

# Service Life Modeling

Major concrete infrastructure is required to endure harsh environmental and loading conditions. Appropriate determination of the expected service life of concrete requires a deep understanding of materials transport and degradation mechanisms.

## Determining Service Life

For new structures, material selection and development of concrete play a crucial role in ensuring that durable concrete will be used. CTLGroup has a longstanding history of developing test methods and evaluating concrete properties related to concrete deterioration mechanisms and transport of deleterious agents. Combined with advanced modeling, the expected service life of concrete elements can be determined.

## Existing Structures

For existing structures, CTLGroup commonly faces questions from our clients including: “What’s the expected useful life for this structure?” or “Is the cost to repair, reinforce, or rehabilitate justified by the return of an extended life of the structure?”

Whether assessing an iconic and historic structure, such as the North Torrey Bridge in California, or the water cooling tower of a power production plant, CTLGroup helps our clients make and implement important decisions.

## STADIUM

CTLGroup is part of a select number of laboratories certified to provide testing services for input into the STADIUM® (Software for Transport and Degradation In Unsaturated Materials) service life modeling software. CTLGroup scientists and engineers are also accredited users of the STADIUM® model, allowing our firm to provide comprehensive, in-house service life modeling services.

