

Bridge Design, Rehabilitation, and Management

Transportation



gai consultants®



Transforming the
Way We Travel

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Bridge Design, Rehabilitation, and Management

Streamlining Solutions

For more than three decades, the experienced, award-winning bridge staff at GAI Consultants has been designing, inspecting, rehabilitating, and managing transportation structures for private and public owners. Our understanding of safety and design standards, construction processes, and material and workmanship practices results in long-term returns on infrastructure investments.

The skill GAI brings to bridge design projects for all types of steel, concrete, and timber structures is evident in our list of project successes. We incorporate the latest design techniques and approaches into every design effort, providing constructible details and appropriate materials that results in long-term, low maintenance structures.

Whether inspecting to monitor structural health or to scope a structural rehabilitation, GAI offers reliable and professional inspection services that draw from a seasoned pool of certified bridge inspectors. Our in-house capabilities provide all necessary support services.

With dedicated engineering and design professionals in all disciplines, GAI delivers premier solutions for designing, inspecting, and monitoring bridges for highways, railways, transit systems, and pedestrian facilities.





GAI's success is built on trusted relationships
and respected professional reputations.

What Distinguishes GAI

- In-house technical experts in structural design, rehabilitation, and asset management who move projects forward faster
- Unique expertise in Finite Element Modeling (FEM) for structural analysis of small to complex bridges
- A specialty practice in structural health monitoring with inspection expertise that provides sound recommendations to extend structural life
- In-house historic bridge documentation and recordation professionals
- Extensive DOT and private industry knowledge and experience across the U.S.
- Extensive design-build experience that provides cost effective projects.
- Value engineering design approach that delivers innovative concepts and solutions.

Bridge Design, Rehabilitation, and Management Services

Bridge Design

- Complex bridge design development
- Simple and continuous span bridge design
- Curved girder, and thru and deck truss bridge design
- Culvert and drainage design
- Hydraulic analysis, scour analysis, and scour protection design
- Temporary and permanent retaining wall design
- Geotechnical engineering and foundation design
- Design-bid-build and design-build project delivery
- Pre- and post-construction services

Bridge Rehabilitation

- Condition inspection and material testing
- Historic bridge documentation and restoration
- Bridge rehabilitation design
- Fatigue-prone detail retrofitting and member strengthening
- Earthquake and fatigue-prone detail retrofitting
- Useful life expectancy estimates

Bridge Management

- Certified bridge and structure inspections
- Load capacity determinations
- Bridge asset data management
- Bridge load testing and analysis
- Finite element analysis



FTBA

AWARD WINNER

The SR 600 / US 92 Pedestrian Improvements project won several awards in 2016, including honors from SASHTO, FTBA, and FICE.



ABCD

AWARD WINNER

Lake Gordon Bridge, Bedford
County, PA — Outstanding
Rehabilitated Bridge Award

About GAI Consultants, Inc.

Transforming ideas into reality[®] since 1958, GAI is an engineering, planning, and environmental consulting firm providing local expertise to worldwide clients in the energy, transportation, development, government, and industrial markets.



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