

# NV5 RELATED SERVICES



NV5, Inc. (NV5), formerly The RBA Group, is a professional and technical Engineering and Architectural consulting firm serving the industry for well over 40 years. NV5's northeast infrastructure team is headquartered in Parsippany, NJ and has multiple offices in the northeast, New York, NY and Philadelphia, PA. We are a multidiscipline firm of professionals dedicated to developing cost-effective solutions that enhance safety and quality of life. Core specialties include bicycle/pedestrian planning and design, recreational planning and design, landscape architecture and streetscape design, highway and traffic design, transportation planning, traffic engineering, structural and bridge design, site design, utility design, environmental permitting and processing services, hydraulic design/hydrologic studies and construction management. We have provided design services for

various counties and municipalities throughout New Jersey, and other major transportation agencies including NJDOT, NJTPA, NJ TRANSIT, NJDPMC, NJTA, PANY&NJ, DRJTBC, NYSDOT, NYCDOT, and NYCDDC, as well as numerous Local Public Agencies (LPAs).

Safe Routes To School is a comprehensive mobility program that uses proven planning and engineering approaches, including the latest traffic safety and calming measures, to make school routes safer for student walkers, bicyclists and motorists. Planning efforts focus on education, enforcement, encouragement and evaluation and include conceptual designs as part of School Travel Plans. Engineering Design components include development of Preliminary and Final Plans, prior to Contract Plans, Specifications and Engineer's Estimate (PS&E), environmental review and obtaining approvals for construction projects.

NV5 will utilize FHWA's [Safe System Approach](#) on projects to "reduce death and serious injuries through design that accommodates human mistakes and injury tolerances". Elements include measures to provide [Safe Roads for all Users](#), [Safe Speeds](#) and [Safe Road](#) measures, which include separating people travelling at different speeds. This new approach refocuses transportation system design and operation on anticipating human mistakes, reducing crash severity and saving lives (FHWA-SA-20-015).



## SAFE ROUTES TO SCHOOL DESIGN EXPERIENCE

NV5 is a full service multidiscipline firm. Below are some specific SRTS services.

**SRTS AND TRANSPORTATION ALTERNATIVE DESIGN ASSISTANCE:** NV5 has extensive grant management process and design experience with federally funded SRTS and Transportation Alternative Program (TAP) grants. Our team has training through Rutgers CAIT and is working with numerous Local Public Agencies (LPAs) to provide design services to see SRTS and TAP projects constructed in accordance with grant goals and federal requirements.

**COMPLETE STREETS:** NV5 prepared Complete Streets program support documents for NJDOT. We also assisted NJDOT in refining the Capital Project Delivery Process and recommendations were made to the associated Activity Descriptions and Guidelines (Concept and Design phases) so that the Complete Streets policy is addressed.

**STREET/INTERSECTION IMPROVEMENTS/INTEGRATED PROJECTS:** NV5 prepared concept designs for all NJ SRTS Demonstration Project Schools, and New York City School Safety Engineering (210 school campus areas). SRTS elements are routinely integrated in our constructed projects.

**ADA COMPLIANCE:** NV5 routinely integrates ADA requirements, an important element for SRTS projects. We have extensive ADA compliance experience from teaching seminars, to trained staff, to assisting NJDOT on policy procedures, to proven experience. NV5 has also been awarded multiple NJDOT projects specific to ADA improvements, including the design of over 100 curb ramps along Route 17 in Bergen County, and several 100 along Route 35 in Ocean County.

**SUSTAINABLE ENVIRONMENTAL AND COMMUNITY DESIGN:** Even small SRTS improvements require identification/avoidance of environmental, historic resources and opportunities for achieving context sensitive, sustainable designs. NV5 has extensive environmental services and permit experience to support transportation and mobility projects in NJ and the region.

**EQUITY:** NV5's projects include identifying disadvantaged populations and addressing Environmental Justice issues and concerns by working with local communities. Our public outreach techniques are inclusive and equitable, using measures to reach populations that have been typically underserved and underrepresented because of socioeconomic factors, religious customs, language barriers, disabilities, etc. SRTS safety improvements can be life-changing for these populations who often rely on walking and biking for transportation.

**FULL-SERVICE ORGANIZATION:** NV5 has all required engineering, environmental and public outreach services in-house, enabling production of efficient, cost effective SRTS designs. NV5 has served as an On-Call consultant to NJDOT for bicycle/pedestrian planning and design for over 30 years.

# SAFE ROUTES TO SCHOOL (SRTS)/DESIGN ASSISTANCE PROGRAM—NV5 REPRESENTATIVE PROJECTS



## SRTS DESIGN ASSISTANCE—MULTIPLE PROJECTS FOR LPAs THROUGH NJDOT LOCAL AID AND ECONOMIC DEVELOPMENT USING FEDERAL AID HIGHWAY PROGRAM FUNDS FOR GRANT RECIPIENTS

NV5 has been selected by LPAs throughout NJ to provide Assistance Services for Preliminary Design, Final Design and Construction Support for the Federally Funded SRTS project grants listed below. Services include: Pedestrian safety, sidewalk and ADA curb ramps, signing and striping, intersection improvements, bicycle compatibility improvements, utility coordination including RR crossings, environmental permitting, public outreach, and preparation of contract plans, specifications and cost estimates (PS&E) as well as construction support:

- Pemberton Township: SRTS improvements for roadways near Busansky and Emmons Schools
- Somerville Borough: SRTS improvements along Veteran's Memorial Drive East
- New Providence Borough: SRTS improvements for roadways near Allen W. Roberts and Salt Brook Elementary Schools
- Highland Park Borough: SRTS improvements for roadways near Irving School and Bartle School
- Village of Ridgewood: SRTS improvement for roadways near six (6) elementary schools and two (2) middle schools throughout the Village
- Princeton - Rosedale Road (CR 604) & General Johnson Dr. Intersection & Pathway Improvements associated with Johnson Park Elementary School
- City of Asbury Park - SRTS Improvements near Bradley Elementary School
- City of Orange Pedestrian Safety Upgrades - Park Ave School area
- Frenchtown Borough - SRTS Improvements



## TRANSPORTATION ALTERNATIVES PROGRAM DESIGN ASSISTANCE (TAP)—MULTIPLE PROJECTS FOR LPAs THROUGH NJDOT LOCAL AID AND ECONOMIC DEVELOPMENT USING FEDERAL AID HIGHWAY PROGRAM FUNDS FOR GRANT RECIPIENTS

NV5 has been selected by LPAs throughout NJ to provide Design Assistance Services for Preliminary Design, Final Design and Construction Support for the Federally Funded TAP project grants listed below. Services include Multi-Use Trail design, streetscape and landscape architecture, signing and striping, intersection improvements, bicycle compatibility improvements, pedestrian safety, pedestrian bridges, ADA curb ramps, driveway apron improvements, intersection and signal design, pedestrian scale lighting, cultural resources, technical environmental studies, environmental permitting, public outreach, preparation of contract plans, specifications and cost estimates (PS&E) as well as construction support:

- Morris County Park Commission: Patriots' Path on Great Morristown Greenway (approx. 1-mile trail)
- City of Passaic: Market Streetscape Enhancement Project
- Toms River Township: Ortleigh Beach Streetscape and Gateway Treatment Project along Rt. 35 and gateways to Ortleigh Beach
- Town of Morristown: MLK Promenade Transit Connection Streetscape, pedestrian safety improvements
- Raritan Borough: Pedestrian Improvements from the NJ Transit Rail Station to the Riverfront
- Pennington Borough: Downtown Streetscape Improvements within Historic District
- DPMC/NJDEP: Waterloo Road Amphibian Passage System (Byram Township)



## ROUTE 130 PEDESTRIAN ROAD SAFETY AUDIT (PSRA)

NV5 assisted NJDOT in conducting a PSRA along Rt. 130 in Burlington NJ. Project safety enhancements were developed through roadway assessment and community workshops. Recommendations by the Safety Impact Team were combined with other corridor-wide recommendations and potential engineering, education, and enforcement solutions to form a Corridor Improvement Plan. A safety video documenting the PSRA process was also created.



## NJDOT MID-BLOCK CROSSWALK IMPROVEMENTS – NORTH

(Sussex, Essex, Union and Morris Counties) NV5 is advancing evaluation and safety design recommendation services for nine (9) existing mid-block crosswalk locations including several along school routes. Each mid-block crosswalk location is being evaluated to determine improvements needed to enhance pedestrian visibility and safety. Safety countermeasures under consideration include: sidewalk connections, crosswalk visibility enhancements, lighting improvements, signage, striping and Rectangular Rapid Flashing Beacons, Pedestrian Hybrid Beacons (HAWK), or pedestrian actuated traffic signals, where warranted.

# SAFE ROUTES TO SCHOOL (SRTS)/DESIGN ASSISTANCE PROGRAM—NV5 REPRESENTATIVE PROJECTS

# NV5

NV5's specialists have not only developed School Travel Plans for many schools across NJ, they helped 'write the book' for what School Travel Plans should include and showed schools how more of these plans can make the trip to and from school more safe and enjoyable for everyone. Through developing pilot SRTS programs in New Jersey, NV5 set the bar for School Travel Plans, including streamlining the process to identify physical enhancements for routes to school.

As National Complete Streets Coalition instructors, we make sure our engineering concepts help balance the needs of all travelers, especially children getting to and from school, and provided workshops and specialized training for school and municipal representatives to help plan and advance both SRTS activities and improvements.

Our understanding of how SRTS concepts are planned strengthens our ability to design SRTS projects efficiently, avoid scope creep and support environmental and community contexts. NV5 has all required engineering and environmental services in-house to efficiently design SRTS projects. Design elements can include ADA compliant sidewalk and curb ramps, crosswalks, reducing street crossing distances, curb extensions, traffic signalization and signal upgrades, pedestrian traffic control devices, intersection improvements, signing, pavement markings/stripping, traffic calming, connectivity paths, bicycle safety improvements, etc. We also integrate SRTS with our Complete Streets design approach.



**ESSEX COUNTY ON-CALL TRAFFIC ENGINEERING SERVICES:** As part of a traffic engineering on-call agreement, NV5 designed new traffic signals for over 70 intersections, many near schools. All signals featured substantial ADA pedestrian improvements, including count-down pedestrian timers, audible and visual push buttons (light up and beep), and new crosswalks and sidewalk.



**WESTFIELD TRAFFIC CALMING:** The objective was to provide a safer environment for pedestrians and bicyclists, by addressing through-traffic and speeding issues. NV5 evaluated traffic calming strategies, examined the feasibility of methods and alternatives, recommended appropriate treatments and prepared final design plans and specifications. Recommended treatments constructed include raised intersections, speed tables, curb extensions and raised crosswalks.



**ROUTE 35 RECONSTRUCTION MP 4.0 TO 9.0 (SUPER-STORM SANDY EMERGENCY CONTRACT):** NV5 provided final design and construction support services for a 5-mile section of Route 35 (along two separate roadways - northbound and southbound), involving pavement replacement, corridor-wide drainage upgrades and replacement/upgrades to 19 signalized intersections, significant sidewalk improvements, enhanced crosswalks, bike lanes and over 800 ADA compliant curb ramp installations, which were designed in accordance with NJDOT ADA policies.



**ROUTE 17-ADA NORTH CONTRACT 5:** NV5 provided Preliminary Engineering, Final Design and Construction Support Services for this NJDOT ADA contract involving the upgrading of pedestrian facilities along Route 17 between MP 8.70 and MP 17.1 (40 separate locations). Key project elements included: environmental permitting; design of 118 new curb ramps; 5,500 linear feet of new or replaced sidewalk; traffic signal upgrades at 5 intersections; ROW documents.



**PEMBERTON COMPLETE STREETS IMPLEMENTATION AND SRTS PROJECTS:** NV5 provided assistance in the development of a Complete Streets Implementation plan to address Complete Streets education, implementation tools, and project development and delivery. Recommendations include: Typologies for Township-wide Corridor Treatments, Intersection Treatments; Amenities and Maintenance; and Signage. NV5 is currently providing SRTS Design Assistance services for sidewalk, curbramp and crosswalk connectivity for Busansky and Emmons Schools.



**NORTH AVENUE HAWK SIGNAL/PEDESTRIAN HYBRID BEACON IN WESTFIELD, NJ:** In response to numerous pedestrian crashes on North Avenue, NV5 designed a hybrid traffic signal for pedestrians to connect a parking lot across North Avenue. Pedestrian Hybrid Beacons (PHBs) can lead to lower conflict and crash rates for pedestrians and vehicles. FHWA's evaluation of pedestrian PHBs found that their installation reduces crashes.

# SAFE ROUTES TO SCHOOL (SRTS)/DESIGN ASSISTANCE PROGRAM—NV5 REPRESENTATIVE PROJECTS



## NEW YORK CITY SCHOOL SAFETY ENGINEERING PROJECT

Since 2002, NV5 has been conducting pedestrian safety assessments for NYCDOT's School Safety Program which manages pedestrian safety for over 1,470 elementary and middle schools. The School Safety Engineering Project seeks to improve pedestrian safety for children in the vicinity of schools by redesigning sidewalks, intersections, and travel corridors along school routes. NV5 visited and studied streets around hundreds of schools, met with school representatives, and identified pedestrian safety concerns. Schools were ranked as to the severity of the problems and improvements identified. We then conducted more detailed assessments for the 210 highest ranked 'priority' schools (with the most severe pedestrian safety concerns) identifying specific engineering and traffic improvements around each school. In subsequent contracts, we develop engineering designs for over 46 capital projects.



## BRIDGE STREET STOCKTON STREETScape

NV5 provided landscape architecture and streetscape design services for this NJDOT, Borough of Stockton \$2 million project, which is the connector roadway between the Route 29 Scenic Byway and Delaware River. Because Bridge Street crosses the D&R State Park and Canal, all design elements required approval from the NJ State Historic Preservation Office (SHPO). Streetscape improvements included: new blue stone curb and sidewalks, period lighting, street trees, ornamental plantings, bicycle trail crossing design and historic signage. *2010 Hunterdon County Planning and Design Award*



## MONTCLAIR STREETS ARE FOR EVERYONE (SAFE) COMPLETE STREETS IMPLEMENTATION PLAN

The Montclair SAFE Complete Streets Implementation Plan provides a road map for improving the walking and bicycling environment in the Township of Montclair. The purpose of this plan is to provide guidance towards ensuring that Montclair's streets are designed to encourage safe driving, walking, and bicycling and to advance the Township's SAFE/Complete Streets philosophy.

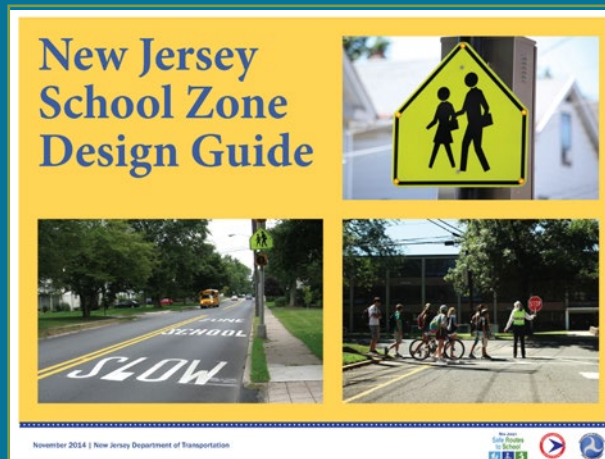


## CAMDEN, NJ—SAFE ROUTES TO SCHOOL URBAN DEMONSTRATION PROGRAM

The NJ SRTS Urban Demonstration Program in Camden focused, primarily, on making sure that all children can benefit from SRTS programs. NV5 developed an approach for two schools, which recognized that the issues faced by these students may be different than those affecting children in other NJ suburban or rural areas. The program goal was to assist the schools with strategies to develop and implement local SRTS programs that were reflective of individual school neighborhoods. This program demonstrates how communities can collaborate to plan SRTS improvements, and serves to guide other urban schools and cities in establishing successful partnerships to promote SRTS activities.

## SRTS DESIGN

As a consultant for NJDOT, NV5 has developed the School Zone Guide, a statewide resource focused on engineering measures that can be used to make the environment to, from, and around schools a place where children and their parents feel safe and want to walk and bicycle.



# SAFE ROUTES TO SCHOOL (SRTS)/DESIGN ASSISTANCE PROGRAM—NV5 REPRESENTATIVE PROJECTS

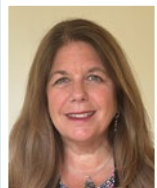
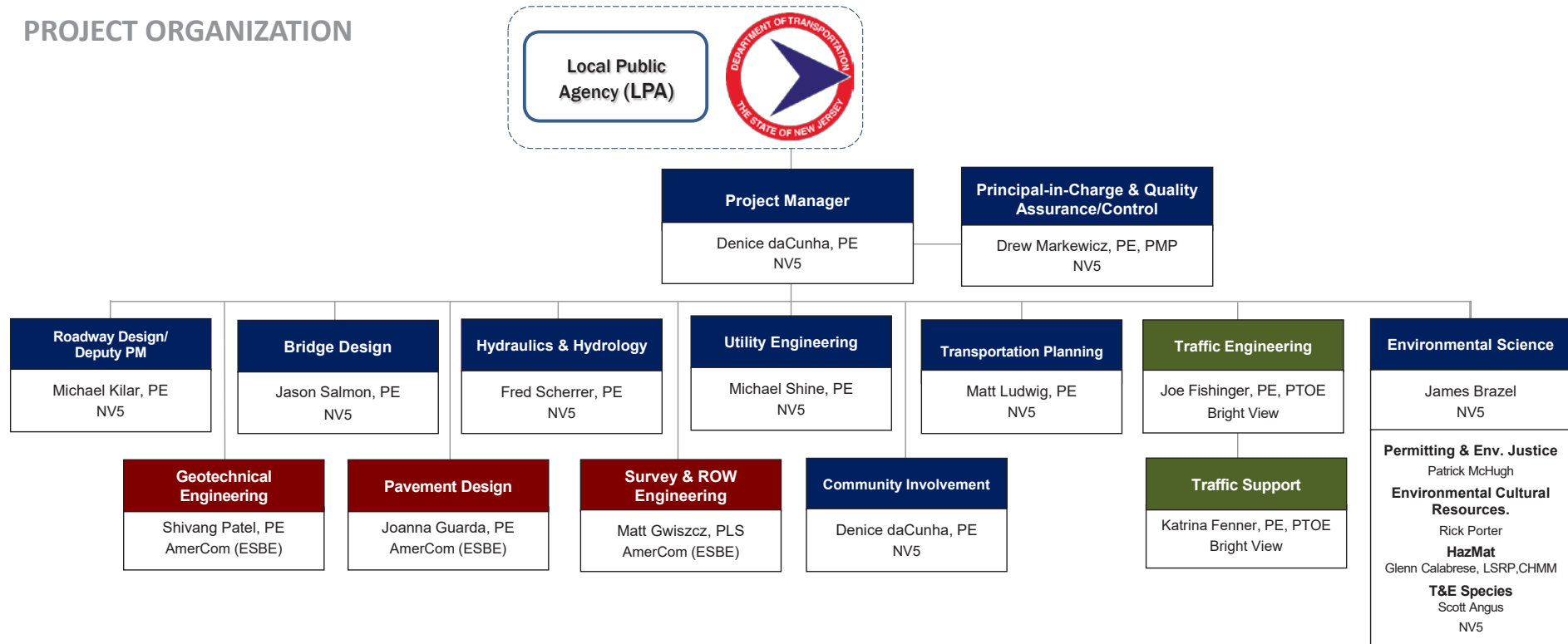


**MUNICIPALITY OF PRINCETON SRTS:** (Rosedale Road & General Johnson Drive Intersection and Upgrades to Sidepath Along Rosedale Road) - NV5 is providing design and construction support services for this Federally Funded SRTS project to provide safe pedestrian and bicycle passage across Rosedale Road (CR 604) at its intersection with General Johnson Drive and improve access and safety for students walking or biking to Johnson Park Elementary School. Services include traffic control options, design of a shared use path, sidewalks, ADA compliant curb ramps, signing and striping, cultural resources, technical environmental studies/permits, public outreach, and preparation of contract documents. NV5 is also coordinating Mercer County proposed mini-roundabout and signalized intersection improvements within project limits.



**COMPLETE STREETS (CS)—COMPREHENSIVE PROGRAM SUPPORT SERVICES:** NV5 prepared CS program support documents for NJDOT. NV5 helped NJDOT refine the Capital Project Delivery Process and made recommendations to the associated Activity Descriptions and Guidelines (Concept and Design phases) to implement the CS policy. NV5 instructs NJDOT, agency, county and municipal staff on implementing CS.

## PROJECT ORGANIZATION



**Denice daCunha, PE—Project Manager / Supervising Engineer**  
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Denice is a Professional Engineer with over 34 years of experience at NV5 in the design and management of numerous transportation (highway, bridge and traffic engineering) projects. Her experience includes managing NJDOT projects throughout all design phases: conceptual, preliminary, final design and construction support. She manages both SRTS and Transportation Alternative projects through the Federal Aid process administered through NJDOT Local Aid. SRTS related projects have included school zone safety, ADA compliance, bicycle and pedestrian improvements and connections, signal upgrades/ flashing beacons, signing/ striping, transportation alternatives, streetscape improvements, environmental documentation/permits, community outreach, etc. She has completed Rutgers CAIT Federal-Aid Responsible Charge and Federal Grant Management training.

## SRTS DESIGN ASSISTANCE

NV5 is uniquely qualified and experienced with NJDOT's SRTS Design Assistance program, having been selected for multiple grant recipient projects for both SRTS and Transportation Alternative projects throughout NJ, developing the NJ School Zone Design Guide and previously assisting the Department with their SRTS Pilot Program. NV5 includes seasoned professionals, experienced in a broad range of transportation settings and Federal Aid training/experience within all NJDOT Local Aid Districts.

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