/highway/rail, civil, geotechnical, marine and forensic projects nationwide, Mal McLaren's experience and reputation are unparalleled. He leads McLaren's team of forensic experts and specializes in forensic investigation, analysis and expert testimony.

100+ EXPERT WITNESS + INVESTIGATION PROJECTS

- Investigation of the I-40 Bridge Collapse; Webbers Falls, OK
- Terminal Ventures Bulkhead Failure; Jersey City, NJ
- Crane Collapse - Sparrows Points; Baltimore, MD
- Queen Isabella Causeway Collapse; Port Isabel to South Padre Island, TX
- Wedge vs. Cambridge Schools; Cambridge, New York
- State of New Jersey Dept. of Transportation/ State Attorney General's office vs. Pierson-South State
- Cherry Creek Construction vs. George & Lynch, Inc. and Delaware Dept. of Transportation
- North Texas Tollway Authority v. Halff Associates; Frisco, TX
- Pier 34 Collapse; Philadelphia, PA
- Super Grid 1 + 2; Atlantic City, NJ
- Johnson vs. Cranesville Block; Rock Tavern, NY
- MacArthur Blvd. Interchange LADOT; Metairie, LA
- Schletter v. Schneider; NC, GA, TN
- Dune, Inc. vs. Hartz Mountain Industries, Harrison Riverside Ltd, and 700-760 First Street, LLC; Harrison, New Jersey;
- Port Liberte' II vs. PMK; Jersey City, New Jersey
- Views at Hudson Pointe Condominium Association, Inc. vs. K. Hovnanian at Hudson Pointe, LLC, et al; North Bergen, New Jersey
- Fisher vs. Grigg & Davis; Rye, New York
- Prentice Women's Hospital vs. High Concrete; Chicago, Illinois;
- Berth 7 Failure at the Port Freeport; Port Freeport, TX;
- 66 Main Street Building Collapse; Yonkers, NY
- Forensic Investigation of Overpaint Failure
- State of Indiana vs. Ronald Tobias and Amerigas Propane, LP

EDUCATION

M.S. Structural Engineering,
Rutgers University

B.S. Civil Engineering,
Cornell University

PROFESSIONAL ENGINEER

42 States and D.C.

CERTIFICATIONS

Association of Diving Contractors
International (ADCI) Certified Diver

National Association of SCUBA
Diving Schools (NASDS)
Certified Diver

OSHA – 10 Hour Construction
Industry Outreach

Structural Engineering Certification
Board, 2005 –
Certification No. 1339-0705

ENGINEERING SPECIALTIES

Structures

Civil

Marine

Bridge/Highway/Rail

Geotechnical

Facade/Building Envelope

Entertainment

Construction





McLaren

ENGINEERING GROUP

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APPLIED INGENUITY

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