



## Nate Taylor

PE

### Senior Managing Engineer

#### Department

Engineering Services

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#### Locations

San Diego, CA

## Biography

Nate Taylor is a Senior Managing Engineer with over 25 years of experience in forensic root cause analysis and mechanical system evaluation. He specializes in analyzing failures across construction, motor vehicles, consumer products, industrial machinery, and manufacturing systems.

His extensive knowledge of building systems is supported by his prior roles as a licensed C-36 Plumbing Contractor, Certified Backflow Tester, and expert in plumbing codes. This expertise includes the design, installation, testing, and failure analysis of commercial and residential plumbing systems—such as fire, domestic, and industrial backflow preventers, gas systems, water distribution and waste systems—as well as HVAC components including air handlers, cooling towers, and heat pumps.

Nate has co-authored several U.S. patents and brings technical insight into product development and manufacturing processes, including plastic extrusion, injection molding, and high-speed assembly operations. He provides expert testimony in criminal and civil court cases and delivers technical guidance on complex failure investigations.

Earlier in his career, Nate worked as a General Motors-trained automotive technician, gaining hands-on experience in diagnostics and failure analysis for light-duty and commercial vehicles, including semi-trucks, dump trucks, and car-haulers. His forensic work includes accident reconstruction, vehicle analysis, digital site mapping, and interpretation of Event Data Recorder (EDR) data. Additionally, he has experience in premises liability investigations, using XL Tribometers to measure Coefficient of Friction (COF) in slip-and-fall cases.

## Credentials

- PE | Professional Engineer
- BPAT | Certified Backflow Preventer Assembly Tester
- LPC | Licensed Plumbing Contractor
- CXT | Certified XL Tribometrist (inactive)
- ACTAR | Accredited Traffic Accident Reconstructionist (inactive)
- ASE | Certified Automotive Service Excellence - Electrical Systems (inactive)

## Representative Consulting Assignments

- Single Family Dwelling | Los Angeles, CA | Water Loss - Plumbing Fitting | Cross-linked Polyethylene (PEX) Fitting Failure
- Multi-Family Dwelling | San Diego, CA | Water Loss - Flexible Connector | Toilet Water Supply / Plastic Nut Failure
- Multi-Family Dwelling | San Diego, CA | Water Loss - Copper Flex Connector | Corrugated Copper Failure
- Commercial Life Science Facility | San Diego, CA | Construction Defect - Seismic Plumbing Connector | Stainless Steel Seismic Water Connector Failure

- Hi-Rise Commercial Mixed Use | Santa Monica, CA | Water Loss - Appliance | Water Dispenser Failure
- Commercial Office Space | Phoenix, AZ | Cost Replacement & Business Interruption Analysis | Cooling Tower Failure
- Single Family Dwelling | Henderson, NV | Construction Defect - HVAC Coils | Evaluation of HVAC System Coil Failures on 500+ Units
- Commercial Solar Farm | Buckeye, Arizona | Construction Defect - Solar Panels | Inspection & Analysis of 1000+ Solar Panels
- Mixed Use Residential/Commercial | San Diego, CA | Construction Schedule & Defect - Fire Stop | Analysis of Fire Stop System Used on Pipe Penetrations
- Industrial Facility | Borrego, CA | Construction Defect - Reactor Tanks | Analysis of Fractured Reactor Tanks at Bio Diesel Facility
- Vehicle Accident Reconstruction | Phoenix, AZ | Passenger Vehicle Accident - Brake Failure | Analysis of Reported Brake & Fuel Failure on Passenger Vehicle
- Vehicle Accident Reconstruction | Alpine, CA | Commercial Vehicle Accident - Fire | Analysis of Fire and Reported Brake Failure of Semi-Truck
- Industrial Equipment | San Diego, CA | Fork Lift Fire | Analysis of Fork Lift Fire and Battery Failure
- Vehicle Accident Reconstruction | Riverside, CA | Dump Truck - Cracked Frame | Analysis of Fractured Dump Truck Chassis
- Commercial Life Science Facility | Torrey Pines, CA | Water & Fire Loss | Analysis of Vacuum Pump in Bio Safety Cabinets
- Single Family Dwelling | Riverside, CA | Water Loss - Fire Sprinkler | Analysis of Discharge from Fire Sprinkler
- Warehouse Storage | Sorrento Valley, San Diego | Equipment Damage - Refrigerator Storage | Investigate Water Damage to Refrigerators During Transportation & Storage
- Hotel | San Diego, CA | Equipment Damage - Commercial Dishwasher | Failure of High-Volume Commercial Dishwashing Machine
- Single Family Dwelling | Hollywood, CA | Water Loss - Mold and Water Damage | Investigation of Condensation from HVAC System
- Restaurant | Pacific Beach, CA | Fire Loss - Appliance & Kitchen Exhaust | Analysis of Kitchen Exhaust System and Appliances
- Automotive Shop | Tracy, CA | Product Liability - Spring Compressor | Analysis of Coil Spring Compressor Machine
- Commercial Office Space | Carlsbad, CA | Water Loss - Tankless Water Heater | Analysis of Ruptured Tankless Water Heater
- Mixed Use Commercial Building | El Centro, CA | Equipment Damage - HVAC System | Analysis of Damage to Rooftop HVAC Equipment Reportedly Caused by Vandalism
- Educational Facility | San Diego, CA | Water Loss - PVC Fitting Failure | Analysis of Fractured PVC Pipe and Fittings
- Restaurant | Pasadena, CA | Business Interruption - Sewer System Failure | Analysis of Sewer Ejector Pump Failure

## Professional Experience

- 2025 - Current | Senior Managing Engineer | YA Group
- 2020 - 2025 | Co-Founder, President | Don Alarm Company, Inc.
- 2017 - 2024 | Vice President | Western Plumbing & Piping, Inc.
- 2015 - 2017 | Senior Consultant | Rimkus Consulting Group, Inc.
- 2011 - 2015 | Principal Design Engineer | Toro
- 2010 - 2011 | Senior Mechanical Engineer | Toro
- 2005 - 2010 | R&D / Manufacturing Engineer | Toro

- 2004 - 2005 | Project Engineer / Intern | Walsh Engineers
- 2000 - 2004 | Pipe Fitter / Plumber | Western Plumbing & Piping, Inc.
- 1999 - 2000 | Automotive Technician | People's Chevrolet

## Education

- San Diego State University - Bachelor of Science - Mechanical Engineering - San Diego - California
- Cuyamaca College - Associate of Science - El Cajon - California

## Training Courses

- Chemical Waste Systems - Spears Manufacturing - 2024
- Leak Defense System - Watts - 2024
- Backflow Prevention Assembly Tester - Plumbing Heating Cooling Contractors Academy - 2022
- Bosch Crash Data Retrieval Technician - Northwestern Center for Public Safety - 2016
- Traffic Crash Reconstruction II - Northwestern Center for Public Safety - 2015
- Industrial PLC Programming - Opto 22 - 2008
- Advanced PLC Programming - Unitronics - 2012
- Forklift Safety Course Class I, III, IV, V - Toro - 2014
- Fall Protection - Capital Safety - 2015
- Polyethylene Fusion Welding - Carrhill Company - 2018

## Affiliations

- International Association of Plumbing and Mechanical Officials (IAPMO)
- American Society of Mechanical Engineers (ASME)
- American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)
- American Society of Plumbing Engineers (ASPE)
- Society of Plastics Engineers (SPE)

## Licenses

- 34880 - California - Professional Mechanical Engineer
- 647485 - California - C36 Licensed Plumbing Contractor
- 035129 - Nevada - Professional Mechanical Engineer
- 85762 - Arizona - Professional Mechanical Engineer