# STV -

Your Best Choice for Transportation Alternatives Program (TAP) Design **Assistance** 

STV has served public and private sector transportation. infrastructure, building, and facility needs with distinction for more than 100 years. Through perseverance and strategic alliances, STV has grown from a one-person shop in 1912 to a firm of more than 40 offices throughout North America. While we are large enough to offer a full range of engineering, architectural, planning, environmental and construction management services, we deliver personal attention with tailored solutions for each project designed by our large, talented pool of technical and support resources. We have built a national reputation for successful delivery of transportation/infrastructure services including roadway, bridge/structure, water resource systems design, traffic and ITS solutions, municipal engineering, planning, and associated environmental and public outreach support.

With offices in Lawrenceville, Newark, Philadelphia, and New York City, STV has the necessary depth of specialized personnel and resources to serve local public agencies throughout New Jersey who have been granted Federal Aid Highway Program Funds through NJDOT's Transportation Alternatives Set-Aside Program.

STV's transportation planning and engineering experience encompasses all facets and modes of transportation. We have a tremendous understanding of the planning, engineering, and design of both urban and rural transportation and infrastructure, as well as multimodal transportation. We have extensive experience addressing and mitigating corridor management issues including pedestrians, bicyclists, transit, and motorized vehicle traffic concerns, and we evaluate all modes of transportation when assessing improvements.

## **Services We Offer:**

**STREETSCAPE DESIGN** 

**BICYCLE/** PEDESTRIAN **SAFETY AND ACCOMMODATIONS** 

**ADA FACILITY** DESIGN

**ROADWAY** / INTERSECTION **UPGRADES** 

**PUBLIC OUTREACH** 

**ENVIRONMENTAL** 

- Decorative pavers
- Aesthetic treatments
- Gateway development
- Historic lighting
- Street features (trash receptacles, benches, street trees)
- Sidewalks
- Multi-use paths
- Curb extensions
- › Pedestrian bridges
- Lighting
- Traffic calming
- Crosswalks
- Lead and all-pedestrian signal phases

- ADA-compliant curb ramps
- › Pedestrian overpass ramp systems
- Wide sidewalks
- Transit accommodations
- › Building entrance ramps

- Roadway widening
- > Roundabouts
- > Pavement restoration/ reconstruction
- Signing, striping, and pavement markings
- > Traffic signal design
- Drainage and stormwater management
- Green infrastructure design

- > Presentations
- Graphics preparation
- > Public information centers
- > Consensus building
- Charettes
- > Steering committees
- Social media tools

- NEPA documentation
- > NJDEP stormwater management rules
- Cultural resources
- Hazardous materials
- > Fnvironmental Justice
- Permitting



### Value Added

- ✓ Full-service A/E firm incorporated in 1912
- Extensive experience with design and management of projects for public agencies
- ✓ Strong local presence and portfolio
- Knowledge of NJDOT standards and processes and federal aid laws and regulations
- ✓ Established relationships with local agencies and stakeholders

STV has a history of providing unique and innovative multimodal solutions. We are well-versed in mobilizing multidisciplinary teams to design small- and large-scale transportation infrastructure projects. Our engineers, planners, and environmental specialists have extensive experience in identifying and designing creative solutions for projects in constrained environments.

Our portfolio includes everything from bicycle/pedestrian improvement projects and safe routes to school projects to revitalization and safety improvement projects that support Vision Zero goals. Our notable assignments have included developing complex traffic models for innovative and alternative intersections, corridor revitalization including road diets to include all modes of transportation, evaluating transportation operations for retrofitting transit services along challenging corridors with heavy traffic volumes, and solving capacity issues for mixed-use development projects.

## **Challenges and Opportunities**

Parking/ Competing Curbside **Demands** 

- · Bus bulb-outs or sidewalk curb extensions could replace on-street parking or freight delivery spaces, protecting pedestrians and transit-users, which in turn create a modal shift away from single-occupancy car usage
- On the other hand, retaining curbside parking/deliveries provides for community access and creates a traffic calming
- A balance between needs to be achieved between competing curbside demands

Stakeholder Coordination

- TAP projects can increase the economic viability of a neighborhood by improving access for more transportation modes, but requires buy-in, participation, and understanding from all stakeholders to best fit the design to the neighborhood
- Various public outreach strategies may be needed to create an effective engagement program, ranging from virtual, to digital, to standard face-to-face public meetings

**Maintaining** Traffic

- > Stakeholder traffic concerns arise in "car-centric" neighborhoods because a TAP project could change the landscape of a roadway, but benefits could be reaped two-fold:
  - Increased transit reliability could decrease associated automobile use within mixed-use neighborhoods and
  - Enhanced neighborhood pedestrian amenities may increase/attract foot-traffic and improve economic vitality

Implementing Protected **Bike Lanes** 

- Protected bike lanes provide the greatest opportunity to attract new riders and encourage mode shifts to biking; however, right-of-way width is often limited
- Complete Streets alternatives that can incorporate bike lane buffers into the design, such as bike lanes located between the sidewalk and a parking lane or adjacent to physical protection (i.e., planters) can enhance safety and serve as a traffic calming device

# **Kev Projects**



#### **Route 27 and Witherspoon** Street Safety Improvement

STV identified key safety issues. evaluated the intersection, and developed conceptual solutions with a pedestrian focus for this urban intersection adjacent to the Princeton University campus. Signal, intersection, and lighting safety and operational improvements were addressed.



#### **Cooper's Poynt Waterfront Walk Extension** | STV prepared a concept development study for the construction of a pedestrian/bicyclist shared-use pathway and bridge connecting Cooper's Poynt Waterfront Park with the promenade that terminates on the south side of the Ben Franklin Bridge in Camden, NJ.



#### **City of Alexandria Pavement Marking Design and Traffic Engineering for Complete** Streets | STV planned and designed

signing and pavement marking, as well as civil components, to enhance existing pedestrian, bus, and bicycle facilities. The firm performed road diet traffic analysis to install bicycle lanes as part of Complete Streets design.



# **Key Projects (continued)**



**DDOT Bicycle Facilities Design** and Traffic Analysis | STV designed and developed innovative bicycle facilities in Washington, D.C. Highlights included roadway, on- and off-road bicycle, and intersection improvements; traffic signal, trail and sidewalk design, bus stop safety and accessibility; and transportation management plans.



**City of Seat Pleasant Enhanced Streetscape** STV developed design plans to enhance the streetscape and better accommodate pedestrians along Martin Luther King Boulevard in the City of Seat Pleasant (MD). Alternatives include a new 10-foot-wide shared-use path with a 5-foot buffer to accommodate extension of the WB&A trail to Washington, D.C.



**Frances Appleton Pedestrian Bridge** As part of STV's role as lead designer for the rehabilitation of the Longfellow Bridge over the Charles River between Boston and Cambridge, MA, the firm designed the adjacent, award winning Frances Appleton Pedestrian Bridge connecting downtown Boston and the Charles River Esplanade.



**South Carolina State University** Pedestrian Bridge | STV provided structural and civil engineering services, utility coordination, pedestrian safety, and architectural elements for this South Carolina Department of Transportation project spanning four-lane US Route 21 (Chestnut Street) that splits the school's campus.



**Quincy Street Reconstruction** STV redesigned this Boston, MA, roadway to revitalize the urban landscape and address traffic, pedestrian, and bicyclist safety issues. Following "Complete Street" quidelines, the design improves safety and flow, incorporating planting areas, smaller lane widths, new side street connections, and upgraded lighting.



and Traffic Improvement Studies STV provided a conceptual design study of Barnum Avenue in Stratford, CT, that identified themes and subthemes for the corridor. The study was followed by the preparation of final design.

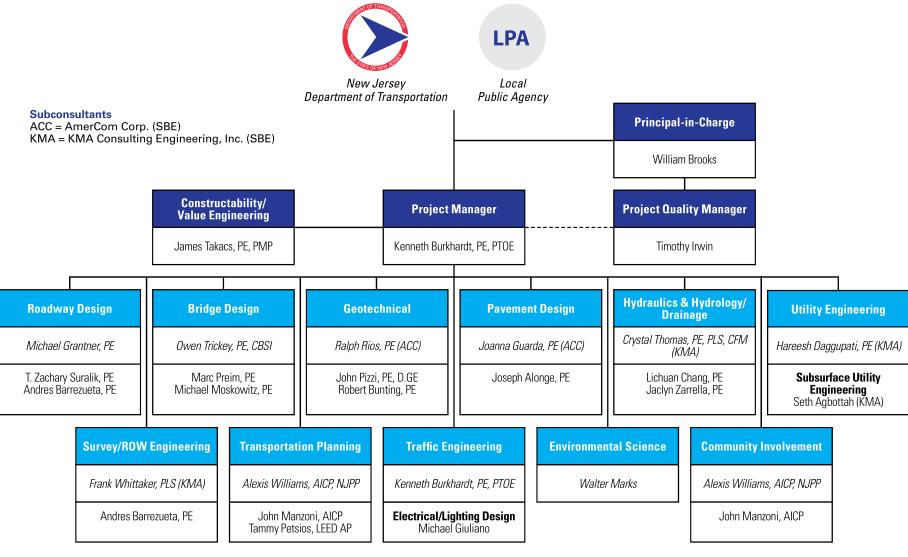


**Route 28 (Main Street) Safety Improvements** This section of Somerville (NJ) Borough's Main Street is a primary traffic corridor with heavy pedestrian use in this County seat. STV's conceptual plans include ADA-compliant curb ramps, push buttons, and pedestrian countdown heads; improved lighting; an upgraded traffic signal with a lead pedestrian interval, and a potential roundabout.



**Cambridge Infrastructure Improvements** | STV is providing engineering services for Gore Street and Rufo Road infrastructure in Cambridge, MA, including pavement structure rehabilitation, stormwater management system and streetscaping improvements, roadway accessibility upgrades, and traffic-calming chicanes and raised intersections/ crosswalks.





#### **Contact Information**

Kenneth Burkhardt, PE, PTOE, STV's project manager for the TAP Program, has nearly 30 years of experience in the planning, design, and management of transportation improvement projects in New Jersey. His project history includes managing numerous highway, bridge, traffic, and Complete Streets projects through all phases of

the NJDOT project delivery process. He also has served as project manager on NJDOT local aid TAP and Safe Routes to School contracts for the past five years and has completed the Rutger's CAIT Federal-Aid Responsible Charge Training.

Princeton Pike Corporate Center 997 Lenox Drive, Suite 102 Lawrenceville, NJ 08648 kenneth.burkhardt@stvinc.com office: 609-530-1099 mobile: 609-991-1407



