

# Complex Roadway Engineering

## Transportation



gai consultants®

An aerial photograph of a complex highway interchange. The interchange features multiple lanes of traffic, green grassy medians, and several large, dark-colored stormwater ponds. The surrounding area includes residential neighborhoods with houses and trees, as well as some commercial buildings and parking lots. The overall scene depicts a well-engineered transportation infrastructure project.

Transforming the  
Way We Travel

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# Complex Roadway Engineering

## Streamlining Solutions

GAI's respected highway engineers and designers deliver award-winning projects to public and private clients, including local, state, and federal agencies. We are committed to providing comprehensive transportation services in all phases of project development and for all project applications—from feasibility review through facility dedication.

GAI applies practical engineering and field experience to solve urban, residential, and rural traffic challenges. Weaving economical concepts and cost-reducing measures into each design, our highway professionals produce results that are in our clients' best interest.

With constructability, safety, quality, and innovation as top priorities, GAI is trusted by our clients to get their roads and highways built.





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

### **What Distinguishes GAI**

- Client Managers who clearly understand project goals to streamline the process
- Sensible solutions that guide clients through rigorous regulatory requirements
- Economical and constructible designs that get projects built
- Active investment in staff knowledge and experience to serve clients better
- Profound understanding of the unique intricacies of our clients' programs

## Complex Roadway Engineering Services

### Project Development

- Needs analyses
- Feasibility studies
- Environmental studies and permitting
- Corridor location studies
- Conceptual alignment studies
- Utility coordination and design
- Real estate acquisition support

### Expressways and Interstates

- Limited-access highway design
- Urban and rural interchange design
- Right-of-way plan development
- Pavement design and rehabilitation

### Local Streets and Highways

- Intersection design
- Transportation system access management
- Roundabout design
- Bikeway and trail design
- Streetscape/landscape architecture

### Traffic and Transportation Operations

- Traffic impact studies
- Traffic simulation and modeling
- Roundabout analysis and justification studies
- Traffic signalization
- Highway signing and lighting design
- Traffic management

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## SINGLE SPAN CONCRETE

Geometry optimization by GAI provided for the most efficient bridge structure solution.





### **I-295 UNF Drive Interchange**

Design and permitting services for this high profile SPUI interchange at the entrance to the University of North Florida in Jacksonville.

# AWARD WINNER

Multiple award-winning Mon-Fayette Expressway project for the Pennsylvania Turnpike Commission stretched 70 miles south from Pittsburgh, PA

## About GAI Consultants, Inc.

Transforming ideas into reality<sup>®</sup> 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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