

Leader in Design-Build Project Delivery

Design

Quality Control

Quality Assurance

Volkert has a national reputation as a leading provider of design-build best practices for complex transportation infrastructure. This is a result of excellent performance on some of the most complex and regionally significant projects in the country, providing design services for projects ranging in size up to \$210 million and quality control and quality assurance services for projects ranging in size up to \$2.3 billion.



Rendering of the I-4 Ultimate

Volkert provides quality assurance management for the I-4 Ultimate. This 2.3-billion project involves a 21-mile makeover including 4 new tolled express lanes, 15 interchanges, 127 new and replaced bridges, and a world class signature pedestrian bridge. This regionally significant project will transform the region while safely connecting communities and providing infrastructure to improve the economy.

Design

As designers, Volkert works closely with D-B (design-build) contractors to develop 30% design plans for evaluation by owners as well as develop final plans on accelerated schedules for roadway / highway infrastructure and bridges as part of D-B teams in the role of lead designer. Design services include planning and implementation of roadway design, alternative intersection and interchange analyses and design, developing concurrent design and construction activities involving complex phased construction and sequencing plans, analyses of constructability and traffic management issues on urban roads and interstates with high traffic volumes, bridge design (new, rehabilitation, widening, replacement, realignment,...) ranging in complexity and cost, development of Transportation Management Plans, and CPM schedule development and analyses.

Quality Management

As QA (quality assurance) managers, Volkert's construction engineers and senior inspectors conduct QA testing and inspection services to confirm that construction, material testing, and sampling are performed in compliance with contract requirements, approved construction plans, and specifications. Responsibilities include the development of QA plans; leading preparatory inspection meetings before major work activities; documentation of construction activities; acceptance of materials; review of materials documentation; verification of material certifications; monitoring of major construction components; verification of accurate QC testing and submittal reviews; and resolution of nonconforming work and materials, preparation of noncompliance reports, review and approval of noncompliance recovery plans, and monitoring of corrective actions.

Volkert has extensive experience working collaboratively with contractors, designers, and owners (state DOTs, FHWA, and local officials) to resolve complex construction and field issues.

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Representative Design-Build experience includes:

Martin Luther King Expressway Extension for the Elizabeth River Crossing P3 Project, Portsmouth, Virginia, VDOT – Civil, roadway, and structural design (\$210M)

I-66 Rehabilitation, Fairfax, Virginia, VDOT Northern Virginia District – Lead designer, quality assurance management, and public relations (\$43M)

I-495 Northern Shoulder Lane Use, Fairfax County, VA, VDOT – Civil and roadway design, traffic engineering, ITS infrastructure, and QA inspection services (\$15M)

I-95 Temple Avenue Interchange Improvements, Colonial Heights, VDOT – Quality assurance (\$12M)

Western Wake Freeway Design-Build Project, Western Wake County, North Carolina Turnpike Authority – Quality control (\$465M)

US 90 Biloxi Bay Bridge Replacement, Biloxi, MDOT – Quality control (\$350M)



Volkert conducted design and QA for this I-66 pavement rehabilitation design-build project in Fairfax County, which involved the resolution of complex issues due to its location on I-66. The project received a national quality award from NAPA.

I-12 Widening Design-Build Project, Baton Rouge and Livingston Parishes, LA, LDOT – Civil, roadway, and electrical design and QA/QC (\$100M)

Elm Avenue / I-581 Interchange Improvements, Roanoke, VA, VDOT – Structural design (\$20M)

Representative Owner Design-Build Support Services Projects

I-64 and I-264 Pavement Rehabilitation, VDOT Hampton Road District – Development of bridging documents: technical design concepts, conceptual estimate, special provisions, project scope description for 3 D-B RFP packages for multiple pavement rehab projects covering 158 lane miles of interstate (\$124M). Keith Weakley, Volkert's chief engineer and Senior Vice President, received Commissioner's Award for Outstanding Customer Service Achievement.

US 301 Harry Nice Bridge Design-Build Construction Management Support Services, Charles County, MD, MDTA – Owner's representative for construction management and inspection support services (\$30M) for the \$463M design-build construction of a new, wider and safer 1.9 mile bridge over the Potomac River between Maryland and Virginia that replaces the heavily traveled 80-year old structure.

Project Management Support Services, I-495 Express Lanes Northern Extension (I-495 NEXT), VDOT, Northern Virginia District -- Volkert is providing owner support engineering and construction management services to include preliminary design and coordination, oversight and review for work products related to the expansion of, and modifications to, the I-495 Capital Beltway Express Lanes, primarily during the P3 Procurement and Construction of the initial phase of I-495 Northern Extension Study (I-495 NEXT) project. This project will extend the tolled express lanes from their existing terminus at Tysons Corner, VA to the Maryland state line (Potomac River) and into Maryland (as coordinated with Maryland State Highway Administration). Likewise, Volkert is responsible for coordination with the National Park Services with regard to a significant interchange at the termination of the George Washington Memorial Parkway at I-495. **The scope of services includes tasks in support of:**

- Design and construction management
- Environmental studies and compliance
- ITS design oversight and integration
- TMP development and execution
- Design plan and constructability reviews
- Analysis of cost data
- Development of independent estimates
- Reconciliation of quantity and costs differences
- Support for key stakeholder coordination including design
- Construction and agreement development support
- Claims prevention, mitigation, and resolution
- Design-Build procurement document(s) development
- Development of reports and accurate cost projections
- Compliance with federal/state statutes covering improvements and support of construction activities and documents in accordance with VDOT requirements for QA/QC project management
- Civil rights compliance administration
- Public affairs and communications