

# NJDOT TRANSPORTATIONAL ALTERNATIVES SET-ASIDE (TA-SET-ASIDE) DESIGN ASSISTANCE PROGRAM 2023



200 NJ Employees



NJ Offices in Newark & Hamilton

The TA SET-ASIDE grant for Local Public Agencies (LPA) in New Jersey reflects community dedication to enhancing walking and bicycling safety. NJDOT supports TE/TAP infrastructure grant recipients by providing qualified design consultants, including Michael Baker International. Michael Baker is committed to helping communities overcome obstacles and implement solutions for TE/TAP initiatives. This collaboration aims to promote safe walking and biking, especially for individuals with disabilities, through innovative engineering and adherence to the latest design standards, ensuring success for awarded LPAs.

## WHY MICHAEL BAKER?

Michael Baker brings extensive expertise in transportation safety and engineering, uniquely equipped to manage projects from planning to Final Design and Construction. Specializing in Complete Street and Streetscape Design, Pedestrian and Bicycle Facilities, Intersection Improvements, Traffic Calming, Roadway and Structure Design, Drainage Improvement, and Environmental Permitting, our team is a trusted partner for public and private clients in New Jersey. With a proven track record in safety studies at municipal, county, regional, and state levels, we employ data-driven processes, analyzing crash data, pedestrian and cyclist counts, and traffic data. Our approach aligns with New Jersey's safety initiatives, Vision Zero goals, and Complete Streets policies, emphasizing equity and environmental justice in project delivery. Our experience encompasses TE/TA improvements, including local safety programs, road safety plans, targeted countermeasures, project prioritization, ADA-compliant designs, streetscaping, lighting, wayfinding, trail design, and intersection improvements, contributing to a safer, more accessible New Jersey.

## MICHAEL BAKER'S LOCAL NEW JERSEY EXPERIENCE:

### Complete Street & Streetscape Design



- » Road safety audits
- » Multimodal design
- » Transit access/bus shelters
- » Bicycle parking
- » Landscape (rain gardens/flow-through swales)
- » ADA facilities (sidewalk, curb ramps, intersection devices)
- » Parklets
- » Wayfinding signage
- » Intersection lighting/curb extensions

### Bicycle Facilities Design



- » Bike parking facilities
- » Bike lanes/boulevards
- » Cycle tracks
- » Shared-use paths
- » Bike route signing
- » Off-road bike routes
- » Trails & greenways

### Traffic Calming/ Corridor Design



- » Road diets
- » Speed tables
- » Pavement markings
- » School zone design
- » Traffic regulation development

### Pedestrian Facilities Design



- » ADA-compliant curb & sidewalk design
- » ADA-compliant pedestrian bridges
- » ADA-compliant curb retrofitting
- » Landscaping inc. buffer zones, benches, stairs & bollards
- » Pedestrian lighting
- » Curb extension/bump-outs

### Intersection Improvement Design



- » Green infrastructure
- » Drainage/SWM
- » High-visibility/raised/textured crosswalks
- » Intersection lighting
- » HAWK signals & flashing beacons
- » Traffic signal design
- » Rapid rectangular flashing beacons
- » In-pavement LED lighting
- » Radar speed displays/DMS
- » Passive pedestrian protection devices
- » Mid-block crossing design
- » Traffic signal timing optimization
- » Traffic counts & analysis

### MUTCD Signing & Striping Design



- » High-visibility slip-resistant crosswalks and stop bar
- » Multimodal lane markings
- » Rectangular rapid-flashing beacons (RRFB)
- » Advanced warning signs

### Roadway Traffic Improvements



- » Roadway geometrics
- » Drainage improvements
- » Pavement improvements
- » Roadside safety
- » Parking analysis
- » Environmental services
- » ROW/Utility design & coordination

### Other Services

- » Permitting
- » Construction services
- » Retaining wall & structure design
- » Public involvement & outreach
- » Landscape & architectural design



### ROADWAY SAFETY ENGINEERING EXPERTISE

With a strong track record collaborating with MPOs like NJTPA, SJTPO, and DVRPC, as well as counties, municipalities, NJDOT, and other LPAs across New Jersey, our local team comprehensively grasps the process of implementing Bikeways, Quality of Life, and Pedestrian Safety improvements. We navigate from planning and policy discussions to ensure stakeholder buy-in, while also addressing technical design considerations and practicalities crucial for implementation during final design and construction.



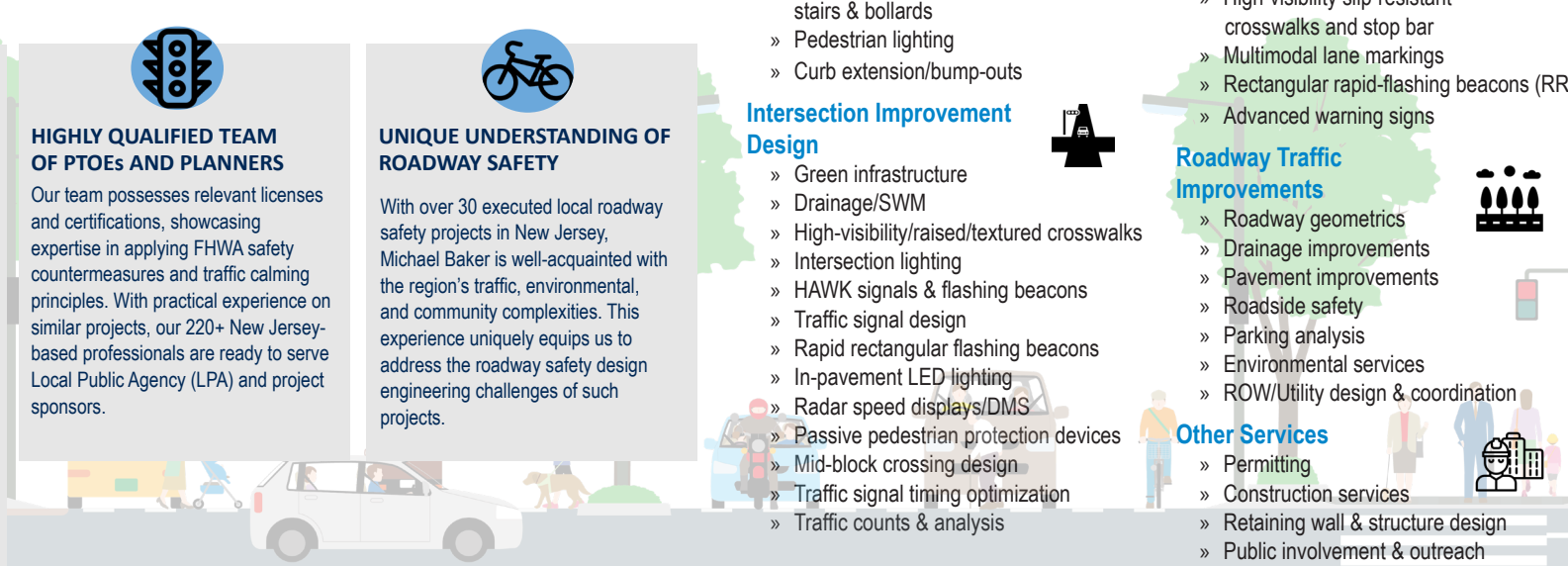
### HIGHLY QUALIFIED TEAM OF PTOEs AND PLANNERS

Our team possesses relevant licenses and certifications, showcasing expertise in applying FHWA safety countermeasures and traffic calming principles. With practical experience on similar projects, our 220+ New Jersey-based professionals are ready to serve Local Public Agency (LPA) and project sponsors.



### UNIQUE UNDERSTANDING OF ROADWAY SAFETY

With over 30 executed local roadway safety projects in New Jersey, Michael Baker is well-acquainted with the region's traffic, environmental, and community complexities. This experience uniquely equips us to address the roadway safety design engineering challenges of such projects.



# RELEVANT EXPERIENCE TO TA SET-ASIDE PROJECTS



Through extensive work with MPOs such as NJTPA, SJTPO, and DVRPC, counties, municipalities, NJDOT, and other Local Public Agencies (LPAs) throughout New Jersey, our local team understands the implementation Bikeways, Quality of Life, and Pedestrian Safety improvements from the planning and policy level that can facilitate stakeholder buy-in, while also assessing the technical design considerations and practicalities that drive implementation during final design and construction. Below are the relevant projects with LPAs that include pavement markings and signage improvements, upgrades to curbs and sidewalks, ADA access ramps, drainage improvements, bump-outs along intersections, bicycle and pedestrian trails and facilities, pedestrian bridges, benches, chain-link fence gates, decorative street lighting and streetscaping.

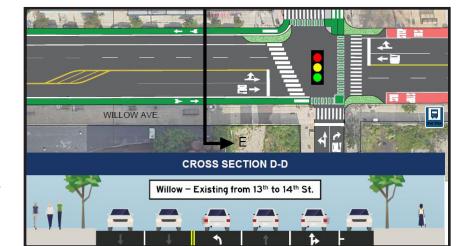
## MAIN STREET (CR 531) FROM TALMADGE AVENUE TO BRUNSWICK AVENUE IMPROVEMENTS PROJECT MIDDLESEX COUNTY, METUCHEN, NEW JERSEY



Michael Baker performed conceptual through final design services along a 1.1-mile corridor-wide roadway improvement project via NJTPA's Local Safety Program in the Borough of Metuchen, NJ. The design included safety improvements at 20 intersections incorporating multimodal traffic calming measures to balance the competing needs of pedestrians, buses, bicycles, and automobiles. Geometric and streetscape improvements included curb extensions, bus stop turnouts, and ADA-compliant curb ramps. The project included four new and upgraded traffic signals and related infrastructure as well as five midblock Rectangular Rapid Flash Beacons (RRFB) crossings. Traffic data collection activities included turning movement and Automatic Traffic Recorder (ATR) counts. Traffic analysis was performed to evaluate geometric improvements as well as optimize and coordinate signal timing, phasing, and perform adjustments to pedestrian and vehicular clearance times. AutoTURN sweep path analysis was performed to confirm that the geometric improvements and curb extensions can accommodate the sweep path of the typical design vehicles. The design incorporated sidewalk improvements, street lighting upgrades, drainage improvements, roadway resurfacing, and new pavement markings, signing, and striping. The design also included an Over-height Vehicle Detection System to divert trucks from a low-clearance AMTRAK underpass. Michael Baker facilitated a Public Information Center (PIC) to solicit community input for the improvements.

PROJECTS THAT ARE SIMILAR IN SCOPE AND COMPLEXITY AS THE PROJECTS LISTED UNDER TRANSPORTATION ALTERNATIVE SET-A-SIDE PROGRAM	SURVEY / MAPPING	FEDERALLY FUNDED	STRUCTURAL TASKS	PROJECT MANAGEMENT & COORDINATION	ROADWAY DESIGN / SAFETY IMPROVEMENTS	ADA CURB RAMP DESIGN	BIKE-PED FACILITY DESIGN / COMPLETE STREETS	UTILITY COORDINATION (ROW)	TRAFFIC ENGINEERING & ANALYSIS	LIGHTING DESIGN	ENVIRONMENTAL / PERMITTING	DRAINAGE / STORMWATER	CONTRACT DOCUMENT DEVELOPMENT
Intersection Improvements Along East and West 7th St (CR 601) and the Intersection of East Front St (CR 620) and Leland Ave, NJTPA/Union County   Plainfield, NJ	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
West Seventh Street (CR 601) Intersection Improvements, NJTPA/Union County   Plainfield, NJ	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Communipaw Avenue Safety Improvements, NJTPA/City of Jersey City   Jersey City, NJ	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Dr. Martin Luther King Boulevard Pedestrian Safety Corridor Improvements, NJTPA/City of Newark, NJ   Newark, NJ	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bergen Street Pedestrian Safety Corridor Improvements, NJTPA/City of Newark   Newark, NJ	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Main Street (CR 531) From Talmadge Avenue to Brunswick Avenue Improvements, NJTPA/Middlesex County   Metuchen, NJ	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
New Central Avenue (CR 31) and North Hope Chapel Road (CR 639) Roundabout, NJTPA/Ocean County   Jackson, NJ	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Park Avenue (CR 677), JFK Boulevard East/Boulevard East (CR 505 and CR 693) and JFK Boulevard (CR 501) Improvements, NJTPA/Hudson County, Hoboken, Weehawken, West New York, Guttenberg, North Bergen, Jersey City, NJ	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2022 and 2023 On-Call Traffic Engineering Support, City of Hoboken   Hoboken, NJ				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rio Grande Avenue Entrance Improvements, Cape May County   Wildwood, NJ	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Frank E. Rodgers Boulevard Safety Improvements, NJTPA/Hudson County   Harrison, NJ	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
JFK Boulevard (CR 501) – Phase IV From 43rd Street to 59th Street, NJTPA/Hudson County   Union City, Town of West New York, and Town of North Bergen	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Secaucus Road, From Paterson Plank Road to Route US 1&9 Tonnelle Avenue Southbound Ramps, NJTPA/Hudson County   Town of North Bergen, Union City, and Jersey City, NJ	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Paterson Plank Road (CR 681) – West Side Avenue to Park Plaza Drive, NJTPA/Hudson County   Secaucus, NJ	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Newark Bergen Street from Madison Avenue to 14th Avenue, NJTPA/City of Newark   Newark, NJ	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ITS Master Plan and Pacific Avenue Signal Optimization Atlantic City ITS Master Plan, City of Atlantic City/SJTPO   Atlantic City, NJ	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Safe Routes to School Design Assistance Program for Morgan Village, City of Camden, Camden, NJ	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Taft Avenue Pedestrian Bridge, Borough of Woodland Park, Passaic County, NJ   NJDOT	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

## BERGEN STREET PEDESTRIAN SAFETY IMPROVEMENTS NJTPA/CITY OF NEWARK NEWARK, NEW JERSEY



Michael Baker was responsible for leading the design of Bergen Street Pedestrian Safety Improvements for the City of Newark from conceptual level to final design. Concept designs were developed based on the recommendations of a road safety audit. The conceptual design was developed utilizing Complete Streets design guidelines and presented at a Public Information Center to facilitate public outreach and engagement. The final design incorporated multimodal traffic calming measures to balance the competing needs of pedestrians, buses, bicycles, and automobiles. Geometric and streetscape improvements included buffered bicycle lanes, bus stop turnouts, reverse angle parking, pedestrian crossing refuges, raised crosswalks, and curb extensions. Traffic signal improvements included a new midblock HAWK beacon (High-Intensity Activated crosswalk beacon), a midblock Rectangular Rapid Flash Beacon (RRFB), and new and upgraded traffic signals and related infrastructure. The design incorporated new ADA curb ramps, sidewalks, street lighting, pavement markings, signing, and striping. Intersection-level traffic analysis was performed to evaluate geometric improvements as well as modified signal timing, phasing, and adjustments to pedestrian crossing times. Pedestrian count data was collected and evaluated to determine warrants for midblock signals. Parking utilization was reviewed prior to the reduction of on-street parking to accommodate bicycle lanes.

## MAKING NEW JERSEY A BETTER PLACE TO LIVE, WITH SAFER, MORE ENJOYABLE WAYS TO BICYCLE AND WALK

Pedestrian Signal Heads	Mid-Block Crossing & Curb Extensions	Decorative Street Lighting	Skid-resistant High-visibility Crosswalks	Adequate Accommodations for Users of All Abilities	Multimodal Trails	Pedestrian Bridges	Green Infrastructure

# MICHAEL BAKER INTERNATIONAL

## EXCELLENT CHOICE FOR TRANSPORTATION ALTERNATIVES SET-ASIDE DESIGN ASSISTANCE

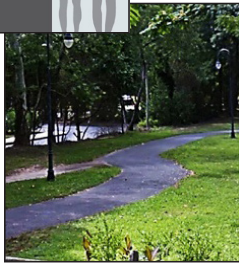
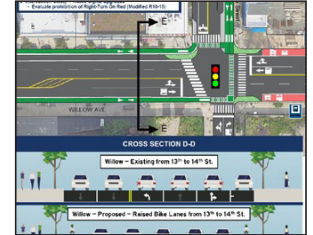


### SAFE ROUTES TO SCHOOL DESIGN ASSISTANCE PROGRAM FOR MORGAN VILLAGE City of Camden, Camden, NJ

Michael Baker designed safety improvements within this corridor for over 700 students in Morgan Village community in City of Camden. We collaborated with the NJDOT Local Aid and the City of Camden to design and install 30 curb ramps including skid resistance retro-reflective crosswalks, stop bars, and new sidewalk within Morgan Village to make bicycling and walking to school safer and more appealing for the K-8 students in the community. Michael Baker also coordinated high profile site visits and public meetings with the mayor, stakeholders, and the general public.

### 2022 AND 2023 ON-CALL TRAFFIC ENGINEERING SUPPORT City of Hoboken, Hoboken, NJ

Michael Baker provided On-Call Traffic Engineering services for the City of Hoboken in 2022 and 2023. Michael Baker conducted a Safe Speed Study aligned with Hoboken's Vision Zero goals. The work included an evaluation of speed limit reductions using NACTO guidelines, analyzing speed, volume, crash data, and existing conditions to recommend speed management strategies. Additionally, Michael Baker developed concept plans for the conversion of 16th Street to a two-way road and the implementation of a road diet for multi-modal safety improvements on Willow Avenue.

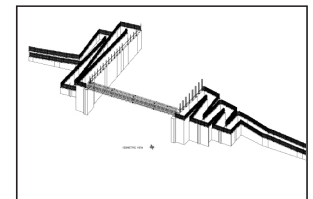
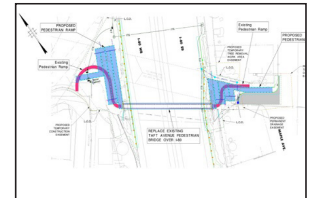


### SOMERS POINT BIKE PATH WIDENING & EXTENSION City of Somers Point, Atlantic County

The Somers Point Bike Path runs almost the entire length of the City of Somers Point as part of an 8.2-mile trail that begins from New Jersey Avenue to Ocean Heights Avenue and continues on through Linwood, Northfield, and Pleasantville. For this Local Aid Project Michael Baker provided preliminary engineering, final design and construction administration services to widen and extend the existing bike path. Other improvements included installing ornamental lighting in keeping with historical context of the path, upgrading light fixtures to LED, and ADA compatible curb ramps, landscaping, benches, fencing, bicycle racks, traffic signs, striping, waste stations. A Public Information Center was held for the local community to provide comments on the path improvements and obtaining community support.

### TAFT AVENUE PEDESTRIAN BRIDGE OVER ROUTE 80 Woodland Park, Passaic County, NJ

Michael Baker performed a concept development (CD) study, preliminary engineering, and final design for the replacement of the Taft Avenue Pedestrian Bridge over I-80. The project proposes to replace the pedestrian bridge to address its structural deficiencies and functionally obsolete condition. Both sides of the bridge connect to residential neighborhoods consisting of single-family homes. Within 1/2 mile of the bridge to the east is Berkeley College's Garret Mountain Campus, Diane Grimes Park, Alfred H. Bauman Free Public Library, and the Woodland Park municipal building. To the west is Windsor Academy, a K-9 school for special needs children, and a commercial corridor featuring pedestrian-oriented retail. Michael Baker utilized community profile to develop an appropriate Public Involvement Action Plan for the Taft Avenue Pedestrian Bridge CD Study. Understanding population, demographics, surrounding land uses, and transportation helped identify local stakeholders and determine/assess potential impacts to vulnerable populations. Michael Baker also coordinated site visits and public meetings with the Mayor, stakeholders, and general public.



### PARK AVENUE (CR 677), JFK BOULEVARD EAST/BOULEVARD EAST (CR 505 AND JFK BOULEVARD (CR 501) IMPROVEMENTS NJTPA/Hudson County, Hoboken, Weehawken, West New York, Guttenberg, North Bergen, Jersey City, NJ

Michael Baker performed conceptual through final design services along a five-mile corridor-wide roadway improvement project via NJTPA's Local Safety Program in Hoboken, Weehawken, West New York, Guttenberg, North Bergen, Jersey City. The design included improvements at 56 intersections incorporating multi-modal traffic calming measures to balance the competing needs of pedestrians, buses, bicycles, and automobiles. Geometric and streetscape improvements included curb extensions, bus stop turnouts, angled parking, pedestrian crossing refuges, and ADA-compliant curb ramps. The project included 33 new and upgraded traffic signals and related infrastructure as well as midblock HAWK beacons (High-Intensity Activated Crosswalk beacon) and Rectangular Rapid Flash Beacons (RRFB).

Michael Baker's Snehal Patel, with 36 years of diverse NJDOT experience, including roles as Assistant Commissioner and State Transportation Engineer, will provide Technical Guidance and Quality Control for projects in the Transportation Alternatives Set-Aside Program. Leveraging extensive expertise in Highway Design, Project/Program Management, and Construction Management, he ensures seamless coordination among Local Public Agencies, NJDOT, and key stakeholders, drawing on his deep understanding of Federal-aid Highway Programs, Grants, Regulations, and FHWA's Every Day Counts (EDC) initiatives. Patel's comprehensive knowledge of the NJDOT's Capital Project Delivery process enhances project oversight and communication.



Sylvester (Sly) Fryc, the proposed Project Manager, brings 35 years of experience in highway design and team management. With direct and relevant experience overseeing various roadway and highway projects of different scales, Sly has a proven track record in managing projects through both local and federal aid processes, including on-call agreements with NJDOT. His portfolio encompasses TE/TA improvements, such as pedestrian and bicycle facilities, ADA-compliant sidewalks, streetscaping, trail design, and more, showcasing his expertise in a wide range of transportation projects.



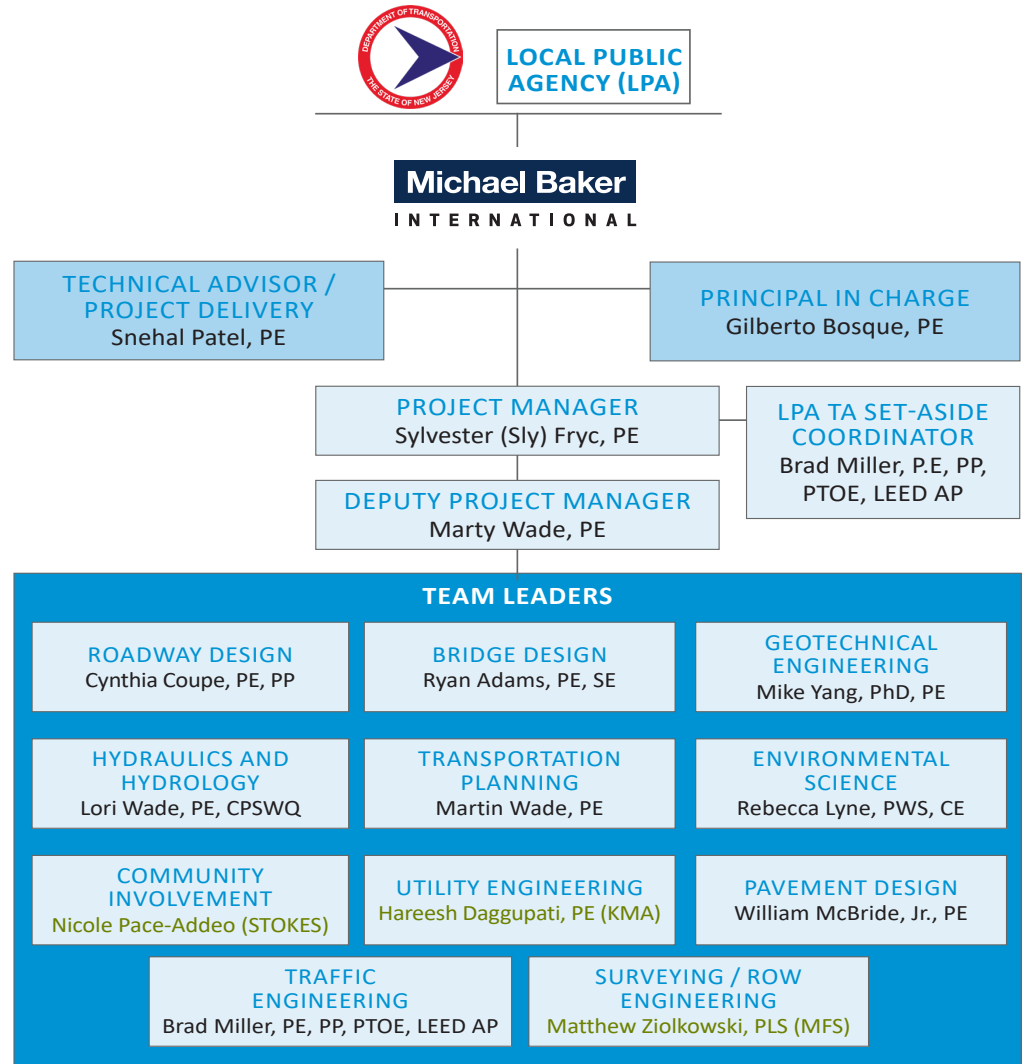
Brad Miller is a transportation professional with a passion for enhancing transportation safety, mobility, and equity for all road users. With over 19 years of experience in transportation planning and engineering, Brad has played a critical role in implementing FWHA proven safety counter measures for a variety of multi-modal safety improvement projects throughout New Jersey for various municipalities, counties, and local public agencies. Brad will be assisted by key transportation engineers and planners who also have completed federally funded TE/TA type projects for clients such as MPOs, multiple and county project sponsors and LPAs, as well as NJDOT and NJDOT-Local Aid.

With two decades of transportation engineering experience, Martin Wade has led numerous local concept development studies for Counties, Metropolitan Planning Organizations, and NJDOT. He manages tasks such as data collection, traffic and detour analysis, crash assessment, alternatives analysis, impact assessment, and construction cost analysis. Martin spearheads stakeholder coordination and public outreach to garner local municipality support, accelerating projects to Local Preliminary Engineering (LPE) by leveraging insights into local stakeholders' needs for expedited delivery of preliminary engineering and final design phases.



# MICHAEL BAKER INTERNATIONAL'S PROFESSIONAL TEAM

## TRANSPORTATION ALTERNATIVES SET-ASIDE DESIGN ASSISTANCE PROGRAM 2023



### Subconsultants

(MFS) MFS/GEOD Corporation (DBE )  
(KMA) KMA Consulting Engineers (DBE)  
(STOKES) Stokes Creative Group (DBE)

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