

IH ENGINEERS, P.C. - QUALIFICATIONS

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IH Engineers, P.C. (IH) has been providing quality consulting engineering services for over a decade. We are committed to being the first choice of our clients by providing quality, innovation, technical excellence and cost efficient, on-time performance for design, construction services and bridge inspection projects throughout the tri-state area.

Our team is comprised of over 100 civil engineers, traffic engineers, structural engineers, technicians, and inspectors trained in the most current standards for design and inspection that utilize current design practices and analytical software applications. Our team's expertise includes: **Civil engineering** such as **highway/roadway design, ADA Facility Design, Utility Relocations, Environmental Permitting, Hydraulic and Hydrological engineering** including stormwater and drainage design; **Traffic engineering** such as **traffic signal design, bicycle and pedestrian facility design, capacity analyses, transportation studies, and maintenance and protection of traffic design; Structural engineering** including bridge design, **culvert design, retaining wall design, and structural evaluation; Construction engineering** including constructability reviews, **construction management, field supervision, and contract administration; Community Outreach; and engineering cost estimating** for all project types.

IH provides quality consulting services tailored to the specific needs of each client. It is the goal of every team member to fulfill all contractual requirements **within budget, on schedule and without compromising function or quality.** We have developed a comprehensive Quality Management Plan which has been approved by the NJ Department of Transportation and ensures that our work product meets the specifications, applicable policies and guidelines provided by our clients. As a result, our firm enjoys a high percentage of repeat business from municipalities such as Bridgewater Township and Princeton; Counties such as Mercer, Monmouth, Somerset, Cape May, and Middlesex, and State agencies such as NJDOT, NJTA, SJTA, PANYNJ, DVRPC, and NJ Transit.

IH has successfully performed design and contract administration services, along with construction support services, for local municipalities on projects very similar in nature to the Safe Routes to School contracts. Based on our experience, we are confident in our ability to provide quality assistance to the municipalities and streamline the design and construction processes.

Services

CIVIL ENGINEERING

- Highway & Roadway Improvements
- Site Development
- Utility Coordination & Design
- Hydraulics & Hydrology
- Environmental Permitting
- Geometric & Grading / Drainage Improvements
- ADA compliance

TRAFFIC ENGINEERING

- Capacity Analysis & Traffic Impact Studies
- Traffic Signal Design
- Intersection & Signal Timing Improvements
- MPT
- Traffic Calming
- Warrant & Accident Analyses
- Traffic Simulation
- Signing & Striping
- Parking Analysis & Facilities
- Bicycle and Pedestrian facilities
- Data Collection

STRUCTURAL ENGINEERING

- Design of Bridges and Culverts
- Design of Underground Structures
- Design of Building Structures
- Design of Temporary Structures

CONSTRUCTION SERVICES

- Construction Inspection
- Construction Management
- Constructability Review
- Construction Scheduling
- Document Control
- Cost Estimating
- Claims Analysis & Avoidance
- Value Engineering

BRIDGE INSPECTION

- Condition Inspection of all types of bridges and culverts
- Load Ratings

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Members of our team are Certified Municipal Engineers, hold certificates in ADA Compliant Design, and are familiar with grant administration. We understand that time is of the essence to ensure project funding does not expire, therefore, we will work with each municipality to assist in the timely administration of all of the Federal and State processes and requirements to obtain all of the necessary permits and authorizations. We will utilize our experience and intimate knowledge of the Federal Aid Process and, along with the municipality, prepare a formal schedule to ensure Federal Authorization for the design and construction of these projects is obtained within 2 years of the grant notification date, as mandated by the terms of the Safe Routes Federal Aid Program.

The qualifications and experience of the **IH** team members who will be dedicated to these projects, clearly indicates our ability and proven success in the delivery of projects which require ADA facilities, utility relocation, environmental permitting, traffic signal design, traffic calming measures, bicycle and pedestrian facility design and coordination with FHWA, NJDOT and the public to ultimately construct and encourage the use of these safe routes. **IH** team members have over 25 years of experience implementing the Federal Aid process required of this pilot program. We understand that public outreach and community relations is critical to the success of these programs and projects. We will work to obtain support from local businesses and residents as required for approval of the environmental document. We will work diligently with the parents, crossing guards, students, local police and school administrators to encourage the use of these facilities. This design assistance program is outcome based and its success will enable the FHWA and the NJDOT to continue the advancement of the program by increasing funding, providing quicker approvals and enabling self-certification of critical processes which will streamline the design and construction authorization in the future. **IH** will utilize the information available through the Every Day Counts program, stewarded by the FHWA and AASHTO, incorporate Best Practices and underutilized innovations identified every two years as part of this program. We will incorporate standard design practices along with innovative approaches to create a customized design for each school route. Our goal is to optimize the safety and efficiency of the bicycle and pedestrian facility for each location in a cost effective, quality based approach. Our experience designing these facilities utilizing guidelines outlined in the MUTCD and the Complete Streets Manual will ensure this goal is achieved.

STAFF QUALIFICATIONS

For the purposes of the Design and Administration of this Safe Routes to School Design Assistance Program we are presenting the following individuals with experience in the selected services. These individuals are supported by the remainder of our team to ensure that all work is completed with **quality, efficiency, and within budget.**

JOHN W. KORUNOW, PE, CME; CIVIL DEPARTMENT MANAGER. Mr. Korunow will serve as *Project Manager for the Safe Routes to Schools Design Assistance Program*, having over 34 years of civil engineering experience specializing in transportation engineering services. His extensive experience includes a variety of transportation services such as the design, reconstruction and rehabilitation of interstates, freeways, pedestrian facilities, land service highways, toll facilities, traffic signal design, and design of unsignalized intersections. He has managed transportation projects of all sizes and scopes, many including pedestrian facilities, and has proven experience providing QA/QC for many projects involving tasks such as drainage and utility engineering, right of way and access design, MPT and Context Sensitive Design.

Mr. Korunow's relevant experience includes serving as **IH's** Project Manager for Middlesex County's Riverside Drive and Parkway Place Extension Intersection Improvements (Present), Middlesex County's

Modification & Upgrades to French Street and Paterson Street at Hospital Drive (Present), and for our **NJDOT 3 Year Statewide General Engineering Services Task Order Agreements (2010-Present) which includes projects statewide that involve ADA compliance, pedestrian facilities,** traffic studies, and civil engineering design. He has served as a Project Manager or Project Engineer for these types of contracts for the NJDOT for the last 20 years.

Mr. Korunow holds a B.S. in Civil Engineering from the NJ Institute of Technology. He is a registered Professional Engineer in NJ and PA, a **NJ Certified Municipal Engineer**, and holds a **Certificate in ADA Standards for Accessible Design.**

FRANK J. INVERSO, JR.; LOCAL AID COORDINATOR.

Mr. Inverso has over 36 years of experience in the preparation, implementation and management of Community Involvement Programs as well as intimate knowledge of the State, Federal and Local Aid funding

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authorization process. During 35 years with NJDOT, he has assisted in the coordination of NJDOT's Capital Program Development process as well as the administration of the funding acquisition process for numerous Design and Construction projects.

Mr. Inverso's relevant experience includes serving as Project Manager responsible for Community Involvement and Funding Authorization for **NJDOT's Statewide ADA Retrofit program (2001-2004)** as well as dozens of resurfacing and reconstruction projects involving ADA compliance, federal funding, and community involvement such as Route 40 from Elmer Lake to Elmwood Avenue, Route 47 from CR 690 to Howard Street, and Route 38 from Route 30/130 to Lenola Road.

Mr. Inverso holds a B.E. in Civil Engineering Technology from Thomas Edison State College. He is formally trained in the NJDOT Project Management Process and holds a **Certificate in ADA Standards for Accessible Design**.

DAVID C. BATTAGLIA, PE, CME, CFM; MUNICIPAL SERVICES MANAGER. Mr. Battaglia has over 22 years of diversified civil engineering experience in the municipal and transportation sectors. He has been the **appointed engineer of record (EOR)** and/or Board Engineer within various municipalities in Morris, Union, Essex, and Bergen Counties tasked with managing the design and construction of local roadway reconstruction and resurfacing projects, intersections, streetscape redevelopments, athletic facilities, **ADA compliant pedestrian facilities**, playgrounds, drainage improvements and evaluations, culvert replacements, and municipal facility construction and rehabilitation. **He has designed and administered roadway and sidewalk projects involving both Federal and State funding sources, and has been intricately involved in the public relations required to achieve stakeholder satisfaction.**

Mr. Battaglia's relevant experience includes serving as **IH's** Project Manager for **Bridgewater Township's Ascot Lane Roadway Improvement project (Present) which includes roadway paving, curb and sidewalk repair, extensions to the existing drainage system, and new ADA compliant pedestrian facilities.** Mr. Battaglia has also served as Project Manager for Main and Day/Main and Cleveland Signalized Intersections (2008-2009) in the City of Orange constructed with Essex County CDBG, NJDOT Local Aid, and Federal Urban Enterprise Zone funding.

Mr. Battaglia holds a B.E. in Civil Engineering from Stevens Institute of Technology. He is a registered Professional Engineer in NJ, a **NJ Certified Municipal Engineer**, and a nationally Certified Floodplain Manager.

DAVID X. CHIU, PE; UTILITY ENGINEERING MANAGER. Mr. Chiu has over 26 years of experience providing utility engineering services related to the design of major highways, roadway reconstruction and rehabilitation, transportation planning, traffic engineering, stormwater and drainage design. His expertise includes having provided services for traffic signal design, traffic analysis, traffic studies, intersection improvements, the preparation of MPT plans, hydraulic studies, hydrological engineering and environmental permitting applications.

Mr. Chiu's relevant experience includes serving as **IH's** Utility Task Leader for Middlesex County's Riverside Drive and Parkway Place Extension Intersection Improvements (Present), Modification & Upgrades to French Street and Paterson Street at Hospital Drive (Present), and for our **NJDOT 3 Year Statewide General Engineering Services Task Order Agreements (2010-Present) which includes projects statewide that involve ADA compliance, pedestrian facilities**, traffic studies, and civil engineering design.

Mr. Chiu holds a M.S. in Civil Engineering from the NJ Institute of Technology. He is a registered Professional Engineer in NY, NJ, and CT. He has Advanced Training in Civil Design and Traffic Analysis software and **holds a Certificate in ADA Standards for Accessible Design.**

BRIAN M. STANKUS, PE, PTOE; PROJECT ENGINEER - TRAFFIC. Mr. Stankus has over 22 years of experience in the areas of traffic signal design and signal timing, signing and striping plans, traffic engineering studies, intersection capacity analysis, traffic impact analysis, and traffic engineering reviews for development applications on behalf of land use boards in the State of New Jersey. He has the proven ability to create the appropriate tables, figures and illustrations to aid in interpretation of data and explanation of complex transportation issues for public sector clients and public testimony.

Mr. Stankus' relevant experience includes serving as the current **Consultant Traffic Engineer for the Municipality of Princeton and Cape May County for**

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IH, as well as serving as IH's Deputy Project Manager for Middlesex County's Riverside Drive and Parkway Place Extension Intersection Improvements (Present) and Modification & Upgrades to French Street and Paterson Street at Hospital Drive (Present).

Mr. Stankus holds a B.S. in Civil Engineering from Norwich University. He is a registered Professional Engineer in NJ and PA, a registered Professional Traffic Operations Engineer (PTOE), and **holds a Certificate in the Design of ADA Curb Ramps.**

MATTHEW A. BENSCOTER, PE; PROJECT ENGINEER – CIVIL. Mr. Benscoter has 18 years of extensive experience in both design and construction support on a range of small to large scale construction projects in both the public and private sectors. He has worked on design projects from concept development through preliminary design to the preparation of final design documents. He has great knowledge of the transportation design criteria and procedures.

Mr. Benscoter's relevant experience includes serving as IH's Civil Project Engineer for Middlesex County's Riverside Drive and Parkway Place Extension Intersection Improvements (Present), Modification & Upgrades to French Street and Paterson Street at Hospital Drive (Present), and for our **NJDOT 3 Year Statewide General Engineering Services Task Order Agreements (2010-Present) which includes projects statewide that involve ADA compliance, pedestrian facilities,** traffic studies, and civil engineering design.

Mr. Benscoter holds a B.S. in Civil Engineering and a B.S. in Architectural Engineering, both from Drexel

University. He is a registered Professional Engineer in NJ and PA, and **holds a Certificate in the Design of ADA Curb Ramps.**

P. NORMAN DEITCH; TRAFFIC ENGINEERING SPECIALIST. Mr. Deitch has 55 years of extensive experience as a traffic engineer, including nearly 40 years with the NJDOT Traffic Engineering Bureau in positions ranging from Assistant through Supervising Engineer and ultimately Bureau Manager. During his career he has been responsible for the development and accomplishment of traffic operations and engineering assignments for a variety of public and private sector clients. Typical assignments for state, county and municipal roadways include: speed and no passing zone analysis, traffic signal design, timing and coordination, development of highway signage and pavement marking concepts, ADA compliance, and overall highway safety and capacity improvements.

Mr. Deitch's relevant experience includes serving as IH's QA/QC Traffic Engineer for Middlesex County's Riverside Drive and Parkway Place Extension Intersection Improvements (Present), Modification & Upgrades to French Street and Paterson Street at Hospital Drive (Present), and for our **NJDOT 3 Year Statewide General Engineering Services Task Order Agreements (2010-Present) which includes projects statewide that involve ADA compliance, pedestrian facilities,** traffic studies, and civil engineering design.

Mr. Deitch holds a B.A. in Geology from Rutgers University, and is a member of the New Jersey County and Municipal Traffic Engineers Association.

RELEVANT PROJECTS

ASCOT LANE ROADWAY IMPROVEMENTS

Township of Bridgewater, Somerset County, NJ

IH Engineers, P.C., serving as prime consultant to Bridgewater Township, is providing engineering services for the development of contract plans and specifications for the resurfacing, base repairs, curb repairs, sidewalk repairs, installation of ADA compliant pedestrian ramps, and extension/upgrade of the existing undersized drainage systems. Civil design services include the roadway design for reprofiling, detour design, and design of ADA compliant ramps intersecting both County and Municipal roadways. IH is also responsible for construction management services and community involvement. The project is in construction closeout. *The project photo shows one of the newly installed ADA ramps immediately adjacent to a reconstructed drainage inlet. This location previously had a non-ADA compliant ramp with a ponding issue.*



The roadway is used as a "cut-through" to avoid a signalized intersection at two County roadways. It lacked ADA

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compliant ramps at its intersection with one County roadway that had an angled profile making ADA compliance challenging, and at its other intersection with a residential roadway. The existing sidewalks were in disrepair, and the roadway had an icing condition due to high groundwater and poor drainage facilities. All pavement markings installed under this project were in conformance with NJDOT Specifications, NJDEP Stormwater Regulations, **ADA Standards for Accessible Design**, and the **Manual on Uniform Traffic Control Devices (MUTCD)**.



ROUTE 46 / CANFIELD AVENUE CONCEPT DEVELOPMENT

Township of Mine Hill, Morris County, NJ

IH Engineers, P.C., serving as prime consultant to NJDOT, conducted a Concept Development Study at this intersection. As part of our evaluation, **IH** conducted existing traffic volume data collection, reviewed the crash history, and evaluated the existing physical and operational characteristics such as **ADA compliance** and access at the intersection with Canfield Avenue and at two adjacent intersections. In order to address the crash history, **ADA compliance**, site access in close proximity to the intersection, and queuing delays, **IH** developed three (3) potential intersection improvement concepts and prepared a Concept Development Report documenting our review and evaluation of the benefits of

each. This review included the use of the Synchro/SimTraffic software package to review existing and projected future traffic flow characteristics on Route 46. *The project photo shows the view of the Route 46 intersection looking east across Canfield Avenue with no ADA compliant ramps or sidewalk despite having a painted crosswalk. Additionally, there is no sidewalk on the east side of Canfield for the first 160 feet south of the intersection, then there is sidewalk the remainder of the distance to Canfield Elementary School.*

IH also participated in coordination with the Public Officials and Emergency Services in the preparation of the study plans, documents and calculations for this assignment. **ADA compliance** at the intersection of Route 46 and Canfield Avenue was held the highest priority for Mine Hill Township since the current pedestrian access was incomplete crossing Route 46. The intersection lacked ADA curb ramps and pedestrian signalization and sidewalks needed to be added to connect to the Canfield Avenue Elementary School (1 block south) and to the bus stop for the Middle School and High School (1 block east). To this end, all three (3) concepts provided full compliance with **ADA Standards for Accessible Design**.

WARREN AVENUE (CR 47) AND OLD MILL ROAD INTERSECTION

Borough of Spring Lake Heights, Monmouth County, NJ

IH Engineers, P.C. is serving as prime consultant to Monmouth County for this project. The scope of work has included conducting a traffic signal warrant analysis. Based on the results of that analysis, **IH** has recommended the installation of a traffic signal and ADA compliant curb ramps. Design tasks have included the development of three geometric/operational intersection improvement concepts, and coordination with the County to select one to advance to final design; and development of a full plan set for the construction of proposed improvements, **including a**



semi-actuated traffic signal installation with ADA compliant curb cut ramps; minor roadway widening and regrading, stormwater improvements and upgraded signing and striping. *The project photo shows the existing intersection with supplementary signage to ensure pedestrian safety on this busy roadway. Note the lack of ADA compliant ramps.*

IH has worked with the County and our survey subconsultant to develop parcel maps and descriptions for use in securing required fee takings and easements, and has also coordinated with numerous utility companies in order to conduct test pit investigations and secure agreements for the required relocation of utility poles/lines as well as underground utilities. As part of this project, **IH** has coordinated closely with County and municipal staff, and has complied with the County's requests for an accelerated schedule. Construction is anticipated in the Spring of 2016.

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TRAFFIC ENGINEERING SERVICES FOR WEST AVENUE (CR 619)

City of Ocean City, Cape May County, NJ

IH Engineers, P.C., serving as prime consultant to Cape May County, prepared detailed signing and striping plans and engineer's estimates for the **"Road Diet"** restriping of the County-maintained portion of West Avenue between 34th and 55th Streets in Ocean City, Cape May County, NJ. Ocean City sees very heavy recreational bicycle traffic of all experience levels especially during the peak summer season. West Avenue is a 70-foot wide roadway which previously provided four travel lanes (two in each direction), two bicycle lanes and two parking lanes. Under the **"Road Diet"**, West Avenue was reduced to one through lane in each direction with left turn lanes at intersections, and wider bicycle lanes with striped buffers on each side to provide additional protection for cyclists. The reduction in the number of through travel lanes from two to one per direction also acts as a "traffic calming" improvement because faster vehicles can no longer overtake slower vehicles. *The project photo shows the reduction of travel lanes and new bike lane, with on-street parking preserved based on community input.*



The improvement also represents an increase in pedestrian safety by reducing the length of crosswalks and the pedestrians' exposure to moving vehicular traffic, as well as providing a median pedestrian refuge in some locations. All pavement marking and signage improvements installed under this project were in conformance with the **Manual on Uniform Traffic Control Devices (MUTCD)**. Adjoining sections of West Avenue which are under the jurisdiction of Ocean City will receive similar improvements designed by **IH** under a separate contract directly with Ocean City.

This **"complete streets"** improvement was completed in the Spring of 2015. As an outgrowth of that project, **IH** is currently preparing updated traffic signal layout and electrical plans for improvements to the five traffic signals within the restriped area to better address the reconfigured travel lanes and ADA compliance under our separate contract as **Traffic Engineering Consultant for Cape May County**.



ROUTE 31 ROADWAY RESURFACING, FLEMINGTON CIRCLE TO PAYNE ROAD

Flemington Borough, Raritan Township, Readington Township & Clinton Township, Hunterdon County, NJ

IH Engineers, P.C., serving as prime consultant to NJDOT, provided conceptual design for pedestrian facilities including the reconstruction of existing curb ramps to achieve compliance with **ADA Standards for Accessible Design** at signalized intersections, un-signalized side streets and driveways and sidewalk connectivity throughout the corridor. Based on field observations and consultation with NJDOT's Bureau of Traffic Signal and Safety Engineering, traffic signal work was limited to the repositioning/replacement of existing Pedestrian signal heads,

Pedestrian Push buttons and the replacement and/or addition of Pedestrian Push button Signs at the signalized intersections at Church Street, Highland Avenue/Hunterdon High School, Walter E. Foran Boulevard, Stanton Station Road and Old Clinton Road. **IH** also provided conceptual design improvements including pavement repair/resurfacing, drainage and guide rail. *The project photo shows an intersection where non-ADA compliant ramps had been installed previously with no sidewalk connectivity. In addition to the lack of connectivity, the grade of the ramps appears to have been improperly constructed and prone to collecting rain water.*