Our Vision: To be a driving force in improving our communities and sustaining our world through an uncompromising commitment to growth, innovation, ethics, and technical excellence.

Your Trusted Advisor

Gannett Fleming, an international consulting engineering firm, has been active in almost every phase of consulting engineering since we opened our doors in 1915. For nearly 100 years, we have been a major contributor to American engineering history, while expanding across the globe, completing thousands of assignments in all 50 U.S. states and in more than 65 countries.

Today, with 2,000 employees, we have the size and resources to provide a total spectrum of services. We can take you from an initial feasibility study to the maintenance of your completed project. Our companywide Practice Leadership Teams ensure that your project receives the appropriate expertise for every issue. Our specialized expertise is a direct testament to the talented staff of professionals who have come to call Gannett Fleming “home.”

While each office has a special knowledge of the geographic area it serves, our complete range of services knows no geographic boundaries. We have the in-house capabilities and services to meet your challenges, wherever they occur. Our full capabilities are applied to all projects, from the routine to the most difficult and demanding. You can rest assured that when you work with Gannett Fleming, your individual and business needs will not outgrow our services.

Sustainability

Gannett Fleming advocates sustainable design principals. We have incorporated this philosophy on specific projects and in our core business practices.

We are a member of the U.S. Green Building Council and employ LEED® Accredited Professionals representing multiple disciplines including architecture and mechanical, electrical, and site/civil engineering. We are a charter member of the Institute for Sustainable Infrastructure, a sustainability rating system for civil infrastructure projects. Many of our staff have earned the Envision™ Sustainability Professional credential through ISI, acquiring the skills to rate infrastructure using the Envision™ sustainability rating system.

ISO 9001:2008 Certified

Gannett Fleming’s projects are developed, initiated, planned, executed, controlled, and closed in accordance with the firm’s written Project Management and Quality Guidelines document.
Transportation Division

Gannett Fleming provides a broad range of services related to the planning, engineering, and design of transportation systems and facilities. Our reputation for producing cost-effective, high-quality plans comes from successfully serving thousands of clients. Our project managers have experience that ranges from highly complex roadway designs for major interstate systems, to the engineering and design of tunnels, bridges, transit and rail, and Intelligent Transportation Systems.

Our primary focus for all projects involving roadway and traffic engineering is to provide the required attention to detail for our clients to have successful implementation of their transportation projects. Our experienced staff’s approach to engineering and design is to incorporate an understanding of the project’s construction needs.

Sectors Served

- Airports
- Bridges
- Highways
- Management Services
- Operations
- Planning
- Transit and Rail
- Tunnels.

Services

- Roadway realignment
- Reconstruction
- Rehabilitation
- Mill and fill design
- Overlay design
- New roadway design
- Bridge design
- Roadway widening
- Pavement section and thickness design
- Interchange justification/modification studies
- Interchange design
- Intelligent Transportation Systems (ITS)
- Incident and emergency management
- Performance measurement
- Tolling and pricing systems
- Freight operations
- Safety studies
- Access management
- Traffic capacity analysis
- Signalization design
- Traffic counts and studies
- Maintenance of traffic
- Traffic pattern movement analysis
- Pavement marking design
- Master planning
- Construction Management
- Construction Inspection.
In preparation for a roadway or traffic project, we establish an approach to complete each project on time and within budget. To do so, we commit to these essentials:

- Acknowledge and understand the client’s requirements and concerns
- Assemble a team of well-suited, highly qualified professionals
- Provide strong project management to lead the team
- Keep the client informed of progress at every stage
- Provide coordination with other involved parties
- Work within the budgetary and cost constraints
- Provide a on-time, high-quality product.

**Additional Sectors Serviced**

**Buildings**
- Corporate/Commercial
- Data Centers
- Education
- Federal and Military Facilities
- Food and Beverage
- Government
- Healthcare
- Pharmaceutical
- Religious
- Transportation.

**Commercial/Industrial**
- Food and Beverage
- Insurance
- Manufacturing
- Mining
- Oil and Gas
- Pharmaceutical
- Power
- Rail.

**Federal**
- Environmental
- Facilities
- Information Technology
- Transportation
- Water Resources
- Small Business Resources.

**Oil and Gas**
- Upstream
- Midstream
- Downstream.

**Power and Utilities**
- Power Delivery
- Power Generation
- Utility Management.

**Water/Wastewater**
- Dams
- Drinking Water
- Stormwater and Flood Control
- Wastewater
- Water Resources
- Utility Management.
Gannett Fleming provides extensive services related to the planning, design, and construction management of transportation systems and facilities. Our solutions — involving highways, tunnels, bridges, structures, transit and railroad systems, traffic, parking, transportation operations, and Intelligent Transportation Systems (ITS) — deliver value and excellence to both public agencies and private clients.

We have been involved with alternative project delivery methods, including design-build and public-private partnerships, for nearly 25 years. Our transportation design-build experience includes many high-profile highway, toll road, bridge, ITS, and transit and rail assignments.
Transportation Qualifications

Highway and Bridge Engineering

Our firm provides a broad range of services related to the planning, engineering, design, and construction management of transportation systems and facilities. Our reputation of producing cost-effective, high-quality plans comes from successfully serving hundreds of clients since our beginning in 1915. Furthermore, we are committed to incorporating context-sensitive solutions, LEED® recognized initiatives, and sustainable designs into all of our projects.

Our Highway Practice is involved in a wide assortment of projects, ranging from corridor studies and master plans, to interstate roadways and high-speed electronic toll facilities. In fact, we have completed location studies and preliminary design for thousands of miles of multilane and split-level roadways.

Our firm has completed the final design of thousands of miles of multilevel and divided highways in both rural and urban locations. Final engineering designs for these highways have included interchanges ranging from the simple diamond type in rural areas to complex, multilevel connections in urban areas. Although Gannett Fleming is well known for its design of large, major highway systems, our firm also has designed numerous two-lane arterials, realignments, bridge approaches, and service and access roads.

Gannett Fleming has been involved in every aspect of bridge engineering and design, including complex highway bridges, rail and transit structures, and inspection and rating of all structure types. In addition, we provide unique design services to the construction community, including design-build, alternative design considerations at the bid phase, and construction engineering.

Key services include:

- Planning/corridor/feasibility studies
- Preliminary engineering
- Final design
- Construction services
- Environmental documentation and permitting.
Transportation Qualifications

Tunnels

Gannett Fleming’s experience includes the planning, design, rehabilitation, maintenance, and construction management of highway, railroad, transit, and utility tunnels. We bring considerable structural and geotechnical experience to tunnel design projects, which have included design of tunnels in both soft ground and in rock, using cut-and-cover construction, shield-driven, or drill-and-blast tunneling techniques.

Gannett Fleming has built a reputation for technical innovation and award-winning design for a variety of municipal, state, and federal clients on dozens of tunnel projects. Our tunnel experience includes:

- Cut and cover tunnels
- Drilled tunnels
- Structural
- Geotechnical
- Structural, mechanical, and electrical inspections
- Mechanical and ventilation systems
- Lighting for interstate tunnels
- Electrical distribution systems
- Computerized preventative maintenance databases
- Immersed tube tunnel construction.

Transit and Rail

Gannett Fleming has a reputation in the planning and design of public transportation systems. We possess strong expertise in transit station design, Bus Rapid Transit (BRT), and civil and structural infrastructure for transit and freight rail systems.

In addition, we plan, design programs, and perform construction management of public transportation systems and transit and rail systems. Gannett Fleming provides engineering and management services to the industry, including performance and detailed final designs; system studies; construction management and inspection for new system starts, as well as existing system expansion and upgrades for commuter railroads, freight railroads, and light and heavy rail transit systems.

Our knowledge of planning, inspection, design, and other engineering services at all levels results in a common sense approach to all projects. In addition, our capabilities and diverse technology applications enable us to offer our clients assistance in every area of the industry.
Transportation Qualifications

For transit agencies, changes in rail or traction power system configurations can have a major effect on customer service, signals and electrical performance, as well as capital and operations budgets. TAROSTM, Gannett Fleming’s suite of traction power system simulator software tools, helps railroad and rail transit operators better manage planned and unplanned events.

Overview of Services:
- Project administration
- Facility needs analysis
- Rehabilitation/expansion of facilities
- Evaluation of alternative sites
- Site planning and design
- Architectural and engineering design
- Performance specifications
- Systems procurement
- Cost estimating and scheduling
- Design-build
- Construction management
- Start-up and testing
- Program management.

Specialized Services:
- Signaling and train control
- Telecommunications
- Track
- Catenary
- Traction power
- Rail operations
- Maintenance facilities
- Industrial engineering.

Transit System Experience:
- Commuter rail systems
- Light and heavy rail systems
- Stations and intermodal facilities
- Rail yards and shops
- Bus maintenance facilities
- Automated guideway systems
- High-speed rail transit
- ITS.

Traffic Engineering

As a recognized leader in traffic engineering, Gannett Fleming brings knowledge of the most current and up-to-date policies, procedures, and software applications in the traffic engineering field. Services include data collection, travel forecasting, traffic impact studies, traffic signal system design, signing and pavement marking plans, and maintenance/protection of traffic plans. Gannett Fleming is experienced in the use of numerous analysis tools, including 3-D traffic modeling. We have conducted studies for major roadway corridors and networks in an effort to reduce travel delay and emissions using low-cost retiming and new technologies. Our traffic engineering services include:

- Traffic data collection
- Travel demand forecasting
- Traffic impact studies
- Point of access studies
- Traffic engineering and design
- Roadway design
- Maintenance and protection of traffic
- Traffic signal design
- Congestion management
- Bicycle and pedestrian planning
- Lighting design
- Signing and pavement marking design
- Parking evaluation and lot design.
Transportation Operations

We are a leader in the continually evolving transportation engineering arena. Serving as a trusted advisor to our clients, we provide a comprehensive range of services for major transportation systems and facilities, having delivered specialized services for a multitude of transportation agencies worldwide.

In today’s efficiency-driven world, the focus of transportation agencies has evolved. The focal point has expanded beyond building and maintaining transportation networks to include improving the efficiency of existing operations. It is a well-established belief that slowly adding infrastructure will not meet future demands in transportation network capacity. Improving mobility and safety, reducing fuel consumption and emissions, examining mode sharing opportunities, and providing effective traveler information are prime concerns in today’s market. As a result, transportation operations has become the primary focus to efficiently manage the transportation network.

Gannett Fleming has the depth and breadth of multi-disciplinary and multimodal transportation operations experience to allow our clients to achieve this goal.

Gannett Fleming provides a wide range of transportation operations services, from developing the initial concepts to planning, design, systems integration, construction, construction management, and operations and maintenance (O&M) support. Furthermore, our team’s software experience spans the entire life cycle of transportation-based software applications, from the initial planning efforts through system requirements definition, system design, development, implementation, hosting, and maintenance.

In the area of transportation operations, our professional staff is experienced in the following key areas:

- ITS
- Traffic and safety engineering
- Incident and emergency management
- Freeway and arterial management
- Performance measurement
- Traffic signal systems
- Traffic management center (TMC) support
- Freight operations
- Tolling and pricing systems
- Road weather management
- Public transportation systems.
Transportation Qualifications

ITS

ITS involves the application of advanced hardware, software, and communication technologies to transportation. It represents one of the most significant “tools” in the transportation operations toolbox. The use of ITS within a comprehensive transportation operations program allows agencies to monitor and manage traffic flow, improve transit operations, reduce congestion, provide multimodal alternate routes to travelers, enhance productivity, and save lives, time, and money.

Gannett Fleming has decades of experience on more than 300 ITS projects that span the entire ITS project life cycle. Our experience includes the development of ITS architectures and master plans at the local, state, and national level. We also have significant experience with preliminary and final design efforts, including design-build projects, for numerous rural and urban ITS in the U.S. and abroad. We have designed and implemented all types of field devices associated with ITS, such as closed-circuit television (CCTV), dynamic message signs (DMSs), dynamic trailblazers (DTBs), vehicle detection systems (VDSs), road weather information systems (RWISs), and highway advisory radio (HAR). In addition to our design experience, we also have deployed, integrated, and provided construction management for ITS projects.

Management Services

Gannett Fleming provides management services for Traffic Management Centers (TMC) and Safety Service Patrols (SSP). Gannett Fleming’s TMC experience includes on-site staffing and staffing plans, training and training program development, interagency coordination, SSP dispatching and monitoring, IT services, concept of operations development, national incident management system (NIMS) integration, incident response plan creation and maintenance, standard operating procedure creation and maintenance, and automatic vehicle locating software and hardware.

Gannett Fleming’s Transportation Operations Practice has experience in SSP dispatching and monitoring, as well as supporting other primary duties of SSPs including assisting motorists whose vehicles have become disabled and providing safety for emergency responders.
Aviation

Gannett Fleming provides a full range of services to meet the many specialized needs of airports and airfields. Our multi-disciplined approach to engineering and planning allows us to offer complete in-house planning, design, and construction-phase management services. We offer proven expertise and services in the following areas related to airfields and aviation-related facilities:

- Master Planning
- Site Selection Studies
- Runway and Taxiway Design and Rehabilitation
- Airfield Lighting
- Airfield Facilities Design (Airside and Landside)
- Airport Obstruction Analysis (FAR Part 77 and TERPS)
- Noise Analysis (Integrated Noise Model)
- Land Use and Environmental Impact Studies
- Geographic Information Systems (GIS)
- Custom Software Design
- Grant Applications and Grant Administration.

Transit Maintenance Facilities

Gannett Fleming is a leader in the field of rail, bus, and vehicle maintenance facilities. The recipient of multiple awards for efficient and innovative design, our firm has provided planning, programming, and design for nearly 300 maintenance facility projects throughout the U.S. Gannett Fleming developed its capabilities in transportation facilities in the early 1960s and continues to be on the cutting edge of facility design. We offer comprehensive, multi-disciplinary services from planning through design development, construction document preparation, and construction management.

Our approach to maintenance facility projects is based on combining sound engineering with effective decision-making processes, involving the client, regulatory agencies, and current industry practices. To this end, we offer services that go beyond just designing facilities. We see the whole picture by offering services such as facility needs analysis, alternative project delivery options, program management (project controls), financing solutions, sustainable design/LEED® certification, and ongoing facility maintenance management.
Transportation Qualifications

Construction Management

Gannett Fleming’s construction managers are skilled in multiple delivery system capabilities. Offering comprehensive services for all phases of construction, we consistently rank in Engineering News-Record’s Top 100 Construction Management-for-Fee list. Throughout the past decade, our firm has provided construction management and inspection services for projects totaling more than $4 billion in total construction value. Our efforts include new and rehabilitated bridges, water and wastewater treatment plants, roadway widening and reconstruction, transit systems and facilities, and dams and reservoirs.

We understand that the construction, commissioning, and operation of new facilities are complex, and our clients trust us to manage their schedule and budget through all phases of construction. This is reflected in our record of less than 3.15 percent change orders on average, while maintaining cooperation among all team members. Our mission is to provide quality, professional service through a staff of long-term employees committed to safety in execution and quality in implementation.

From policy studies to long-range transportation plans, we consider how various transportation modes interact, how technology can provide better traveler information, and how non motorized modes, such as bicycling and walking, can be convenient and safe. We strive to incorporate smart growth strategies, so our clients’ investments can be enjoyed for years to come.

Our Construction Management services include:

- Pre-construction services
- Surveying
- Constructability review
- Value engineering
- Project management
- Community relations
- Trained project staff
- Construction inspection
- Utility and agency coordination
- Materials testing
- Storage tank inspection and maintenance
- Maintenance and protection of traffic
- Contract administration
- Project schedule controls
- Project coordination and communication
- Progress meetings
- Progress payment preparation and validation
- Change control
- Claims avoidance, assistance, and analysis
- Document maintenance and project record drawings
- Commissioning/post-construction services.

Fort Lauderdale-Hollywood International Airport Runway Expansion Design-Build, Fla.

International Border Crossing Facility Study, Calais, Maine and St. Stephen, New Brunswick, Canada
Construction Inspection

Our firm has a long history of providing specific construction inspection services for transportation-related projects serving multiple types of clients including international transportation agencies, Departments of Transportation (DOTs), municipalities and numerous transit and transportation authorities.

Our typical on-site inspection services include:

• Administering project meetings
• Analyzing and updating construction schedules
• Asphalt compaction and content verification testing
• Compaction testing
• Concrete air, slump, and compressive strength testing
• Documentation of construction activities
• Field office administration
• Inspecting for compliance with environmental requirements
• Material verification testing (including operation of field laboratories)
• Monitoring compliance with contract drawings and specifications
• Monitoring traffic control plans
• Project records management
• Quantity calculations for contractor payments.
Transportation Qualifications

The quality of a construction project depends heavily on the performance of the inspection staff. We understand that this means providing well-trained and experienced field personnel who receive the proper support from management and who work in an atmosphere dedicated to partnering. To meet the quality objectives of our clients, we maintain an experienced staff of construction professionals; many of whom have attained NICET certifications, and many others who are licensed Professional Engineers.

Commissioning/Post-Construction Services

We offer commissioning services whereby processes, equipment, controls, and systems are put through a series of operational and performance testing requirements. We strive to have the people and processes in place to support the equipment and systems during the transition from construction to operation. Our field personnel observe all start-up and testing activities to check that not only do the individual systems (process, mechanical, and electrical) operate properly on their own, but also are functional, integrated parts of an overall system.

Typical commissioning plans include:

- Commissioning services
- Coordination of occupancy of new facilities
- Preparation of operations and maintenance manuals
- Prompt correction of any warranty issues
- Schedule start-up and performance testing of all equipment
- Training of personnel.
Serving as a trusted advisor to our clients, we provide a comprehensive range of services for major transportation systems and facilities – from planning, engineering, and design through construction management. We are respected for tackling, and solving, our client’s toughest challenges.

Gannett Fleming has the resources and expertise to complete any project – right, and on time, the first time. In the area of transportation, our professional staff is experienced in the following key areas:

- Transportation planning and environmental services
- Multimodal and transit planning
- Highway and bridge engineering
- Geotechnical engineering
- Traffic engineering
- Transportation systems operations ITS
- Incident and emergency management
- GIS
- Mass transit and rail
- Security solutions
- Tunnels
- Construction management and inspection
- Toll roads and LEED® toll facilities
- Design-build
- Infrastructure management consulting.
Gannett Fleming faced the challenge of reconfiguring the nearly 50-year-old partial interchange, located at Exit 40 of I-79 at the intersection of State Route (S.R.) 1009 and S.R. 1047 in South Strabane and Chartiers Townships, Pennsylvania, into a full-access interchange with I-79. The improvements will meet the needs of the surrounding area in response to regional commercial and industrial growth, increasing truck traffic, and anticipated future development.

Using the split diamond interchange configuration, the existing ramps were reconstructed to meet current design standards for acceleration and deceleration. In addition, new northbound entrance and southbound exit ramps were constructed, and new connector roadways and ramps were built.

The project faced numerous challenges that affected both design and construction, including avoiding impacts to Chartiers Creek, minimizing impacts to the I-79 travel lanes while constructing new dual bridges, maintaining two lanes of traffic on I-79 in each direction during construction, relocating over 800 feet of a tributary to Chartiers Creek, relocating a side road, avoiding an archaeological site, avoiding impact to a golf course, closing off an old mine pond to re-establish low flow back into the tributary, mitigating noise with a noise barrier, and the grouting of mine voids.
Gannett Fleming is providing final design-management services for the fast-track final design of the Uniontown to Brownsville section of the Mon/Fayette Expressway, a new, 17-mile, four-lane tollway. The tollway includes six interchanges, one mainline electronic toll collection and open-road toll plaza, 10 unmanned-ramp toll plazas, and 24 bridges (including a major structure over the Monongahela River), nine miles of side-road relocation, 6.6 acres of wetland replacement, a roadway maintenance facility, and 27 stormwater basins.

Our firm’s tasks include managing and coordinating the work of 10 prime consultants and 18 subconsultants. Additionally, our firm provided focus, direction, technical reviews, and daily coordination of 12 final design-bid packages aimed at achieving reduced environmental impacts, improved drivability and safety, minimized construction costs, confirmation of accuracy between adjacent sections, and project completion within schedule.
Gannett Fleming provided the final design to widen I-80 at Meander Reservoir from four to six lanes. Our firm designed eight bridges, including the replacement of twin 2,500-foot-long bridges over a drinking water reservoir; emergency access; a 12.5-acre wetland habitat to mitigate environmental impacts; wider shoulders; extended merge lengths; and a spill containment system. Additionally, our firm was responsible for wetland permitting, mine remediation, and traffic maintenance. Since the roadway bridge crosses a drinking water reservoir, our firm designed a first-of-its-kind system for conveying stormwater and containing hazardous material spills.

**Awards**

- Best Transportation Project, 2010, *Midwest Construction* magazine
- Globe Award, 2011, American Road & Transportation Builders Association, Transportation Development Foundation
- Outstanding New Major Bridge (co-recipient), 2010, Association for Bridge Construction and Design, Northeastern Ohio Chapter
- Outstanding Project of the Year, Cuyahoga Valley Section, 2010, American Society of Highway Engineers
- Outstanding Achievement, 2010, ACEC of Ohio
The Garden State Parkway (GSP) Interchange 142 Improvements Project provided “missing movements” for this high traffic volume interchange. The project improved traffic flow, safety, and mobility on both highways and alleviated traffic congestion on the surrounding local road network. Gannett Fleming performed alternative analysis, environmental re-evaluation, preliminary and final design, and construction support services.

**Project Features**

- Reconstruction of one mile of I-78 eastbound and westbound local and express roadways
- Construction of five new bridges, including three new flyover ramp structures and two simple-span structures
- Widening of 10 interstate bridges
- Construction of 20 new or modified retaining walls
- Construction of six new or reconstructed ramps, totaling more than 12,000 LF.

**Awards**

- Outstanding New Medium Span Bridge Award, 2012, Association for Bridge Construction and Design, Susquehanna Chapter
- Grand Honor Award, 2012, American Council of Engineering Companies of New Jersey
- Project of the Year award, 2012, American Society of Highway Engineers
- Ranked No. 8 in Top 10 Roads awards program, 2011, Roads & Bridges magazine
- Ranked No. 2 in Top 10 Bridges awards program, 2011, Roads & Bridges magazine
Gannett Fleming provided the preliminary engineering, final design, and construction-related services for the reconstruction of the South Street Bridge over the Schuylkill River, Schuylkill Expressway (I-76), and railroads. The 17-span, 1,320-foot-long, 55-foot-wide existing structure was replaced with a 12-span, 1,390-foot-long, 83-foot-wide structure, consisting of steel-haunched girders and haunched-curved girders. The proposed structure eliminated the bascule span while reusing the foundations of the existing bascule piers. The proposed cross section featured four vehicular traffic lanes, two bicycle lanes, and two sidewalks.

Our firm’s design included modifications to the existing stone masonry retaining walls, the ramp structure connecting South Street to I-76, and the Hollenback Center walkway connecting to South Street. The new bridge includes architectural treatments featuring LED-lighted, glass-paneled towers; railings; architectural railroad protective barriers and fencing; aesthetically-modified pier shapes; and enhancement lighting.

**Awards**

- National Recognition Award, 2012, American Council of Engineering Companies
- Diamond Honor Award, 2012, American Council of Engineering Companies of Pennsylvania
- Regional Transportation Program of the Year Award, 2011, Delaware Valley Regional Planning Commission
Gannett Fleming, as the engineer of record in a design-build team, provided the final design for the installation of a supplemental substructure system on the I-4 bridges over Reedy Creek. The existing structures were twin, six-span bridges and consisted of Type II AASHTO girders supported on intermediate bents, using 18-inch, prestressed-concrete piles. Bridge inspections revealed that pile embedment would be insufficient in an extreme scour event.

Our firm’s design included the installation of crutch bents at intermediate bent locations to transfer load paths to new and deeper foundations. This solution eliminated potential instability due to extreme scour.

The design included the use of modified 78-inch Florida Bulb-T cross beams supported on 30-inch-diameter steel pipe pile footings. The use of steel pipe piles was a modification to Florida Department of Transportation’s original concept, which called for prestressed concrete piles. This modification reduced the number of piles required and shortened the length of the support beams, which reduced the required depth of the support beams and the size of the driving equipment.

**Awards**

- Design-Build Project of the Year, Transportation category, 2013, Design-Build Institute of America, Florida Region
- Grand Award, Structural Systems category, 2012, Florida Institute of Consulting Engineers.
Gannett Fleming provided consulting engineering services for the North Shore Connector project for the Port Authority of Allegheny County. The North Shore Connector is a 1.2-mile, two-track mainline that travels through a tunnel under the Allegheny River to link Pittsburgh’s light rail transit system to PNC Park and Heinz Field. Our firm designed an upgrade of the operations control center (OCC) computer systems, as well as multiple communications subsystems. The communication subsystems support OCC communications to four new passenger stations (Allegheny Avenue, North Shore Park, Convention Center, and the Gateway Center) and to various communications devices located aboveground and in tunnels on the Convention Center and Gateway Center Lines, while maintaining compatibility with existing and other Stage II equipment that is being installed under another contract.

**Communications Subsystems**

- Fiber optics
- Synchronous optical networking (SONET)
- Variable message sign/public address
- Phones
- Closed-circuit television (CCTV)
- Supervisory control and data acquisition (SCADA)
- Signals
- Radio
- Fare collection

**Awards**

- Transportation Project of the Year Award, 2013, Engineers’ Society of Western Pennsylvania.
Gannett Fleming developed and evaluated alternative alignments as part of the environmental screening process to select the locally preferred alternative for the Rail Runner commuter system extension from Albuquerque to Santa Fe. Our firm prepared the necessary design-build request for proposal (RFP) documents for the new 18-mile-long line segment. The project scope included the design of an 80-mph, single-track commuter rail line with passing sidings to allow for an 84-minute travel time between downtown Albuquerque and the terminus located in Santa Fe.

**Project Features**

- 3.3 percent grade to top of escarpment at La Bajada Hill
- Series of deep cuts and large fills that average 40 to 50 feet high through Waldo Canyon
- Retaining structures within median of I-25 based on grade differential between commuter rail line and interstate travel lanes
- 2,600-foot viaduct to fly over I-25 northbound lanes, frontage road, and Bonanza Creek
- 280-foot, cut-and-cover, rigid-frame structure to cross underneath southbound lanes
- Grade-separated structures located at Waldo Canyon Rd, Straight St, Canada de Santa Fe, NM Route 599, NM Route 14, and Richards Ave.
Gannett Fleming provided program management support services for the Sonoma-Marin Area Rail Transit (SMART) project that will operate in a shared-track environment. The project will result in the implementation of a passenger rail service along 70 miles of the existing SMART corridor from Cloverdale to Larkspur, California, saving commuters time and money, and reducing traffic congestion and carbon emissions. Additionally, the project includes an ancillary bicycle and pedestrian pathway to provide alternative modes of transportation along the U.S. Highway 101 corridor in Sonoma and Marin counties.

**Project Features**

- Track rehabilitation within existing rail corridor
- 14 rail stations in Marin and Sonoma counties
- Park-and-ride lots at some station locations
- Passing sidings
- Rail maintenance facility
- Class I and Class II bicycle and pedestrian pathway facilities
- Centralized traffic control with positive train control overlay
- Quiet zones implementation in coordination with Federal Railroad Administration
- Railroad crossing improvements in coordination with California Public Utilities Commission
- Diesel multiple-unit railcars procurement.
Gannett Fleming provided Project Management Oversight (PMO) services for the $1 billion Sounder Commuter Rail System built by the Central Puget Sound Regional Transit Authority. Our PMO team monitored this project on behalf of the Federal Transit Administration (FTA) by undertaking independent assessments of project development and implementation, including project management plans, quality assurance plans, design management and progress, design safety in compliance with FTA regulations, design readiness, cost estimates, construction scheduling, and construction management.

The Sounder Commuter Rail system consists of three segments: 1) Tacoma to Seattle, 2) Lakewood to Seattle, and 3) Everett to Seattle. The project involved developing an 82-mile commuter rail system with 14 to 17 stations on shared Burlington Northern Santa Fe freight track. Transit centers and park-n-ride lots will be added at some stations. Our firm’s responsibilities included overseeing the planning, design, construction, and manufacturing of commuter rail cars, locomotives, and light rail cars and the implementation of fare collection, communications, power, control, and signal systems.
Gannett Fleming developed a comprehensive, national intelligent transportation systems (ITS) strategic plan for Mexico’s Secretaría de Comunicaciones y Transportes. The project involved a multimodal transportation network serving a population of 110 million.

Mexico is striving to build, operate, and maintain a modern transportation network to support sustained growth. To help realize this goal, our firm, as part of a team of consultants, developed a framework for a national ITS program.

The project included a review of international ITS deployments, experiences, and best practices, including a benchmarking analysis for ITS programs in other nations—United States, Canada, Great Britain, Spain, Germany, South Korea, Brazil, Chile, and Argentina.

**Key Features**

- Developed method to provide traceability from the overall ITS vision to the performance measures used on ITS projects
- Identified 74 strategic ITS projects throughout seven operations/ITS regions
- Developed a proposed ITS division to lead Mexico’s ITS program through planning, training, standards, funding, institutional/administrative aspects, stakeholder coordination, and performance monitoring
- Developed modified version of U.S. Department of Transportation’s standard systems engineering approach for ITS project development throughout Mexico.
Gannett Fleming developed Qatar’s National ITS Architecture, Master Plan, and Standards. Based on the needs of stakeholders, the ITS architecture and master plan is expected to set the pace and direction for the implementation of multimodal ITS systems throughout Qatar for more than 10 years. The project included an extensive international ITS benchmarking and best practices assessment, including both a desktop study and in-depth visits to several best practice ITS programs in the United States, Europe, and Asia. Another key component was an extensive stakeholder outreach and participation program that included a number of workshops and meetings throughout the development of the ITS architecture and master plan. The project also included the development of a wide range of ITS technical specifications, standards, and an ITS deployment manual for use on ITS planning, engineering, and construction projects throughout Qatar. The ITS standards contained technical specifications for a variety of ITS field devices, including a number of communications components to be used both in the field and at the proposed national transportation management center. The standards require the use of interfaces and communications that are in compliance with the National Transportation Communications for ITS Protocol.
Gannett Fleming provided its LOCATE/IM services on a statewide basis to Tennessee Department of Transportation (TDOT). LOCATE/IM is a hosted Web-based automatic vehicle location and computer-aided dispatch system developed specifically for incident management. The system is customizable to interface with transportation management center (TMC) software and legacy systems. LOCATE/IM provides complete command and control of an organization’s motorist assist/incident management fleet.

The system is operated from regional TMCs in a number of locations throughout Tennessee, including Nashville, Knoxville, Chattanooga, and Memphis.

As a result of the use of LOCATE/IM, incident response times have dramatically improved; incident management vehicles are located and assigned faster; roadways are cleared in a timelier manner, reducing secondary incidents; and travel time of the incident management fleet and the public has also been reduced, which provides associated environmental benefits. In addition, LOCATE/IM includes detailed performance measure monitoring functions, complete reporting functions, and easy-to-use, field-hardened mobile data terminals for operations personnel.
Gannett Fleming presented an Operational Audit for Traffic Signal Sustainability (OATSS) concept to the Military Surface Deployment Distribution Command Transportation Engineering Agency. It was agreed that Joint Base Lewis-McChord be the location of a pilot project for OATSS.

Our firm collected traffic data at four signalized intersections and conducted a traffic signal study. Inspections of traffic signal equipment were conducted at each of these intersections, along with an equipment inventory. Equipment deficiencies relative to support poles, signal indications, pedestrian accommodations, and signing were noted. Our firm identified operational deficiencies in signal controller parameters, such as minimum greens, passage time, and loop-operational mode.

Following the analysis of existing traffic data using Synchro software, our team entered new timing parameters into controllers at each intersection.

**Services Provided**

- Collected traffic data at four signalized locations
- Identified existing signal equipment and operational deficiencies
- Conducted traffic analyses to determine delay and levels of service
- Developed optimized traffic signal timings.
Gannett Fleming developed alternative concepts and conducted detailed engineering and environmental studies to determine the feasibility, potential impacts, and likely benefits of constructing managed lanes along the 19.8-mile South Miami-Dade Busway. The project team evaluated the concept of express or managed lanes through the analysis of existing conditions, the development of viable and affordable build alternatives, and the assessment of functionality and cost of each alternative. The project team conducted an extensive data collection effort including travel surveys on the transit system and roadways, traffic counts, speed-and-delay studies, and a full range of environmental data collection.

Our firm carried out an iterative, two-step process of developing and analyzing alternatives to focus the study on the most promising alternatives. Major physical features, including facility length, lane configuration, access locations, and grade-separation treatments were tested. The result was three alternative configurations that would meet travel demands and generate sufficient revenues to justify and support the plan.

We are also conducting significant public outreach to garner support for the project, respond to objections, and choose the best alternative to meet the needs of the region. The benefits include improvements to transit passenger service and travel options on the U.S. Route 1 corridor and throughout South Miami-Dade County.
The New Jersey Turnpike Authority (NJTA) embarked on one of the most visible and ambitious 33-mile, $2.5-billion road widening programs in New Jersey’s history. Dewberry served as the prime for final design services, with Gannett Fleming as a major subconsultant.

Project features included widening the NJ Turnpike at Section 6, installing a new 10-lane toll plaza, designing a new interchange ramp system, implementing New Jersey’s first single-point urban interchange at Routes 33 and 133, reconstructing and widening New Jersey Department of Transportation (NJDOT) roadways, and relocating local roadways and intersections. Extensive coordination with NJDOT, Mercer County, and East Windsor Township was required. Additional features included two complex interchanges; 22 bridges; seven water quality basins; right-of-way acquisition; maintenance and protection of traffic; extensive utility relocations; intelligent transportation systems (ITS) design; noise barriers and retaining walls; stormwater management; New Jersey Department of Environmental Protection permits; soil erosion control certification; and coordination with the program manager, environmental consultant, other section designers, and NJDOT on an accelerated schedule.
Gannett Fleming served as primary consultant for the design of facilities for the PHX Sky Train® automated people-mover system at the Phoenix Sky Harbor International Airport. The project was designed according to the Leadership in Energy and Environmental Design (LEED®) for New Construction version 2.2.

Our firm was responsible for the design and construction oversight of all train facilities including stations; guideways; electrical and mechanical systems; security systems; extensive geotechnical analysis and design; vertical transportation systems; and all related improvements for roadways, existing facilities, and site work. Prior to construction, our firm provided the planning and preliminary engineering for the maintenance and storage facility, which included programming, site selection, cost estimating, coordination with the systems designer, and preliminary design.

**Awards**

- Engineering Excellence Honor Award, 2014, American Council of Engineering Companies (ACEC)
- Judges Award, Engineering Excellence Awards, 2013, ACEC
- Clifford C. Sawyer Achievement Award, Engineering Excellence Awards, 2013, ACEC of Arizona
- Outstanding Transit Innovation Award, 2013, Arizona Transit Association/Arizona Department of Transportation

**Client**

City of Phoenix Aviation Department

**Location**

Phoenix, Arizona
Gannett Fleming provided planning, design, and construction support for the $120 million Metro East maintenance shop and storage yard. The facility was required to support the extension of the San Francisco Municipal Railway (MUNI) 3rd Street light rail system, and provides additional light rail (LRV) maintenance capability for MUNI’s existing LRV and trolley system.

The fully electrified yard provides storage for 80 LRVs with provisions for future expansion for storage of 100 LRVs, and an automatic train control (ATC) test track. The main shop provides facilities for daily vehicle servicing, including inspection, fare extraction, sanding, interior cleaning, and exterior washing; preventive maintenance and running repair, including trestle tracks over depressed floors with roof-access catwalks; wheel truing; heavy repair, including LRV hoisting, detrucking, and component repair; central stores; and maintenance and transportation worker support facilities. Project planning and design also included a paint and body shop, which provides two downdraft booths for preparation and painting, as well as three tracks for body work and frame straightening.

**Services Provided**

- Project management of a nine-firm design team
- Functional and operational planning
- Simulation of yard operations
- Public outreach support
- Conceptual design of all facilities
- Final design of all facilities.
Gannett Fleming is a global infrastructure firm that provides planning, design, technology, and construction management services for a diverse range of markets and disciplines. With 2,000 highly qualified individuals across a global network of 60 offices, we are united in our passion to deliver excellence. We have played a part in shaping infrastructure and improving communities in more than 65 countries, specializing in transportation, environmental, water, power, and facility-related projects.

Founded in 1915, we embrace sustainability and innovation in our projects and internal activities, achieving results while being responsible stewards of our environment. Our culture of service, ingenuity, and responsiveness empowers us to fulfill our key mission: make our clients successful.

Gannett Fleming is consistently ranked in the top 10 percent on Engineering News-Record’s Top 500 Design Firms list.