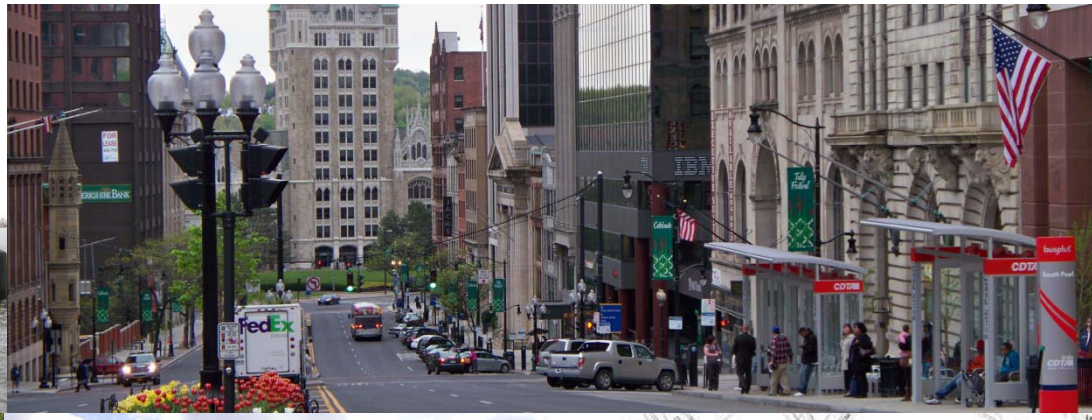
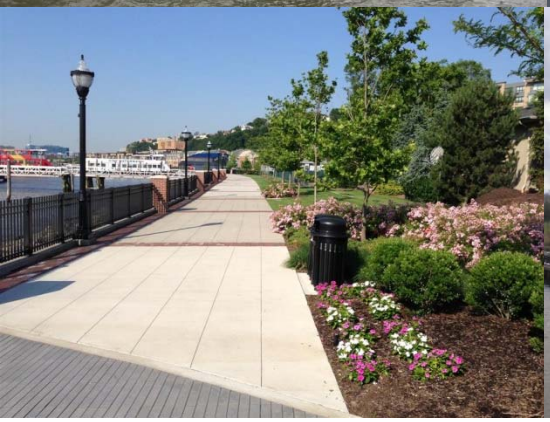
Update of the Village of Nyack Comprehensive Plan; Climate Smart Planning for the 21st Century

Project Identification #CGC42087





McLaren ENGINEERING GROUP

bridge, highway & rail engineering
entertainment engineering
subaqueous investigation
civil & site engineering
structural design
marine facilities
geotechnics
surveying
forensics

May 15, 2015

Village of Nyack
9 North Broadway
Nyack, NY 10960
Attn: Mr. James Politi, Village Administrator

Re: Update of the Village of Nyack Comprehensive Plan; Climate Smart Planning for the 21st Century (Project Identification #CGC42087); MEG# 150433

M.G. McLaren P.C. (McLaren) is pleased to submit five (5) copies and one (1) CD, of our qualifications to provide engineering consulting services for the subject project. Based on our unique experience and qualifications, we strongly believe that we are ideally suited to provide the highest level of services to the Village of Nyack; hereinafter referred to as the "Village."

McLaren is eager to meet or exceed your needs, preferences and requirements on this project based on, but not limited to, the following key attributes:

- **Full-Service Engineering and Planning...**McLaren's Planning Practice provides a comprehensive list of services ranging from Needs Analyses to the creation of complete Comprehensive Land Use Plans and Zoning Laws. Our approach to planning integrates low impact development techniques with sustainable practices to ensure negative environmental impacts have been adequately mitigated. McLaren's expertise from our eight (8) technical divisions (Site/Civil, Survey, Structural, Marine, Waterborne Transportation, Bridge/Highway/Rail, Forensics, Entertainment) makes it is easy to move a project from planning and sustainable solutions to sound design, engineering, and construction.
- **Sustainable Design...**We seek to fully integrate sustainable design thinking into the design process from the early stage, working closely with clients and engineers so that green technologies and best practices inform the unique spatial resolution of every design problem.
- **Streetscapes**...Our team is very experienced in improving streetscape elements to better accommodate bicycle, pedestrian, and vehicular traffic for various communities. This experience includes Battery Park Perimeter Bikeway, Kent Avenue Build-Out, and Willets Point Bicycle and Pedestrian Master Plan, to name a few.
- **Waterborne Transportation Design Expertise/Awards...**As a premier engineering consultant to the Waterborne Transportation Industry, McLaren has planned, designed and provided oversight of construction for over 50 terminals and related facilities nationwide throughout our 38-year history. In 2008, three (3) McLaren Ferry Terminal Designs in the NY Metropolitan Area received design awards: Port Imperial Terminal; Battery Park City Ferry Terminal; and Hoboken Ferry Terminal.
- **Parking Garage Experience...**McLaren has worked on the design of numerous parking facilities. Ranging from small structures to structures made for 4,400 cars. Projects include Parking Garage Design at 164 Kent Avenue, Brooklyn, NY; Birchwood Manor Parking Garage, Whippany, NJ; DPW Garage Addition, Mamaroneck, NY; and MBIA – Parking Garage Assessment, Armonk, NY.
- **Close Proximity...**Headquartered in West Nyack, NY, McLaren is intimately familiar with the Village. We have worked on several projects with the Village including the Underground

Offices: New York, Maryland, Florida, Connecticut, California

Licensed in:
Alabama •Arizona • Arkansas • California • Colorado • Connecticut • Delaware • District of Columbia • Florida • Georgia • Hawaii • Idaho • Illinois Indiana •Kansas • Kentucky • Louisiana • Maine• Maryland • Massachusetts • Michigan • Minnesota• Mississippi • Missouri • Nebraska • Nevada New Hampshire • New Jersey • New Mexico • New York • North Carolina • Ohio • Oklahoma • Oregon • Pennsylvania • Rhode Island South Carolina • Tennessee • Texas • Trinidad & Tobago • Utah • USVI • Vermont • Virginia • Washington • West Virginia • Wisconsin • Wyoming

M.G. McLaren P.C.
100 Snake Hill Road
West Nyack, NY 10994
Phone (845) 353-6400
Fax (845) 353-6509
e-mail: mgmclaren@mgmclaren.com
On the web: www.mgmclaren.com

Inspection of a Culvert, 55 Catherine Street Drainage, Superblock Main Street, and Nyack Marina.

- **Proven Synergy with McLaren Team Members...**McLaren has worked successfully with our proposed subconsultant, **Vanasse Hangen Brustlin, Inc.,** on several projects.
  - Transportation Experience**...**VHB provides transportation planning services for a wide variety of private and public sector clients in both urban and suburban areas. Projects include identifying multimodal transportation issues associated with various types of transportation projects such as alternative modes analyses; multimodal access; congestion analyses; corridor studies; vehicular/pedestrian conflict studies; transportation impact assessments; and downtown/village parking, circulation, and access studies.
  - Sustainable Design...VHB is a leader and innovator in the sustainable planning and design of environmental, transportation, and infrastructure systems. Recently they developed an Energy Master Plan for the City of Albany; played a major role in developing the New York Rising Community Reconstruction Plan for Broome County; and developed a greenhouse gas emissions inventory and a climate action plan for Schenectady County.
  - Award Winning Projects...VHB is a recipient of the American Trails Corporate Award for demonstrating significant, sustained, and exemplary service to trail design, planning, and implementation, and a recipient of the East Coast Greenway Alliance's Corporate Friend of the Year Award.
- **"APPLIED INGENUITY"...**The motto, goal and indeed, mantra at McLaren is "Applied Ingenuity." It is our intent to be ever improving- exploring new solutions to old problems and constantly striving to serve our clients better. We will never rest on our accomplishments nor will we be satisfied with what we did yesterday. Ours is a determination to perform better than we did on the last project.

McLaren strongly believes that our qualifications and corporate depth meet your requirements and will provide the Village with technically sound, and cost efficient design solutions. We look forward to providing our services on this project and further developing our professional relationship with you. Please do not hesitate to contact me at (845) 353-6400 or wmccarthy@mgmclaren.com, if you have any questions or require any additional information.

Very truly yours,

The Office of
M.G. McLaren, P.C.

William J. McCarthy, III
Director of Business Development

Enclosures
cc: File 150433, WJM

P:\Proj150\150433\1_Proposal Tech Info\Response\Working Documents_Cover Letter.doc

TABLE OF CONTENTS

SECTION A.
Statement of Qualifications

Set forth in this section you will find the following information:

I. McLaren Engineering Group Overview

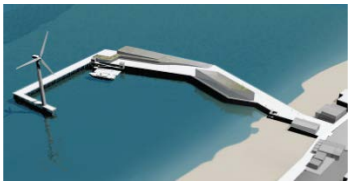
II. Our Team

III. Project Experience

I. MCLAREN ENGINEERING GROUP OVERVIEW

Founded in 1977, **M.G. McLaren, P.C. (McLaren)** has a 38-year history of providing multidiscipline consulting engineering services to clients worldwide. Headquartered in West Nyack, NY and with offices in New York, NY; Orlando, FL; Baltimore, MD; Middletown, CT; and San Francisco, CA; McLaren provides premier professional engineering services through eight (8) technical divisions:

Marine…*provides underwater inspection and condition assessment services, coastal engineering expertise, marine design, and construction management of all types of marine structures; including piers, wharves, marinas, bulkheads, quay walls, terminals, rip rap, dry docks, and bridges. In New York Harbor alone, our inspection P.E. divers have inspected over 2 million piles over the last decade.*



Waterborne Transportation…*offers design, permitting, and construction administration services for all types of waterside landings and terminals and their upland facilities/infrastructure. In the Northeast, McLaren has designed over 50 ferry terminal facilities with associated upland infrastructure.*

Site/Civil*… complete design and construction management services for all types of civil and site development projects. Including drainage, grading, geotechnical services, utilities design, erosion control, stormwater management, zoning assistance, and slope stability analysis; for large-scale mixed-use developments, parks, and waterfront facilities.*

Survey…*plays a central role in the planning of any type of site or structure. In its various forms, surveying determines distance and elevations, identifies angles and directions, and establishes boundaries. McLaren's multiple, fully equipped survey crews have experience with commercial and residential applications, municipal facilities, and highway and rail facilities.*

Structural*…expertise encompasses all aspects of structural inspection, design and construction, including curtain wall design. McLaren has worked on over 4,000 building structures of varying degrees of complexity, including high-rise buildings, intermodal terminals, parking structures, airport facilities, laboratories, historic structures, maintenance facilities, and performing arts centers.*

Bridge, Highway, Rail…*offers full bridge, roadway and rail design, bridge inspection/condition assessments, and construction management services. Clients include many state and city DOTs and transit industry giants, such as the New York City Metropolitan Transportation Authority.*

Forensics…*responds to calls for expert witness testimony and provides forensics analysis of failed structures. Recent examples have included the I-40 Bridge collapse in Oklahoma, the Queen Isabella Causeway in Texas, and a super grid collapse in the Atlantic City Convention Center.*

Entertainment…*at the forefront of the design of scenic and entertainment structures, staging, rigging, and show action equipment. Recent projects include stage sets for the Rolling Stones, U2, Black Eyed Peas, Lady Gaga, Katy Perry, Metallica, and Madonna tours; as well as the renowned Cirque du Soleil.*

Our 150 person staff includes skilled civil, geotechnical, structural, marine, and mechanical engineers, P.E. licensed underwater inspectors, construction management specialists, specification writers and CAD designers experienced in the latest computer-aided design equipment and software. McLaren's success in providing timely, innovative, and cost effective solutions has led to steady growth in the size of our divisions. Total McLaren staff forces available to perform work includes the following disciplines:

16	Administrative/ITS Specialists	2	Landscape Architects
10	Bridge Inspectors	3	Planners
18	Civil Engineers	10	Marine Engineers
9	Construction Inspectors	6	Mechanical Engineers
12	CAD/Drafting Personnel	19	P.E./Certified Divers
4	Geotechnical	27	Structural Engineers
6	Highway Designer/Engineer	8	Surveyors

Clients. We have an excellent history of inspection, engineering and design experience working for both public and private entities. McLaren is currently providing or has recently provided structural engineering services for clients such as the Port Authority of New York and New Jersey, New York City Department of Transportation, New York City Economic Development Corporation, New York City Department of Corrections, New York State Department of Transportation, the Baltimore Center for the Performing Arts, Olympia & York, Carnival Cruise Corporation, U.S. Gypsum, Roseland Contractors, LLC., R&D Development, Turner Construction, Consolidated Edison Company, PSE&G, and the U.S. Navy.

For more information, please visit our website, www.mgmclaren.com, which also contains a downloadable version of our corporate brochure. If you prefer, you can contact us directly as follows:

Mr. Malcolm G. McLaren, P.E., SECB – President and CEO (845) 353-6400 ext. 3328
Mr. William J. McCarthy III – Vice President – Business Development (845) 353-6400 ext. 3354
Email: wmccarthy@mgmclaren.com (845) 353-6509 Fax
M.G. McLaren P.C.
100 Snake Hill Road, West Nyack, NY 10994
EIN#: 13-3172836
Legal Status: Corporation

Our services include feasibility studies; project management; all phases of design (from conceptual to final); preparation of specifications and cost estimates; value engineering; constructibility reviews; and construction services including: shop drawing review, field inspection/supervision, contract administration, CPM scheduling, and as-built drawing preparation.

MARINE ENGINEERING AND WATERFRONT DEVELOPMENT

McLaren distinguishes itself as one of the nation's leading experts in the underwater inspection, assessment, design and construction inspection of waterfront structures. As a recognized leader in the waterfront facilities development industry, McLaren has provided design, engineering, and inspection services for many of these type projects nationwide. Waterfront/shoreline development projects are particularly geared for McLaren as we can cover many of the work elements and aspects of a project with our multidiscipline services.

Brooklyn Navy Yard – Waterfront Rehabilitation Master Plan

Our depth of experience and expertise encompass all aspects of marine design and construction, including:

- Application of Advanced Materials
- Breakwaters/Riprap
- Bulkheads, Relieving Platforms, Quay Walls – rehabilitation / new construction
- Cathodic Protection – investigation / design
- Crane/Crane Rails and Off-Loading Machinery and Equipment
- Dredging
- Dry Docks
- Effects of Water Chemistry on Materials
- Fendering and Berthing Energy Absorption
- Floating Structures (terminals & piers)
- Gangways/ADA Compliance
- Geotechnical Studies and Design
- Launches (Kayak and Crew)
- Marina Designs/Studies/Permitting
- Marine Borer Studies and Remediation, Infestation and Appropriate Mitigation
- Marine Terminal Operations Analysis
- Multi-modal Facilities
- Navigation Aids
- Permitting
- Pier Design – rehabilitation / new construction
- Port and Marine Terminal Planning and Development
- Recreational Marinas for Pleasure Craft
- Relieving Platforms
- RO-RO Facilities
- Seismic Design
- Terminals – berthing, loading and conveying systems
- Tidal Influences
- Timber structure design and repairs
- Underwater Engineering Inspections
- Wharves

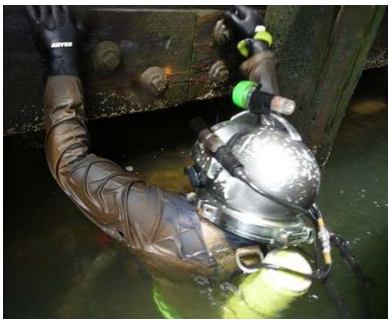
McLaren's professional staff includes specialists in coastal engineering, who are expert in wave analysis, wave attenuation, sediment transport, environmental loading, and structural coastal interaction. McLaren provides waterfront facility master planning, development/design, and design-build RFP document preparation services. Port terminals and marine layout planning, dry bulk handing/conveying, container terminal feasibility studies/design, TEU loading/unloading analyses, RO-RO and LO-LO planning/design, liquid bulk transshipment planning and design, cruise ship terminal design, all are within the realm of expertise offered by McLaren's Marine Division.

Wave Analysis Design

Through our extensive experience in this rather specialized field, we can offer expertise in: cost estimating, life cycle analysis, and construction supervision. Our underwater inspection capabilities provide assurance that construction is carried out in conformance with plans.

SUBAQUEOUS MARINE INSPECTION SERVICES

McLaren has extensive experience in underwater inspection and structural assessment, varying in type from quay walls and piers to bridge foundations and dams. Much of our underwater work has been performed along the Eastern seaboard, which provides probably the greatest variation of diving media in the nation. As only one example, McLaren has successfully performed the underwater investigation, design, and construction inspection of waterfront structures; comprising of approximately 75 percent of the perimeter of Manhattan, within the last decade. McLaren's New York Waterfront experience can be summarized as follows:



Underwater Structural Assessment

- Number of Piles Inspected: 2,000,000
- Number of Substructure Units: Over 10,000
- Length Of Waterfront Inspected: 200 miles
- No. of Facilities Upgraded, Repaired or Replaced: Over 450
- Value of Construction: $3 Billion

The many varied underwater inspections performed by our dive crews have provided us with a tremendous database for the effects of water chemistry and flow on the life of various marine construction types and materials. Through these projects McLaren has become proficient in many specialized engineering concepts, such as:

- Marine Borer and Zebra Mussel Identification
- Effects of Current Velocity on Scour
- Cathodic Protection – both Galvanic and Impressed
- Measurement of Water Resistivity and Stray Current
- Low Visibility Diving (Tactile Investigations)
- Cold Weather Diving
- Underwater Videography and Photography
- Ultrasonic Testing
- Various Cleaning Methods – Pneumatic Brush, Hand Scraper, Water Blaster
- Statistical Relevance of Representative Sampling
- Structural Analysis/Design of Structural Repairs/Construction Inspection
- Comprehensive Report Preparations and Surveys

McLaren P.E. Diver Cold Weather Diving

WATERBORNE TRANSPORTATION DESIGN SERVICES

McLaren's involvement with the ferry transport industry began in the early 1980s when we were asked to provide engineering support and consultation for the temporary floating ferry terminal at Battery Park City in lower Manhattan. That work has led to the design of more than 50 ferry landings in the Northeast, and we are now working on the second generation of terminals, which comprise some very significant structures. Our history of experience includes work for port authorities, economic development entities, state departments of transportation, and private ferry operators.

Battery Park City Ferry Terminal

McLaren's Waterborne Transportation expertise lies within Ferry Terminals in oceans and rivers, marinas, and navy architecture. As part of our work for the development of ferry terminals and landing sites, we have found several key issues germane to the development of:

- Definition of Design Parameters
- ABS Design of Barges, Ramps, and Lift Systems
- Fendering
- Vehicle/Passenger Movement and Throughout
- Anchorage
- Permit Acquisition
- Low Maintenance Solutions/Sustainable Design
- Community Outreach/Participation
- Condition Assessment
- Passenger Amenities
- Safety
- Flexibility of Design for Future Uses
- ADA Compliance
- Design of Floating Structures
- Maintenance / Life Cycle Considerations
- Building Code Compliance
- Gangways

McLaren works with all of these key issues, and finds solutions working with:

- Range of Motion
- Berthing Analysis
- Environmental Modeling
- Gangways
- Hydrodynamic Modeling
- Mooring Analysis

ENVIRONMENTAL PERMITTING

McLaren has successfully prepared the environmental permit applications and guided clients through the maze of waterfront-related permits and approvals for large municipal projects. McLaren's suggestions for innovative project alternatives have greatly reduced the potential for impacts to aquatic biota and the estuarine habitats, thereby allowing the project to be successfully permitted within a relatively short time frame. Furthermore, by eliminating certain impact issues, the need for extensive fieldwork is greatly reduced.

McLaren is intimately familiar with the process and issues that must be addressed in permitting waterfront projects. Because agency review of permit applications can be a lengthy process, McLaren strives to:

- Design projects in a way that minimizes potential problems during the review period to the extent practicable
- Get review agency approval of overall project approach and concept as early as possible
- Develop project construction schedules (including those for producing construction drawings) that recognize the uncertainties regarding the timing of permit issuance

SITE AND CIVIL ENGINEERING SERVICES

McLaren's site/civil division provides comprehensive engineering services ranging from the planning stage through final design and construction management for all types of facilities. We have specific in-depth expertise in large site development projects and transportation facilities.

Transmitter Park Lawn Photo
Property of: Daniel Avila/NYC Dept. of Parks and Recreation

Our recent large-scale site development experience includes: The Club at Briarcliff Manor Senior Housing will be a 9,385 unit continuing care retirement community with 385 units on a 5 acre campus; the General Electric Training Center in Ossining, NY, which includes a new residential building, maintenance building, classroom addition, and renovations on the 52 acre campus; the Maxwell House site development which features 1.4 million square feet of residential and commercial space and a

waterfront park, esplanade, and marina; the Port Imperial development which consists of 6,500 residential units and approximately 2 million square feet of commercial space, including office, retail and a full service hotel; the 5.5 acre River Barge Park, which was a former marina site, located along the western bank of the Hackensack River, in Carlstadt, NJ; and the Wartburg Adult Care Community in Mount Vernon, NY, for construction of a skilled nursing facility and adult day care center for uses currently on the campus, this included construction of a new supportive senior housing building to provide shelter for seniors at affordable rents, the demolition of two (2) structures, and reconfiguration of associated parking.

Our site services include:

- Feasibility Studies
- Local & Regional Planning Studies
- Site Planning & Layout
- Geotechnical Services
- Flood Plain Impact
- Utilities Design
- Subdivision and Land Development
- Demolition & Removal of Existing Structures
- Erosion Control
- Drainage Studies, Design & Hydrology
- Highway Design
- Street & Parking Design
- Transportation System Impacts
- Design of Deep and Shallow Foundation Systems
- Stormwater Management
- Potential Traffic, Noise, and Air Quality Impacts
- Retaining Wall Design
- Earthwork
- Landfill Design
- Landscaping
- Zoning Assistance
- Environmental Permitting
- Public Participation/Meeting Assistance
- Construction Plans and Specifications
- Construction Inspection Services
- Construction Support Services
- Maintenance and Protection of Traffic
- Slope Stability Analysis

McLaren engineers in our site/civil division employ state-of-the-art software, including: Autodesk Civil 3D 2013, Hydraflow Hydropraphs (extension for AutoCAD Civil 3D 2013), HEC-RAS 4:1:0, Hypack 2012, Watercad V8, Hydraflow Storm Sewers 2013, and WinTR-55 Small Watershed Hydrology.

Geotechnics. Developable land has become less abundant over the past decade as restrictions have increased. Marginal sites have now become viable ones; however, they are often associated with difficult ground. The geotechnical challenges offered by these sites require creative engineering skills and technical expertise. Whether the solution is piling, dynamic compaction, or other means of ground modification, McLaren can assess and recommend the appropriate method. We have stabilized old buildings, underpinned and lifted others, and have designed foundations for hundreds of structures. We have in-depth expertise in providing economical foundation design for clients. McLaren explores all feasible alternatives in geotechnical design, such as reusing existing piles to provide cost effective solutions. We examine the most economical solutions to determine if they will meet the long terms needs of the project.

Maxwell House Site Development

Geotechnical services offered by McLaren include:

- Subsurface Investigations
- Soil Strength Parameter
- Underpinning Design
- Foundation Design
- Retaining Walls
- Seismic Analysis
- Ground Improvement

SURVEY CAPABILITIES

Surveying plays a central role in the planning of any type of site or structure. In its various forms, surveying determines distance and elevations, identifies angles and directions, and establishes boundaries. To engineers, the information obtained in a survey is both useful and necessary; the data enable them to not only develop a proper design solution, but to perform a design at all.

Our surveying division adds a significant piece to our diverse engineering puzzle by delivering the most accurate data in the industry.

Our surveying division, therefore, adds a significant piece to our diverse engineering puzzle by delivering the most accurate data in the industry, ascertaining site information needed to execute different types of projects. In fact, our surveyors perform standard control, topographic, hydrographic and cadastral surveys, a range of expertise that takes our firm's self-sufficiency to the next level.

Our multiple, fully equipped survey crews have experience with commercial and residential applications, municipal facilities, and highway and rail facilities. They often work in conjunction with our Site/Civil Division in site development projects, while their hydrographic surveying balances our Marine Division's underwater inspection services.

McLaren's extensive experience portfolio includes surveying and mapping. Our Surveying and Mapping Services Include but are not limited to the following:

- ALTA/ASCM Title Surveys
- As-Built Surveys
- Boundary Surveys
- Construction Stake-Out
- Control Surveys
- Easement Preparation
- Est. of Monument and Benchmarks
- Expert Witness
- Facility Surveys
- FEMA Elevation Certificates
- GPS Control
- Hydrographic Surveys
- Land Ownership Dispute Resolution
- Preliminary/Final Plats
- Route Surveys
- ROW Mapping
- Site Plans
- Structure Movement Monitoring
- Subdivisions/Zoning
- Topographic Surveys
- Utility Surveys

State of the Art Equipment

Surveying Equipment. McLaren has the capability to provide three (3) fully equipped survey crews with equipment at any given time. Specifically:

- Each crew is equipped with a GTS-243-NW 3″ Total Station and TDS Recon Data Collector or Spectra nomad.
- Post-processing of survey data is accomplished with Carlson Survey 2014
- Maps are produced with Carlson Survey 2014, AutoCAD 2013 or AutoCAD Civil 3D 2013

McLaren also owns state of the art survey, GPS, and hydrographic equipment that includes:

- Topcon R-8 Real Time Kinematic (RTK) GPS System
- Trimble 5603 3″ Robotic Total Station
- Topcon DL-102C Digital Level
- GPS Control Survey: Trimble RTK GPS for establishing geodetic control

Hydrographic Surveys. Routine hydrographic surveys are conducted using the Portable Seafloor Hydrolite System which includes Sonarmite BT Echo Sounder (for water depth) linked to a Trimble R-8 RTK GPS data logger (for location on the planet) using industry-standard Hypack Max Software supported by an ODOM Digibar Pro Velocity Calibrator (to tell us the speed of sound in water) and a Valeport Model 740 Tide Gauge (to monitor the varying water elevation). The data is then related to the

appropriate datum to assure that the underwater information seamlessly integrates with the above water land data. Survey planning, execution and post-processing are accomplished using Hypack Max Software.

STRUCTURAL DESIGN AND INSPECTION SERVICES
(BUILDINGS AND SPECIALTY STRUCTURES)

McLaren's depth of experience and expertise encompass all aspects of structural design, inspection and construction services. The firm has provided structural inspection, design and engineering services for thousands of projects in the New York Metropolitan area, nationwide and worldwide.

McLaren has in-depth knowledge of all types of structures, including:

- Airport Facilities
- Casinos
- Churches
- Commercial Buildings
- Cultural Buildings
- Damping Systems
- Educational Facilities
- Entertainment Venues
- Healthcare Facilities
- High-Rise Buildings
- Historic Structures
- Hospitality Buildings
- Industrial and Residential Structures
- Laboratories
- Maintenance Facilities
- Mixed-Use Buildings
- Municipal Buildings
- Parking Structures (Underground and Above Ground)
- Recreational Developments
- Retail Facilities
- Transportation Facilities
- Waterfront and Marine Structures

Our experience can be broken down into the following seven (7) categories:

New Building Construction

McLaren has successfully completed projects constructed of steel, reinforced and post-tensioned concrete, masonry, timber, stainless steel and aluminum. We have an in-depth knowledge of all current standards and codes throught the country and abroad, as well as, many historic codes which often govern. Key issues that our structural engineers address in structural design projects include:

Tanger Outlets at Foxwoods Casino

- Evaluation and Selection of Alternate Structural Systems.
- Optimal Foundation Systems determined with our in-house geotechnical division.
- Structural System Design Using State-of-the-Art Software -- SAP, ETABS, SAFE, RAM, RISA 3D, ANSYS, SJ MEPLA and custom in-house software.
- Knowledge of the Latest Codes and Local Requirements.
- Blast Resistant Design Using Non-Linear Dynamic Analysis.
- Rapid Response During Design and Construction Phases.

Renovations and Additions to Existing Construction

In addition to professional design services for new projects, McLaren has diverse experience in dealing with the complexities associated with the evaluation and analysis of existing structures and historic structures. Our experience includes forensic engineering analysis, structural analysis of existing and older buildings for renovation/repair and adaptive reuse, and evaluation of distressed/damaged buildings.

164 Kent - Building and Foundation Structural Design

Façade Design
McLaren regularly designs specialty façade systems including glass fin walls, parallel cable walls, cable net walls, tensioned truss walls and many other systems using traditional and non-traditional materials such as stainless steel and bronze. Many of our façade systems are designed for blast resistant construction to provide a barrier at the base of the building. Typical designs are performed to the DOD design standards for blast resistant fenestration systems.

Feasibility Studies
McLaren analyzes existing buildings to determine whether proposed alterations can be made and provides an order of magnitude estimate of costs to make the repairs.

Peer Review/Value Engineering
These services of McLaren are regularly retained to provide review of alterations/renovation structural design of other engineers to assess the feasibility and cost effectiveness of the proposed design.

Forensic Engineering
McLaren assesses the stability of structures that have been damaged by flood, fire, insect infestation, and structural overloading. We develop a strategy and provide an engineering design on how to stabilize the structure, and we develop structural design repair details.

Construction Engineering
McLaren regularly provides construction engineering services for steel, concrete, foundation and marine contractors. Our scope of services typically include:

- Shoring Design
- Jacking Sequence Design for Column Removals
- Demo Drawings (DMO in NYC)
- Steel Connection Design
- Foundation Underpinning Design
- Sheeting and Shoring
- Tower Crane Installation Design

Maryland Live Casino – 1.7 Million SF Building Opened in 2012

We have an excellent history of structural inspection, engineering and design experience working for private developers, corporations, contractors, architects, and public and private entities. McLaren is currently providing or has recently provided structural inspection, design, and foundation engineering design services for clients such as the Port Authority of New York and New Jersey, the New York City Economic Development Corporation, the Baltimore Center for the Performing Arts, Olympia & York, Carnival Cruise Corporation, U.S. Gypsum, Cappelli Development, R&D Development, and the U.S. Navy.

BRIDGE, RAIL, AND ROADWAY SERVICES

McLaren offers full service engineering for highway and railroad bridges, pedestrian bridges, overpass structures, culverts, retaining walls, and appurtenant structures. Our professional staff provides expertise in all areas of bridge analysis and design, highway design, rail operations, and construction inspection.

Tappan Zee Bridge - Connecting Rockland and Westchester Counties
New York's Longest Bridge

Whether the project involves long span river crossings, highway overpasses, railroad bridges, secondary road structures or bridge inspection programs, McLaren can provide the technical and management expertise to meet our clients' needs. McLaren's bridge and roadway services offered are comprised of:

- Above and Underwater Bridge Inspection
- Application of Innovative Materials (plastic lumber bridges, walkways)
- Comprehensive Services for All Phases:
  - Project Scoping
  - Preliminary Design (Phases I-VI)
  - Final Design (Phases V & VI)
  - Construction Support Services
  - Construction Inspection Services
- Community Relations / Public Participation
- Constructibility Review / Contractor Review
- Culvert Inventory, Inspection, and Design
- Design-Build
- Designs for Complete Bridge Replacement / Repair / Upgrading
- Environmental Reports
- Feasibility Studies
- Geotechnical Investigation and Design
- Load Rating Analysis
- Maintenance and Protection of Traffic Planning and Implementation
- Permitting
- Preparation of Contract Documents and Construction Cost Estimates
- Recommendations for Repairs / Rehabilitation / Safety Measures
- Traffic Study Analysis / Accident Data Review / Signalization
- Scour and Hydraulic Analysis
- Seismic Design
- Solutions to Drainage Problems

Taconic Parkway Bridges Replacement and Design

West 77th Street Pedestrian Bridge

Design/Build Replacement Bridge

MNR East Avenue Bridge Replacement

With the efficient use of computers for design and document production, we are able to devote our efforts to the optimization of design and management of the process. By using our library of details considerable drafting time is saved, structural analysis can be refined and geometric accuracy is assured.

Our bridge inspection teams are available to assess conditions, file state and federal inspection reports, and most importantly, use our system of computerized management to compile the assembled inspection data and focus on the prioritization of deficient elements. This helps to identify those elements in greatest need of rehabilitation. In this way, a group of bridges can be repaired or upgraded in a fashion that optimizes the use of available funds. Management of infrastructure repair is a science to which we have dedicated significant time and resources.

Rope-Access Inspection. Among the unique elements of McLaren's inspection capacity is the ability to thoroughly examine a bridge's structure using rope-access trained engineer climbers. As demonstrated by our recent inspection work at the Poughkeepsie-Highland Railroad Bridge, there are several cost-saving advantages to employing our SPRAT-certified engineers. Foremost, an inspection utilizing rope-access instead of conventional inspection equipment such as UBIU's, Bucket Trucks, and Manlifts causes less interruption of roadway/bridge traffic and railroad operation. Rope-access will also allow for rapid assembly and disassembly of equipment, increased schedule flexibility, and, since the engineers carry the rope-access gear, rapid mobilization. These benefits all provide considerable savings in the cost, planning, coordination and execution of the inspection.

Our bridge inspection staff are NBIS, NICET, NACE, and SPRAT certified and employs access techniques ranging from hard-hat diving to abseiling – meaning no aspect of a bridge inspection will go unreached. In short, our engineers are trained, experienced and prepared to provide services through all aspects of any project.

SPRAT Certified Climbing Inspector

AWARD WINNING PROJECT

WALKWAY OVER THE HUDSON
Railroad Bridge Conversion Project
World's Longest Pedestrian Bridge

OTHER SERVICES

PLANNING

McLaren's Planning Practice provides a comprehensive list of services ranging from Needs Analyses to the creation of complete Comprehensive Land Use Plans and Zoning Laws. Our approach to planning integrates low impact development techniques with sustainable practices to ensure negative environmental impacts have been adequately mitigated.

McLaren has performed Planning Services for parks, marine structures, bridges, retirement communities, educational facilities, and other communities/structures. Our services include:

- Comprehensive Plans
- Land Use Plans & Studies
- Low Impact Development Plan (LID)
- Site Plans
- Subdivisions
- Traffic Impact Statements
- Continuing Consulting Planning Services
- Site Plan Review
- Subdivision Review
- State Environmental Quality Review Act (SEQRA) Environmental Assessment
- Architectural Review Board Services
- Zoning Board Review
- Environmental Impact Statements (EIS)
- Sustainability Analysis & Review
- Scenic View Regulations
- Simulations & Site Renderings
- Architectural Review Regulations

SUSTAINABLE DESIGN

McLaren brings a sustainable mindset to every project, delivering our clients "Applied Ingenuity". McLaren's passion for innovation and out-of-the-box thinking, is one of our defining traits of success.

LEED...We currently have 4 LEED accredited professionals, and an internal program, that supports all internal engineers that wish to acquire their LEED Accreditation. McLaren seeks to fully integrate sustainable design thinking into the design process from the early stage, working closely with clients and engineers so that green technologies and best

practices inform the unique spatial resolution of every design problem. With several LEED Accredited Professionals on staff, we have the capacity to help projects achieve LEED certification, if desired by the client.

Green Roofs...We provide structural evaluation and rehabilitation of green roofs, the use of recycled materials, stormwater management and re-use, and life-cycle analyses.

Solar... McLaren has an extensive history of providing multi-discipline consulting engineering services to clients nationwide to support the design and structural review for installation of solar energy systems. We have designed over 130 MW for solar ground-mounted carports, parking garage mounted solar carports, solar rooftop installations, and ground mounted solar farms.

Services:

- Structural Evaluation and Rehabilitation of Green Roofs
- Use of Recycled Materials
- Stormwater Management and Re-Use
- Bioswale
- Life-Cycle Analyses
- LEED AP Accredited Professionals
- Solar Panel Mounting
- Solar Racking
- Solar Carports
- Parking Garage Mounted Solar Carports
- Structural Assessment of Rooftops for Solar Support
- Wave Studies
- Distribution (Civil, Survey, Tower Structures, Poles)
- Land Survey for Ground Mounts
- Ground Mount Structures
- R&D Work
- Conductive Ploymers
- Proprietary Research
- Regulation, DEC, Army
- Wind Turbines

II. OUR TEAM

To further augment the team and provide technical depth and the capacity to satisfy the needs, requirements, and time constraints of this project, we invited ***VHB Engineering, Surveying and Landscape Architecture, P.C. (VHB).*** VHB has a 30-year history completing planning, design, and development projects throughout Westchester County. Their Northeast Region offices are home to professionals and support staff serving New York counties, cities, towns, villages, and hamlets, including extensive work in and around Nyack. The diverse composition of their White Plains office staff—urban/regional planners, environmental planners and scientists, traffic engineers, civil engineers, permitting specialists, graphic designers, landscape architects, and archaeologists—provides their clients with a broad base of knowledge and expertise under one roof. These are professionals who know Nyack intimately and are invested in its continual growth and success.

Overall, VHB delivers innovative and pragmatic solutions in planning and urban design; sustainability practices; transportation engineering; community outreach; environmental permitting and restoration; landscape architecture; land surveying; structural engineering and inspection; sustainability and climate adaptation planning; and traffic and transportation planning, engineering, and operations.

MUNICIPAL SUSTAINABILITY

VHB is a leader and innovator in the sustainable planning and design of environmental, transportation, and infrastructure systems. VHB is a regional coordinator for the New York State Climate Smart Communities Regional Pilot Program, and worked on both the Hudson Valley and Capital District regional sustainability plans for the New York State Cleaner, Greener Communities Program. They worked with the New York State Department of Environmental Conservation, under contract to the New

England Interstate Water Pollution Control Commission, to develop a statewide Climate Smart Communities Certification Program and Manual. VHB recently developed an Energy Master Plan for the City of Albany; played a major role in developing the New York Rising Community Reconstruction Plan for Broome County; conducted a climate vulnerability assessment and prepared the climate adaptation plan for the City of Albany; and developed a greenhouse gas emissions inventory and a climate action plan for Schenectady County. VHB also completed the first-ever Comprehensive Sustainable Master Plan for the Town of Greenfield in Massachusetts.

TRANSPORTATION OVERVIEW

VHB provides transportation planning services for a wide variety of private and public sector clients in both urban and suburban areas. Projects include identifying multimodal transportation issues associated with various types of transportation projects such as alternative modes analyses; multimodal access; congestion analyses; corridor studies; vehicular/pedestrian conflict studies; transportation impact assessments; and downtown/village parking, circulation, and access studies. VHB offers the ability to develop and combine technical modeling procedures with pragmatic transportation planning and traffic operations applications.

VHB provides transportation planning, engineering, design, and operations throughout New York. With offices in Albany, White Plains, Hauppauge, and New York City, the firm's transportation practice covers the entire State, represented by:

- **Local Projects**: New York City Bus Rapid Transit Study, Spring Valley Complete Streets Policy, and Potsdam Access Management Study
- **County Projects**: Orange County Non-Motorized Transportation Plan, Dutchess County Transit Development Plan, and Monroe County Accident Database Enhancement Project
- **Regional Plans**: Capital District Regional Sustainability Plan, Binghamton Regional Freight Study, Buffalo/Niagara Integrated Corridor Management Plan, and Long Island Sound Waterborne Transportation Study
- **Statewide Programs**: New York Statewide Emergency Transportation Operations Strategic Plan, New York Statewide Safety Assessment Guidelines, and New York Statewide Traffic Incident Management Program
- **Institutional Projects**: University at Buffalo Facilities Master Plan, SUNY Oneonta Field House, and Cornell NYC Tech Campus on Roosevelt Island
- **Development Projects**: World Trade Center redevelopment, new Yankee Stadium, Concord Resort redevelopment, and the rezoning of Coney Island, Long Island City, and Hunter's Point South

Their transportation team works on bikeways, pathways, roads, highways, bridges, tunnels, rail and transit systems, and airports, as well as projects for property owners, developers, and educational, healthcare, and cultural institutions. Services encompass traffic impact studies, complete street planning and design, streetscape improvement plans, waterfront plans, pathways/bikeways, downtown circulation studies, road safety audits, traffic simulation/visualization, travel demand modeling, and much more. Additionally, their dedicated Transit & Rail team provides integrated services for intercity/high-speed rail, freight rail, commuter rail, heavy rail, light rail, streetcar, bus rapid transit, and bus systems—and they develop multimodal corridor solutions in urban, suburban, and rural environments.

PUBLIC OUTREACH

Using a variety of cutting-edge tools and techniques, their planners are trained in conducting large public meetings as well as small working groups to deliver vital information, involve stakeholders, and integrate public feedback. VHB organizes and facilitates public workshops, community visioning exercises, design charrettes, and public hearings and presentations; develops project websites, newsletters, advertisements, and press releases; designs project-specific branding/logos; initiates and maintains project Facebook and Twitter accounts; conducts interactive TurningPoint polling; and collaborates with MindMixer.

III. PROJECT EXPERIENCE

The McLaren Team has in-depth experience, in all areas required for the proposal. Table A.1 below, demonstrates where some of our project experience lies. ***Detailed project examples are provided at the end of this section.***

Table A.1 - Project Experience Project Title	Bike Pathways	Demographics & Growth Trends	Ferry Landing Alternatives	Ferry Studies	Master Plan	NYSERDA	Parking Analysis	Parking Garages	Public/Private Waterfront Dvlpmnt	Public Outreach	Recreation Facilities / Parkland	Retail Development	Historic/Costal/Environmental Areas	Sustainable Design	Transportation Analysis	Utilities	Zoning Updates
NYCDPR Reconst of Baisley Pond Park & Comfort Station											■			■		■	
PANYNJ Battery Park City Ferry Terminal			■	■					■				■				
Brooklyn Navy Yard Waterfront Structural Design Development					■								■				
Henry Hudson Quadricentennial Park		■							■		■		■				
NYCDPR Reconstruction of Battery Park & Perimeter Bikeway	■								■								
NYCDPR Bronx River Greenway Link	■										■			■	■		
NYCDPR Shore Parkway Restoration & Canarsie Park Bike Path	■								■		■		■			■	
NYCDPR Fort Totten North Park									■		■		■	■		■	
NYCDPR Entrance & Landscape in Fort Greene Park											■		■	■			
NYCDPR Transmitter Park, Pier, and Ferry Terminal			■							■	■		■	■			
NYCDPR On-Call Engineering Services									■	■	■		■	■			
SUNY Maritime New Academic Building & Seawall Repairs					■								■	■		■	
Rockland Community College New Technology Building														■		■	
Long Branch Ferry Terminal Design & Entertainment Pier			■	■	■				■	■	■	■	■	■			
Crestwood Lake Apartments Master Plan & NYSDEC Regulations Compliance Dam					■												
Tanger Outlets at Foxwoods Casino												■					
Haverstraw Ferry Terminal			■					■			■		■				
Edgewater Marina, Park and Ferry Landing			■								■		■				
Brooklyn Navy Yard Master Plan													■				
Cornwall Waterfront Park - 5K Walkabililty Study					■						■		■	■	■		
Maryland Live!								■				■					
Rockland County Highway Department Facility					■			■									
Maxwell Place on Hudson										■		■	■			■	
India Street Pier and Ferry Terminal		■	■						■	■			■				
SUNY Maritime Master Plan - Complete Utility Systems Survey					■								■			■	
Mid-Hudson Regional Sustainability Plan					■	■							■	■	■		
Orangetown Comprehensive Plan		■			■		■			■	■	■	■	■	■		■

Table A.1 - Project Experience Project Title	Bike Pathways	Demographics & Growth Trends	Ferry Landing Alternatives	Ferry Studies	Master Plan	NYSERDA	Parking Analysis	Parking Garages	Public/Private Waterfront Dvlpmnt	Public Outreach	Recreation Facilities / Parkland	Retail Development	Historic/Costal/Environmental Areas	Sustainable Design	Transportation Analysis	Utilities	Zoning Updates
Climate Smart Communities Regional Coordinator Program						■				■				■			
Unified Sustainable Development Ordinance		■				■								■	■		■
Uniondale Community Vision Plan					■					■		■		■			
Yorktown Comprehensive Plan	■	■			■							■	■		■		
City of Albany 2030 Comprehensive Plan	■	■			■	■						■			■		
Building a Better Broadway Complete Streets Design	■						■				■				■		
Brewster Urban Renewal Plan and Complete Streets Study	■	■					■				■				■		■

Transmitter Park, Brooklyn, NY

Location
Brooklyn, New York

Client/Owner
New York City Economic Development Corporation
New York City Department of Parks and Recreation

Services
Marine Engineering and Design
Underwater Inspection
Site/Civil Engineering
Permitting
Construction Administration and Inspection
Shoreline Sand Filter
Bioswale
Fence Design

Contract Period
2002-2009

Fee
$199,182

Reference
New York City Department of Parks & Recreation
Olmstead Center
Flushing Meadows-Corona Park
Flushing, NY 11368
Ms. Therese Braddick
Deputy Commissioner, Capital Projects
(718) 760-6602

Project Team
Malcolm McLaren, PE
Steven Grogg, PE
Stephen Frech, PE
Chris Leung
Luke Daur, PE

Transmitter Park Lawn Photo
Property of: Daniel Avila/NYC Dept. of Parks and Recreation

Project Description

Located on the site of the former WNYC radio station and a ferry terminal, the park is the first new significant open space on the Greenpoint waterfront; at the end of Java Street, Kent Street, and Greenpoint Avenue. The design includes a recreational pier at the end of Kent Street. The pier consists of pods and connecting bridges with a fishing station and shade structure. At the water's edge, the former relieving platform was replaced with a natural wetland shoreline. A pedestrian bridge crosses an excavated historic ferry slip restored as a wetland and a large, inviting lawn defines the central space of the park.

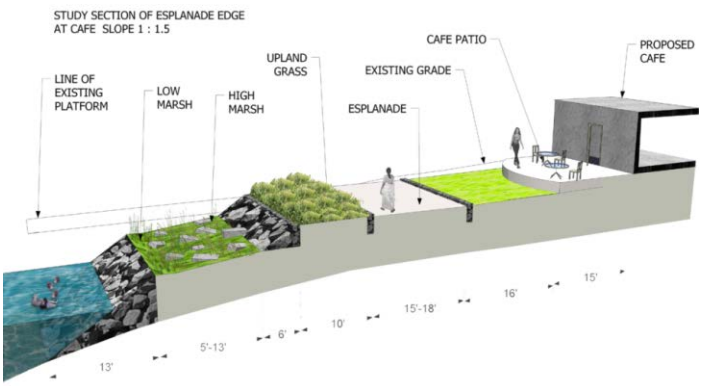
Transmitter Park Under Construction

McLaren's Role

McLaren Engineering Group (McLaren) provided site/civil and marine engineering services for open space improvements of the property. McLaren performed underwater inspections of the project site and waterfront structures, and reviewed all available documentation about these existing structures. McLaren generated a plan for the demolition and redesign of the new pier at Kent Street and coordinated permitting with the NYSEDC, NYCDOS, U.S. ACOE, the NYCEDC and the NYCDPR.

Old Ferry Landing Reconstructed

For the creation of a waterfront park, McLaren created demolition plans for various existing structures and the necessary design documents for shoreline improvements. Working with AECOM, McLaren provided the site/civil engineering for the park including grading, drainage, utilities and soil erosion and settlement control. The project was designed to comply with the NYS SPDES regulations and included sustainable elements such as sand filters and porous pavement.



Long Branch Ferry Terminal Design & Entertainment Pier

Location
Long Branch, New Jersey

Client/Owner
City of Long Branch

Project Type
Ferry Planning & Operations
Pier Planning

Services
Project Management
Marine Engineering
Site/Civil Engineering
Geotechnical Engineering
Structural Engineering
Surveying
Sustainable Design
Permitting
MEP Services
Public Outreach
Cost Estimating
Pier Planning
IT Technology

Contract Period
2009-2014

Reference
City of Long Branch
344 Broadway
Long Branch, NJ 07740
Mr. Howard Woolley
(732) 571-5645

Project Team
Malcolm McLaren, PE
Stephen Frech, PE
Luke Daur, PE
Robert McCombs

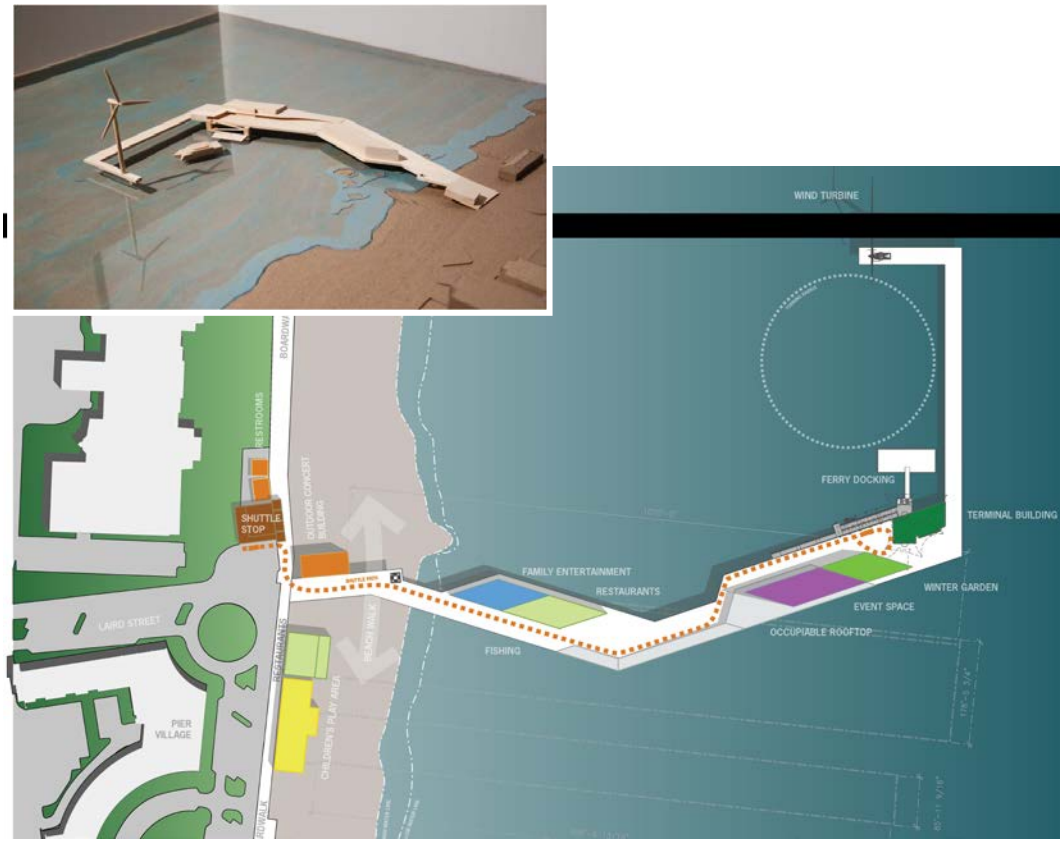
Project Description

The redevelopment of the Long Branch Oceanfront Pier and Ferry Terminal represents an opportunity for the City of Long Branch to re-establish its public identity for the 21st century, for the benefit of residents and visitors alike.

McLaren's Role

McLaren Engineering Group (McLaren) is providing overall Program Management, as well as marine, site/civil, structural, geotechnical engineering and surveying services needed for design and construction of a new oceanfront pier in Long Branch, New Jersey. The $89 million pier will include a multi-functional retail and entertainment facilities, a ferry terminal providing commuter access to New York City, renewable energy resources, and a learning center. The pier is a critical aspect of the City's redevelopment plan, enhancing its identity as a premier United States destination.

As part of this contract, the McLaren project team will identify funding opportunities for the terminal and pier to become a long-term source of sustainable economic development for the City. In order to keep the community fully engaged in the vision of the new pier, McLaren will lead an inclusive, collaborative public process that will strengthen the design and execution as the project moves forward. McLaren will convene a series of facilitated workshops, known as "charrettes," to identify important questions and articulate the shared priorities. We believe this process is the most effective means of achieving broad support for this environmentally, socially, and economically sustainable project over the long-term.



Henry Hudson Quadricentennial Park

Location
Haverstraw, NY

Client/Owner
Village and Town of Haverstraw

Services
Surveying Services
Site/Civil Engineering
Drainage Analysis
Drainage Design
SPDEC
Permitting

Contract Period
2012-2014

Fee
$262,500

Reference
Village of Haverstraw
40 New Main Street
Haverstraw, NY 10927
Mr. Mayor Michael Kohut
(845) 429-0300

Project Team
Steven Grogg, PE
Luke Daur
Stephen Zaskey
Robert McCombs

Project Description

The Village of Haverstraw as part of its Local Waterfront Revitalization Plan has retained McLaren Engineering Group to provide design and construction of improvements to the existing Emeline Park and a waterfront trail along its entire Hudson River Shoreline. The New York State Department of State has awarded the Village funds under Title 11 (Environmental Protection Fund) for the implementation of a key portion of this trail from Emeline Park north to the Bowline Pond Trail at Warren Court as well as for improvements to Emeline Park itself.
This project will enhance the perimeter protection of the park lands where necessary, so they can withstand the forces of the river and resist future degradation; maximize the use of the available land at the foot of Main Street for active and passive park facilities; design a continuous waterfront walkway that will traverse a diverse and interesting natural habitat environment; allow for the future integration of the walkway into future upland development; and provide a design that can complete the continuous waterfront walkway within the project construction budget and also an overall design where additional components and amenities can be implemented in future phases as funds become available.

McLaren's Role

McLaren is responsible for providing design, engineering, and permitting services associated with the walkway, amenities and shoreline stabilization as well as providing construction inspection services.

Specific tasks include hydrographic surveys of areas requiring slope/shoreline stabilization; topographic and property survey; Phase I ESA; Soil Investigation; Permits; Initial Schematic Design Alternatives; Archeological and Historic Resource Survey; Wetland Assessment and Ecological Evaluation; State Environmental Quality Review (SEQR); Construction Requirement Analysis; Final Design and Construction Documents and Bid and Construction Phase Services

AWARD WINNING PROJECT

Rockland Community College New Technology Building

Location
Suffern, New York

Client/Owner
Einhorn Yaffee Prescott / Rockland County
Department of General Services

Services
Structural Engineering
Civil Engineering
Site Layout Planning
Drainage & Utility Planning
Construction Administration

Contract Period
2003–2006

Fee
$277,950

Reference
Einhorn Yaffee Prescott
412 Broadway
Albany, New York 12207
Mr. Tom Birdsey
(518) 431-3361

AWARD

2007 Tappan Zee Large Project of the Year Award
New York Metropolitan Section, Lower Hudson valley Branch, American Society of Civil Engineers

Project Team
Malcolm McLaren, PE
Chris Leung

Rockland Community College Technology Building

Project Description

Rockland Community College Technology Building was the first new permanent construction on campus in over twenty years. The 100,000 square foot, 3-story building houses over ninety faculty and staff offices and student services. It features 21 state-of-the-art classrooms, including a lecture hall and computer laboratories, which increased classroom capacity on campus by approximately 40% and a one-stop shopping area. The building holds a LEED Silver Certification.

McLaren's Role

McLaren Engineering Group (McLaren) provided civil and structural engineering services associated with the buildings design, working with the architect, Einhorn Yaffee Prescott Architecture and Engineering, PC. These services included:

- Structural and Civil Engineering
- Drainage and Utilities Plan
- Site Layout Plan
- Grading Plan
  - Typical grading practices were implemented to develop the site and minimize costs.
- Construction Details, Specifications and Administration

McLaren also provided assistance in site selection for the new technical facility. Four site locations were studied taking into consideration the typical technical site issues such as grading and utilities, but also considering campus lifestyle and relationships to the existing buildings and campus amenities. The importance of not disturbing campus functionality was looked at heavily, as well as, maintaining a new image and campus expansion that the college wanted to portray.

Once a final site location was established, McLaren developed design documents for the foundation demolition plans that involved demolition of two buildings, major utility demolition, and relocation of sand.

McLaren ENGINEERING GROUP

AWARD WINNING PROJECT

Battery Park City Ferry Terminal

Location
New York, New York

Client/Owner
Port Authority of New York & New Jersey

Project Type
Ferry Terminal

Services
Marine Engineering
Structural Assessment
Design Services

Contract Period
Design: 1998-2008
Construction Completed: April 2009

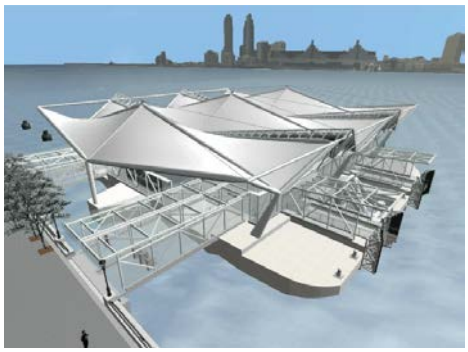
Fee
$1,200,000

Reference
Port Authority of New York & New Jersey
233 Park Avenue South
11th Floor
New York, NY 10003
Ms. Janet Cox
(212) 435-7809

AWARD
2008 Best Public Works Project
New York Construction News

Project Team
Malcolm McLaren, PE
Shea Thorvaldsen

Project Description



Battery Park City Ferry Terminal (Actual v. Rendered Views)

The Battery Park City Ferry Terminal was originally constructed in 1989 to provide ferry service between Hoboken and Battery Park City. The original facility was a temporary structure consisting of a floating landing terminal and appurtenances. The Port Authority of New York & New Jersey contracted McLaren Engineering Group (McLaren) to provide structural and marine engineering services for the design of a permanent floating ferry terminal, which will provide the facility a minimum 25-year life. The facility is the largest of its kind in the United States, encompassing more than ¾ acres of floating structure.

McLaren's services under this contract involved preparation of Stage I – Schematic Design Documents, Stage II – Preliminary Design Documents, Stage III – Detailed Design Documents, and Stage IV – Construction Administration. The floating terminal structure consists of a mono-hull main terminal; two anchorage towers anchored to bedrock, 75 feet below the water; and pedestrian walkways connecting to the Battery Park City Esplanade. McLaren was also responsible for the design of ADA-compliant access ramps to the ferries, fendering, staging, and constructibility.

The technical design involved static and dynamic analyses of floating structures in accordance with the principles of Naval Architecture. The facility accommodates all six degrees of freedom by restraining three and allowing three motions. Complicating its design was the requirement to minimize interruptions to the existing ferry service. This facility is an aesthetically prominent feature of New York City's waterfront.

Project Highlights

- Dynamic Response Analysis
- Computer Modeling and Simulation
- Prestressing of Rock Anchors
- Buoyancy, Flotation and Damage Stability
- Mechanical Engineering of Deployable Ramps
- Glass and Glazing
- Geotechnical Analysis, Rock Mechanics, Pile Driving and Rock Coring
- Wind, Wave and Current Analysis
- Ferry Operations and Passenger Flow
- Fendering and Energy Dissipation
- Materials Expertise for Piers, Bearings, Fenders, Moving Parts
- Corrosion Control
- Fabric Structures Interaction
- Permitting & ADA Compliance
- Underwater Inspection Services

McLaren ENGINEERING GROUP

Maxwell Place on Hudson

Location
Hoboken, New Jersey

Client/Owner
P.T. Maxwell, LLC

Project Type
Site Development

Services
Site/Civil Engineering
Marine Engineering
Permitting
Design
Construction
Administration

Contract Period
1999-2010

Fee
$1,491,000

Reference
P.T. Maxwell, LLC
1125 Hudson Street
Hoboken, NJ 07030
Mr. Thomas Mulvey
(201) 792-9220

Project Team
Malcolm McLaren, PE
Steven Grogg, PE
Shea Thorvaldsen
Chris Leung
Alison Scott

Project Description

McLaren Engineering Group (McLaren) assisted P.T. Maxwell, LLC in converting the former Maxwell House coffee industrial site to a residential mixed-use development along the Hudson River. This waterfront community was designed to preserve views and maximize open space in accordance with NJDEP's Hudson River Waterfront Walkway (HRWW) guidelines.

Maxwell Place Waterfront Community

Plans included the construction of approximately 800 condominiums and associated parking, on four (4) acres of waterfront property (including a park and an esplanade). The central focus of Maxwell Place is a waterfront park that includes a beach and the restoration of Elysian Fields, the site on which the first baseball game in America was played. Maxwell Place on the Hudson also features 200,000 square feet of commercial and retail space that will host a luxury restaurant and shopping amenities, a fitness center, a rooftop pool and garden, and 1,500 parking spaces.

Hudson River Walkway

When the six-building Maxwell House complex opened on the Hoboken waterfront in 1939, it was the world's largest coffee plant. Considered the first application of Bauhaus architecture in this country, these elegant buildings feature simple construction, open floor plans, glass-ribbon wall curtains, glazed corners, and yellow brick walls. The plant handled the entire process of industrial coffee production, from dockside bean delivery through cleaning, roasting, grinding, and canning. The plant closed in 1992.

The project required the investigation and understanding of the existing infrastructure systems that serviced the prior manufacturing facility. The new planned development required the construction of new upgraded utilities. The Master Planning of these services was a crucial first step in the design process. A key component of this planning was the incorporation of the existing combined sewer that passes through the site into a new utility design without altering its function and location. By understanding the existing system capacities, McLaren was able to work with the project team to develop the new infrastructure system to meet the project demands. This planning was then implemented in the construction and permit documents.

Maxwell Place on the Hudson

Maxwell Place Condominiums

Other Project challenges included:

- Stabilization of an unstable shoreline
- Repair of dilapidated piers
- Incorporation of the existing combined sewer that passes through the site into a new utility design without altering its function and location
- Permitting for emergency fire access and dock
- Maintaining view corridors
- Providing access to the river

The project included the construction of a riverside public park comprised of a 1,800 linear foot promenade along the Hudson River waterfront and various public amenities. A portion of this work will be funded through a federally administered New Jersey Department of Transportation Enhancement Act (TEA) grant. McLaren worked with the project landscape architect to develop plans and sections for the promenade and has coordinated with the City of Hoboken to secure funding and approval from the NJDOT. The park and promenade included construction of on-grade walkways, pedestrian piers over the Hudson River, an emergency boat ramp, lighting, landscaping, and various park and playground amenities.

McLaren's Role

McLaren provided site/civil, infrastructure, and marine engineering services. This includes construction documents of demolition, and reconstruction of the existing pier and platforms, utilities, and roadway design. McLaren also authored the following permits: New Jersey Department of Environmental Protection Waterfront Development, Boat Launch, Treatment Works Authority, the North Hudson Sewer Authority, City Planning Board, and Soil Erosion Approval.

New Hudson River Promenade

AWARD WINNING PROJECT

Superstorm Sandy
NYCDPR On-Call Engineering Services

Location
3 Boroughs, New York City

Client/Owner
New York City Department of Parks & Recreation

Services
Structural Engineering
Site/Civil Engineering
Marine Engineering
Construction Phase Services

Contract Period
2012-Present

Construction Value
$140,000,000 (est.)

Reference
New York City Department of Parks & Recreation
Olmstead Center
Flushing Meadows-Corona Park
Flushing, NY 11368
Ms. Therese Braddick
Deputy Commissioner, Capital Projects
(718) 760-6602

AWARDS

2014 New York Regions Best Projects, Best Government / Public Building Project - NYC Parks Beach Restoration Modulars
Engineering News-Record

2013 Special Recognition – Beach Access Restoration Project
New York City Public Design Commission

"McLaren consistently meets extremely tight deadlines, adheres to schedules and milestones, and produces all required deliverables in a timely manner."
- Sharika Sims

Project Team
Steve Grogg, PE
Malcolm McLaren, PE
Stephen Frech, PE
Dominic DeSantis, PE

Project Description

McLaren Engineering Group (McLaren) was retained by the New York City Department of Parks and Recreation (NYCDPR) to provide structural engineering design services on an "as-needed" basis for various sites throughout the five boroughs of New York City. Immediately after Superstorm Sandy, McLaren became involved in assisting the NYCDPR and City in the assessment and rebuilding of the NYCDPR beach facilities.

Damaged Boardwalk and Building
The Rockaways, Queens, NY

McLaren's Role

Superstorm Sandy Assessment Contract: McLaren provided engineering services to assess the widespread damage caused by Superstorm Sandy. McLaren deployed engineers to assess damage to the NYCDPR facilities in Brooklyn and Queens, New York.

Coney Island, Brooklyn, NY

McLaren performed detailed visual inspections, documenting findings, and submitting damage assessment reports for the requested sites including Coney Island, Brooklyn; The Rockaways, Queens; Manhattan Beach, Brooklyn; and Shore Parkway Bikeway and Pedestrian Path, Brooklyn. This work was achieved in two tasks:

- *Assessment & Report* – McLaren conducted detailed visual inspections; documented the inspection findings with field notes, sketches, photographs and videos; and submitted damage assessment reports which included costs, recommendations and estimates for the implementation of immediate Debris Removal and Public Safety measures.
- *Design & Contract Documents for Clean-Up and Public Safety* – McLaren prepared 5 contracts for bid documents regarding the clean-up of the storm's aftermath including the removal of debris, removing sand from buildings, installing temporary fences, etc. We also prepared bid contract documents for immediate Public Safety measures referred to as the "Make Safe Contract" including but not limited to fencing, walls, repair of boardwalk, railing repair, etc.

Steeplechase Pier
Before and After

Superstorm Sandy – Phase I – Beach Restoration Project: As the prime design consultant, McLaren in collaboration with seven (7) A&E sub-consultants, prepared construction documents for over of $140M worth of construction in response to beach damage caused by Superstorm Sandy within six (6) weeks. The

design effort started on December 21st, 2012 and bid documents were issued on February 4th, 2013 for sites located in Staten Island, Rockaway Beach, Manhattan Beach, and Coney Island for the City of New York. This unprecedented effort yielded the production of over 950 drawings in four (4) separate contracts with a construction dead line set by the City on May 24th, 2013, prior to Memorial Day. The four (4) prime contractors worked 24/7 to complete the projects, requiring our Design Team to provide real-time feedback on RFI's and submittals, weekly and sometimes daily meetings and conference calls, and immediate resolution of field conditions. The sense of urgency and cooperation between all City Agencies, the Design Team, the Construction Manager and the Prime Contractors demanded that strong leadership and a sense team work to prevail. Public access to the beaches was restored for the Summer of 2013 with all the amenities as in previous seasons. The project closeout is expected to be completed in the fall of 2013 with work continuing throughout the summer.

Modular Comfort Station
Before and After

Sites include: Rockaway Beach, Queens; Coney Island, Brooklyn; Manhattan Beach, Brooklyn; South Beach, Staten Island; Midland Beach, Staten Island; Wolfe's Pond Park, Staten Island; and Cedar Grove Beach, Staten Island. To replaced damaged or destroyed facilities, the project included new pre-fabricated modular structures. The Structures included 10 comfort stations, 21 life guard stations, and four (4) offices for a total of 35 buildings throughout Brooklyn, Queens and Staten Island. The project also included the renovation of 3 comfort stations/concession building in the Rockaways. New boardwalk, shade structure, "stadium seating" to the beach was installed to create "Islands" for public access and focal points. The historic Steeplechase Pier in Coney Island was reconstructed with new precast concrete substructure, RPL deck, new aluminum handrail, shade structures and benches constructed from the reclaimed decking of the damaged pier. Also, repair of storm damage at 10 comfort stations and lifeguard buildings was design in Brooklyn and Staten Island.

As requested by NYCDPR McLaren also provided architectural and engineering services for additional waterfront structures that include:

- Boardwalk repairs
- Design of facades
- Landscape architecture
- Slope stabilization
- ADA accessibility
- Utility rehabilitation
- Beach access paths and ramps
- Repairing damaged ramps and stairs
- Reconstructing damaged concrete boardwalk and ramp/stairs

Stadium Seating

New Concession area and Shade Structure

"Island" at Rockaway Beach
Before and After

New Public Beach Access at Rockaway Beach

Haverstraw Ferry Terminal

Location
Haverstraw, New York

Client/Owner
Village of Haverstraw

Services
Ferry Landing
Marine Engineering
Design Services
Structural Engineering
Site / Civil Engineering
Geotechnical Design
Mechanical Engineering
Electrical Engineering
Architecture
Landscape Architecture
Surveying
Conceptual Site Planning & Layout
Dredging
Army Coor and NYSDEC coordination

Contract Period
2004–2015

Fee
$897,700

Reference
Village Hall
Village of Haverstraw
40 New Main Street
Haverstraw, NY 10927
Mr. Michael Kohut
Mayor
(845) 429-0300

Project Team
Malcolm McLaren, PE
Steven Grogg, PE
John Lange, PP
Chris Leung

Project Description

As part of the Village of Haverstraw's Waterfront Revitalization Program, McLaren Engineering Group (McLaren) was retained to provide marine and ferry terminal design, as well as an environmental assessment.

Under the Local Waterfront Redevelopment Plan (LWRP), the Village sought to:

- Create a multi-purpose ferry terminal with docking space and associated piers, a terminal building, 450 car parking structure, internal and external lighting, and infrastructure improvements.
- Restore and revitalize the underutilized sites and downtown area.
- Improve existing and provide additional public recreation facilities, public access, and recreation opportunities to the waterfront and other areas of the Village.
- Link public sites along the waterfront and throughout the Village.
- Utilize the waterfront as a resource for alternative transportation modes.
- Protect and improve the Village's natural resources.
- Provide opportunity to expand the range and diversity of housing and residential environments within the Village.

McLaren's Role

McLaren provided overall responsibility for the project management of this contract, quality control, coordination of the project's design, and environmental review functions. Four (4) different Pier locations were evaluated with varied navigation routes from each of the piers ultimately resulting in evaluation of five (5) different channel locations. Ultimately 19 alternates consisting four (4) pier locations and three (3) channel alternatives were evaluated for walking distance (distance from the terminal to the ferry), shading area (the dock and barge area blocking direct sunlight to the river bottom), the dredge area in square feet, and the volume of dredged material in cubic yards.

Project Challenges

The environmental analysis revealed significant negative construction environmental and dredging impacts. Also a new access road (Short Clove Road overpass, providing access from Route 9W) had been completed, providing ample access to the existing Haverstraw Ferry Terminal. These results indicated the ferry terminal would not achieve all the benefits anticipated, would have significant negative environmental impacts, and would require significant mitigation. McLaren issued a letter of support for a new project to upgrade the existing ferry terminal at lower costs and significantly reduced environmental impacts.

Edgewater Marina, Park and Ferry Landing

Location
Edgewater, New Jersey

Client/Owner
Gruzen Samton LLP/
Borough of Edgewater

Services
Marine Design & Engineering
Permitting
Construction Administration & Inspection
Dredging

Contract Period
2003-2007

Fee
$315,990

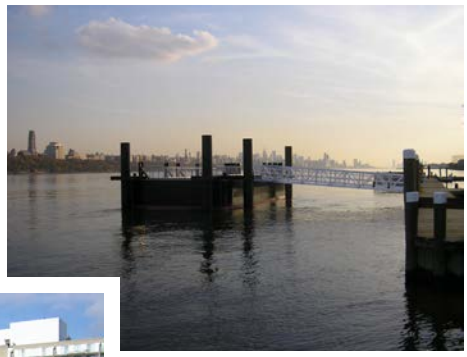
Reference
Gruzen Samton LLP
320 West 13th Street
New York, NY 10014
Mr. Edward M. Mayer, AIA
(212) 477-0900

Project Team
Malcolm McLaren, PE
Shea Thorvaldsen

Project Description

McLaren Engineering Group (McLaren) provided Marine, Site/Civil, Permitting, and Construction Administration services for this 12.4-acre site consisting of 2.9 acres of upland area and 9.5 acres of waterside docks and marinas. The project required the demolition of existing on-site structures, construction of a ferry landing, associated facilities and open spaces, on-site utilities relocation and the rehabilitation of a number of marine structures.

McLaren developed design criteria for the new ferry landing, marina and building structures, which included design loads, vessel types, ADA requirements and material specifications. Upon an above and below water survey, McLaren determined the condition of the existing components of the marina before coming up with rehabilitation design plans. Additionally, McLaren assisted in a boring program and in submitting for the appropriate permits. McLaren outlined specifications for the new ferry landing, marina and building structures and proposed preliminary and final design documents.



Brooklyn Navy Yard Waterfront Structural Design Development

Location
Brooklyn, New York

Client/Owner
Brooklyn Navy Yard
Development Corp

Project Type
Waterfront Rehabilitation

Services
Marine Engineering
Above Water Inspections
Underwater Inspections
Design Services
Construction Cost Estimating
Bid Document Preparation
Permitting
Construction Administration
Construction Inspection

Contract Period
1992-2012

Fee
$1,400,000

Reference
Brooklyn Navy Yard
Development Corporation
63 Flushing Avenue, Bldg. No.
292, 3rd Floor
Brooklyn, New York 11205
Mr. James Corley, Jr.
(718) 852-1441

Project Team
Malcolm McLaren, PE

Project Description

As part of Brooklyn Navy Yard Development Corporation's 10-year Master Plan to revitalize the Navy Yard as an economic development facility, McLaren Engineering Group (McLaren) was selected to provide specific area waterfront rehabilitation services at this 213-acre site. Improvements have been made to various marine structures at the facility, including Piers C, D, G and K; Berths 3A, 6, 7, 7A, 14A, 17, 18, 20A and 20B.

McLaren first performed above water and underwater inspection and assessment of piers, low-level relieving platforms, bulkheads/seawalls, and wharves. Preliminary and final design services, with construction cost estimates, were then provided for the rehabilitation.

Each of the repair packages was fully designed and constructed, and McLaren provided full engineering services throughout those phases. Specifically, the following were performed for each of the waterfront structures listed above:

- Data Accumulation and Research
- In-Depth and Detailed Underwater and Above Water Condition Surveys and Assessments
- Preparation of a Condition Survey Report
- Preparation of an Alternatives Study and Feasibility Report with Costs
- Preparation of Environmental Permits and Coordination Meetings with NYSDEC and USACE
- Preparation of Bid Documents (Contract Drawings, Technical Specifications and Boilerplate/General Specifications) – Submittals to 30%, 70%, 100% and Final Stages
- Bidding Assistance and Evaluation/Contractor Selection
- Construction Inspection using Underwater Inspection Crews
- Construction Administration Support Services (Shop Drawings/Submittals, Clarifications, Meetings, As-Built Documentation, Scheduling)

Prior to repairs, the structures were in a dilapidated state. Because the facilities are old timber structures, McLaren was exposed to nearly every type of timber construction – and nearly every type of condition for which a solution was needed. Repairs were executed in consideration of the environmental regulations and included:

- Wrapping timber piles in plastic and driving new timber piles
- Posting timber piles and shimming non-bearing piles
- Encasing timber and steel piles in concrete
- Replacing or encasing timber pile caps
- Protecting, through encasement, timber cut-off walls and underdeck
- New cast-in-place concrete pile caps
- Constructing new steel sheet piles/anchored "dead man"
- Constructing new cast-in-place cutoff walls
- Reconstructing severely deteriorated seawall of low-level platforms
- Design of cathodic protection systems

McLaren ENGINEERING GROUP

Mid-Hudson Regional Sustainability Plan

Hudson Valley Region, New York

Client
Mid-Hudson Region Consortium

VHB Status
Completed: June 2013

Cost
VHB Fee: $360,000

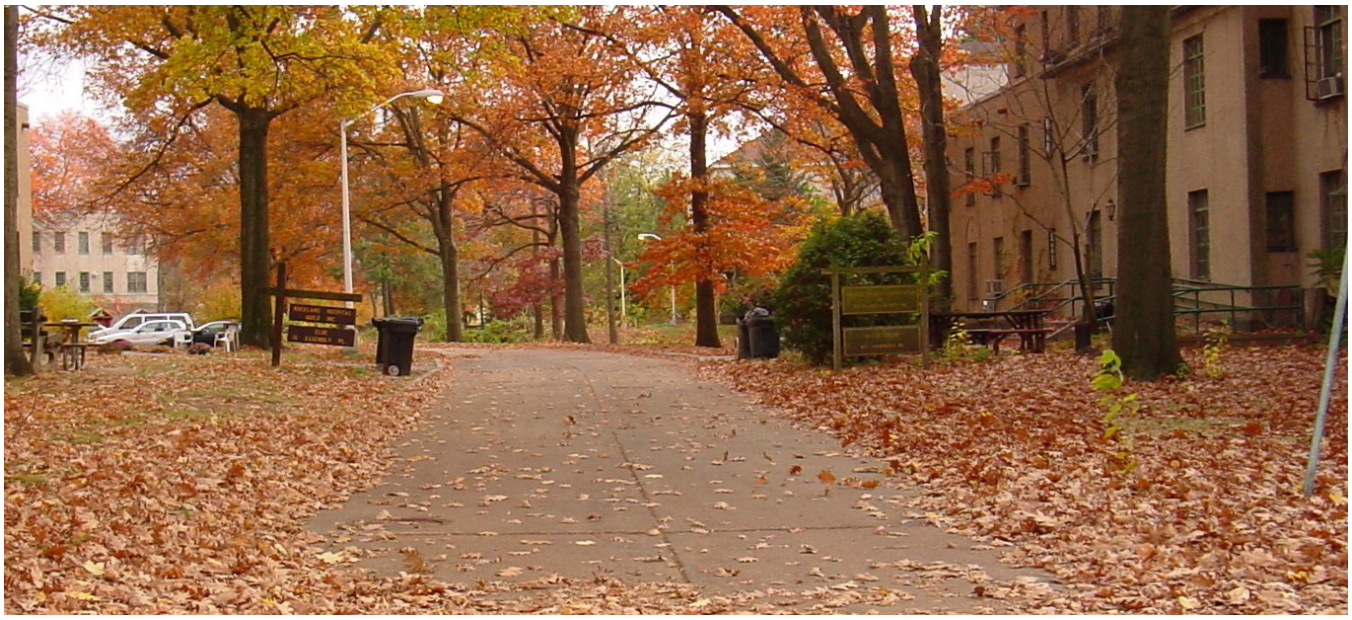
Reference
Thomas Madden
(914) 993-1505

Key Staff
Kari Hewitt, LEED, AP, CEM, ENV SP

VHB was part of a consultant team retained by the Mid-Hudson Region Consortium (representing a planning consortium of six counties and approximately 30 municipalities and other interested organizations) to develop a regional sustainability plan. This project was part of New York State's Cleaner, Greener Communities Regional Sustainability Planning Program, a competitive grant program that encourages communities to develop regional sustainable growth strategies.

The regional plan was intended to provide a baseline assessment of the region, including inventories of greenhouse gas (GHG) emissions and energy use; identify short- and long-term sustainability goals for the region, including GHG reductions and other sustainability goals for energy supply, water management, waste management, transportation/land use, agriculture, and economic development; identify and develop recommended actions to achieve sustainability goals and enhance climate change resiliency; and provide an implementation plan.

Our firm provided planning and environmental expertise as part of several Working Groups. As technical lead for the Economic Development Working Group and Climate Adaptation Working Group, VHB was responsible for developing baseline assessments, facilitating Working Group sessions, and preparing GHG analyses of identified strategies. We also conducted GHG analysis and provided local context in support of the Transportation/Land Use & Livable Communities Working Group. The involvement of stakeholders was also an important component of this project.



Orangetown Comprehensive Plan

Orangetown, New York

Client
Town of Orangetown

VHB Status
Completed: November 2003

Cost
VHB Fee: $68,000

Reference
John Giardiello, PE
(845) 359-8410

VHB prepared the 2003 Comprehensive Plan for the Town of Orangetown, located in the southeastern portion of Rockland County. The plan evolved from a nearly two-year planning process involving Town officials and representatives as well as public and private stakeholder groups. VHB documented and analyzed existing conditions relative to land use and zoning, socioeconomic factors, infrastructure, environmental factors, open space and recreation, and community facilities and services. We identified objectives and developed plan proposals for the Town, including the preparation of a Land Use Plan and functional plans for open space and environmental protection, community facilities, and transportation and infrastructure.

VHB also prepared separate descriptions of and generalized land use plans for six key hamlet areas—Pearl River, Orangeburg, Blauvelt, Tappan, Sparkill, and Palisades—as well as a general land use plan for the Rockland Psychiatric Center site. Of the various hamlet areas, the plan for Pearl River was the most extensive, addressing on- and off-street parking for shoppers and commuters, urban design, beautification, and zoning issues. Reuse of existing vacant space in two former movie theaters will also be an important element of the planning for this major hamlet center. We recommended zoning and land development initiatives to realize the Comprehensive Plan proposals, including recommendations for environmental protection, senior housing, urban design, administration, public improvements, and potential public/private partnerships.

Climate Smart Communities Regional Coordinator Program

Capital and Mid-Hudson Regions, New York

Client
New York State Energy Research and Development Authority(NYSERDA)

VHB Status
Ongoing

Cost
VHB Fee: $963,000

Reference
Jennifer Manierre, CEM, LEED AP ND
(518) 862-1090 x3406

Key Staff
Kari Hewitt, LEED, AP, CEM, ENV SP

Climate Smart Communities (CSC) is an unprecedented state-local partnership to reduce greenhouse gas emissions and advance community goals for health and safety, economic vitality, energy independence, and quality of life. The program is jointly sponsored by the New York State Energy Research and Development Authority, Public Service Commission, and four New York State agencies.

Regional CSC coordinators are part of a pilot program to test the effectiveness of hands-on technical support and guidance in facilitating the selection, development, and implementation of successful local climate action programs. VHB was chosen as a CSC Coordinator to deliver climate protection and sustainability services and resources to 53 communities in the Mid-Hudson Region. Our approach includes assessing and tracking the progress of current participants in achieving CSC pledge elements; conducting in-person consultations with each community to determine its exact climate protection needs; and delivering one-on-one tailored assistance, resources, and educational opportunities.

VHB is reaching out to a broader audience throughout the pilot program to promote the successes of the CSC program and to engage new participants. Our team is also created a baseline to gauge the overall success of the program by conducting a regional GHG emissions inventory in the Mid-Hudson Region. Additionally, VHB is part of a team serving as CSC Coordinator on behalf of the Capital District Regional Planning Commission, which is managing the CSC Pilot Program in the Capital District. Eighteen local governments have taken the Climate Smart Communities pledge in the Capital region.

Unified Sustainable Development Ordinance

Albany, New York

Client
City of Albany

VHB Status
Ongoing

Cost
VHB Fee: $15,000

Reference
Kate Lawrence
(518) 434-2532

Key Staff
Kari Hewitt, LEED, AP, CEM, ENV SP

VHB is part of a consultant team retained by the City of Albany to undertake a comprehensive update of the City Code to incorporate sustainable design and smart growth principles with a specific emphasis on zoning. The project is also considering the refinement of building codes, design guidelines, and stormwater and flood management regulations, as well as climate adaptation and streamlined permitting for compliant projects.

VHB is preparing the Performance Benefits Metrics Report in accordance with New York State Energy Research and Development Authority requirements under the Cleaner, Greener Communities Program. We are identifying performance metrics for inclusion in the Performance Benefits Metrics Report and benefit values likely to be quantified including Required Performance Metrics, Common Planning Metrics, and Sector-Common Metrics. These Sector-Common Metrics could include vehicle miles traveled, trip reductions, transit ridership, community-scale sector-specific energy reductions, waste metrics, and/or others to be determined. VHB is also identifying relevant indicators and metrics from the Capital Region Sustainability Plan.

Yorktown Comprehensive Plan

Yorktown, New York

Client
Town of Yorktown

VHB Status
Completed: February 2010

Cost
VHB Fee: $20,000

Reference
John Tegeder
(914) 962-6565

Key Staff
Matt Carmody, PE

VHB served as part of a consultant team that prepared a comprehensive plan and generic environmental impact statement for the Town of Yorktown. We reviewed vehicular traffic, parking, pedestrian, bicycle, and transit conditions within Yorktown, and evaluated the Yorktown Heights and Mohegan Lake shopping districts' accessibility and interconnections. Meetings were conducted with the Town's elected officials and planning professionals, and we performed field surveys and reviewed available transportation data. Our staff also led a transportation workshop for Town residents and officials in order to better understand the needs and concerns of the community, and existing and future traffic networks were developed using data gathered at the workshop and existing traffic data.

Demographic and transportation surveys were conducted by the consultant team to help estimate the traffic impacts that future growth may have on key corridors in the Town. Using trip generation estimates for six development alternatives, we developed a trip generation threshold to ensure that developments that may impact traffic conditions be required to perform traffic impact studies as part of their permitting with the Town. We also tabulated crash totals to identify safety-deficient locations. Our firm incorporated the aforementioned tasks and recommendations into the comprehensive plan, and then evaluated the plan under the environmental review portion of the study. We authored the "Transportation" chapter of the generic environmental impact statement, and the comprehensive plan was adopted in June 2010.

City of Albany 2030 Comprehensive Plan

Albany, New York

Client
City of Albany

VHB Status
Completed: March 2012

Cost
VHB Fee: $32,000

Reference
David Rouse
(215) 732-5215

VHB provided transportation planning services as part of a multidisciplinary planning team retained by the City of Albany to prepare the first comprehensive plan in its 400-year history. The plan includes the City's collective vision for the future, as well as maps, policies, and guidelines that describe how to achieve that vision. Components of the plan include: Safe, Livable Neighborhoods; Model Educational System; Vibrant Urban Center; Multi-Modal Transportation Hub; Green City; and Prosperous Economy.

During the initial community assessment and visioning phase of the project, VHB was responsible for the review of existing transportation plans and for transportation aspects of the Comprehensive Plan Data Book that contained text, table, and map summaries of key factors indicating current conditions and trends. This included: roadway functional classifications; levels of service at selected locations; parking capacity and costs; transit ridership data and existing bus routes; existing and proposed bike routes; pedestrian mobility and access conditions; and existing truck routes.

VHB was also responsible for mapping planned transportation projects and for working with the planning team to help formulate a vision statement and goals. From a transportation perspective, the vision statement calls for Albany's neighborhoods and centers to be connected to each other and to the rest of the region by an extensive, efficient, and safe network of complete streets, mass transit, bikeways, trails, and sidewalks. The City of Albany Common Council voted unanimously to adopt the Comprehensive Plan in 2012, and the project received a planning excellence award from the APA New York Upstate Chapter in 2013.

Building a Better Broadway Complete Streets Design

Kingston, New York

Client
Ulster County Transportation Council

VHB Schedule
Started: May 2014
Completed: Ongoing

Cost
VHB Fee: $69,000

Reference
Dennis Doyle
(845) 340-3340

Key Staff
Matt Carmody, PE

The Ulster County Transportation Council has retained VHB to develop design concepts to improve mobility and accessibility for pedestrians, bicyclists, and motorists along and adjacent to a nearly one-mile section of Broadway in the City of Kingston. The corridor plan will be consistent with Complete Streets concepts, as well as with community goals and expectations.

VHB is leading a walkability audit from Liberty Street to Chester Street with members of City Council, the Ulster County Transportation Council, and City of Kingston Engineering Department to examine existing pedestrian facilities such as mid-block crosswalks, pedestrian signals, and ADA accessible curb ramps; identify opportunities for additional bicycle and pedestrian infrastructure; observe traffic conditions during school dismissal; and to assess potential locations for pedestrian plazas, pocket parks, and new community gathering spaces.

We are providing recommendations, design concepts, implementation strategies, and planning-level cost estimates for Complete Streets improvements on Broadway, including alternative parking concepts such as angled back-in parking, road diets, bicycle route markings and signage, reconfiguring intersections, and traffic calming. Our work also includes analyzing crash data, preparing a Synchro model to test the feasibility of alternative improvement scenarios, and providing tables showing parking gained or lost as a result of mobility improvements. VHB is planning and facilitating community meetings, including the use of interactive TurningPoint surveys to attain public input.

Brewster Urban Renewal Plan and Complete Streets Study

Brewster, New York

Client
Village of Brewster

VHB Schedule
Started: May 2014
Completed: Ongoing

Cost
VHB Fee: $82,000

Reference
Peter Hanson
(845) 279-3760 x13

Key Staff
Matt Carmody, PE

The Village of Brewster has retained VHB to conduct an existing inventory and analysis of the Main Street Corridor area; review a market feasibility study that may lead to the definition of an urban renewal area; modify the existing Zoning Code to conform to the updated Comprehensive Plan; and write an Urban Renewal Plan. We are coordinating with the Village's Comprehensive Plan Committee, Village Attorney, Village Engineer, and other stakeholders such as the Putnam County Planning Department and the Pace University Land Use Law Center.

VHB is also conducting a Complete Streets planning study for Brewster. Our responsibilities include a Complete Streets walking tour of the Route 6/Main Street and Marvin Avenue corridors, to be attended by the Assistant Mayor, Police Chief, Commissioner of Public Works and Clerk of the Village, and a representative from the Putnam County Department of Planning; determining the positive impact of planned bicycle and pedestrian improvements currently under design by the New York State Department of Transportation and Putnam County; assessing current peak period traffic and determining future traffic growth; coordinating with Metro-North Railroad on potential station access and parking improvements; and developing Complete Streets improvements, such as new mid-block crossings, filling in gaps in missing sidewalks, recommending a multi-use path through a new park, and developing concepts to reconfigure intersections and "pedestrianize" portions of streets to increase usable open space.

SECTION B
Project Team Members

As a multi-disciplined consulting firm, McLaren possesses experts in a range of engineering categories. Our 150-person staff features marine engineers, bridge/highway/rail inspectors and designers, underwater inspectors, structural engineers, mechanical engineers, forensic investigators, and waterborne transportation planners. This staff, ably supplemented by our subconsultant VHB, will be available to support this project and ensure its successful completion.

We believe our team's ability to provide the highest level of service is exemplified by our history of successfully executing projects of similar scope, and is combined with an understanding of urban environments. Our understanding of the materials and techniques used in site inspection, design, and construction further augments these comprehensive services.

Our Team' qualified professionals have considerable expertise in:

- Public Outreach
- Planning
- Zoning Code Evaluation / Updates for Sustainability
- Bike Path Planning
- Waterborne Transportation
- Sustainability Practices
- Traffic
- Public/Private Waterfront Development
- Site/Civil Engineering
- Geotechnical Engineering
- Surveying
- Construction Administration & Management

PROJECT ORGANIZATION

Our view is that corporate qualifications and historical experience mean little without the commitment of senior level staff. The strength of our project team, therefore, is the people we assign. A summary of our project team is provided below and further depicted in our proposed organization chart, **Figure B.1,** on the following page.

Malcolm G. McLaren, PE, SECB
Principal-In-Charge
Mr. McLaren has more than 40 years of design, engineering and inspection experience for structural, marine, site/civil, geotechnical, bridge/highway/rail, and forensics projects nationwide. He has participated as engineer or manager on more than 11,000 projects varying in scope and difficulty. Design specialties include land use development; waterfront structure inspection and rehabilitation, especially relative to marine borer activity; waterborne transportation facility design; intermodal transportation planning; design of mixed-use high rise building structures; design of unique bridge and rail structures; and the design and use of composite materials, to name a few.

Steven L. Grogg, PE
Project Manger
Mr. Grogg is 39 years of civil engineering experience encompassing: site development plans, infrastructure design, subdivision plans, environmental impact statements, storm water management, construction support services and green storm water and infrastructure design. His diverse and extensive experience includes preparation of storm water pollution prevention plans, hydrologic/hydraulic analysis, utilities and infrastructure coordination, drainage, sanitary and water

Project Organization Chart

McLaren Engineering Group

VHB Engineering, Surveying and Landscape Architecture, P.C.

Figure B.1

***Malcolm G. McLaren, PE**
Principal-in-Charge

***Steve L. Grogg, PE**
Project Manager

PLANNING

***John F. Lange, PP**
Lead

John F. Lange, PP
Demographics & Growth Trends

Stephen D. Frech, PE
Public/Private Waterfront Development

John F. Lange, PP
Document Review & Updates

Thomas Vanderbeek, PE
Transit Oriented Development

SUSTAINABILITY

***Kari Hewitt, LEED AP, CEM, ENV SP**
Lead

Ana Hagerup
Green Infrastructure

Matthew Egge, LEED AP
Engineering Conservation

Kari Hewitt, LEED AP, CEM, ENV SP
Sustainable Neighborhood Design

TRANSPORTATION

***Matthew T. Carmody, PE**
Lead

Dominic V. DeSantis, PE
Ferry Studies

Matthew T. Carmody, PE
Parking Analysis

Matthew T. Carmody, PE
Pedestrian & Bike Accessibility

Thomas Vanderbeek, PE
Mass Transit Options

PUBLIC OUTREACH

***Steve L. Grogg, PE**
Lead

Susan O'Donnell
Public Outreach Strategy

Susan O'Donnell
Public Workshops

John F. Lange, PP
Design Charrettes

SUPPORT

Luke Daur, PE
Chris Leung
Alison M. Scott

Stephen Zaskey
Jesse M. Volpe
Brendan P. Kelly

Robert Acker
Robert McCombs
Christine Smith

Matthew Egge
Susan O'Donnel
Andrea Connell

Noah Bernstein
Steven Martini

Technical Support Staff as Required

supply, public outreach, expert testimony, parking layout and demand analysis, highway design, traffic signal design, parking garage functional design.

Mr. Grogg has extensive experience in managing and working with large multidiscipline project. His leadership has helped successfully drive some of the most challenging projects. Ms. Angelyn Chandler from New York City Department of Parks and Recreation said "I attribute our success to the amazing group of designers, our constant communication, and Steve Grogg's incredible talent for coordination and management."

John F. Lange, PP

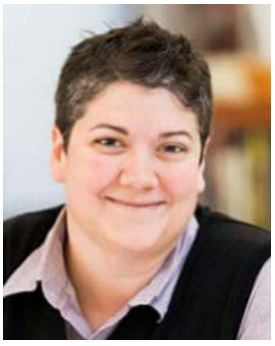
Planning Lead

Mr. Lange is a seasoned, Licensed Professional Land Use and Environmental Planner experienced in both public and private sectors. He has experience in land use planning, zoning, environmental planning and sustainability consulting. He has thorough working knowledge of current environmental regulations including, NEPA and New York State Environmental Quality Review Requirements, Federal and State Stormwater Regulations and Soil Erosion Control Regulations.

Mr. Lange has provided leadership in creating Low Impact/Sustainable Developments (LID) and regulations. He has prepared numerous Environmental Impact Statements and Assessments and serves multiple communities as planning consultant. He continues as an advocate for sustainable solutions in the designs and regulations for the communities he serves.

Kari Hewitt, LEED AP, CEM, ENV SP

Sustainability Lead



Kari Hewitt is a Sustainability Planner and Project Manager working with local governments on sustainability planning and reporting, climate action and strategic energy planning, and stakeholder engagement. Kari ov ersees technical components of the firm's municipal planning efforts, including conducting greenhouse gas (GHG) emissions inventories; assessing energy baseline usage; and quantifying GHG reduction potential, energy savings, and cost savings from existing and proposed strategies. Kari will manage sustainability elements for this project.

Matthew T. Carmody, PE

Transportation Lead

Matt Carmody is a Director of Transportation skilled and experienced in the management and performance of traffic engineering and transportation planning services. He specializes in traffic and parking impact analyses, Complete Streets planning, bicycle/pedestrian studies and multimodal transportation safety. He is a frequent speaker and presenter on contemporary transportation issues at industry conferences and events. Matt will perform transportation studies for Village of Nyack Comprehensive Plan.

Malcolm G. McLaren, P.E., SECB
President & Chief Executive Officer
Project Role: Principal-In-Charge

Education:
Master of Science, Structural Engineering, Rutgers University, 1975
Bachelor of Science, Civil Engineering, Cornell University, 1973

Professional Registration:
Licensed Professional Engineer: New York #056880; and 41 other states
Association of Diving Contractors International (ADCI) Certified Diver
National Association of SCUBA Diving Schools (NASDS) Certified Diver
OSHA – 10 Hour Construction Industry Outreach

Professional Societies and Affiliations *(selected):*

- Advisory Board – Rockland County Salvation Army
- Board of Directors - Foundation for Engineering Education (FEE) - New York State Society of Professional Engineers
- American Society of Testing and Materials
- The Association for Bridge Construction & Design
- American Society of Civil Engineers
- American Association of Port Authorities
- American Concrete Institute
- Precast/Prestressed Concrete Institute
- North Atlantic Port Authorities
- National Society of Professional Engineers
- Association of Diving Contractors
- International Code Council
- Chi Epsilon - Civil Engineering Honorary Society
- Who's Who Among Students in American Universities
- Who's Who in the East

Awards *(selected):*

- Engineer of the Year, 2014, American Society of Civil Engineers, Lower Hudson Valley, NY Branch
- Entrepreneur of the Year, presented by the Rockland Economic Development Corp, November 2012.
- Contribution to Education Award, presented by the NYSSPE, June, 2012.

Lectures/Publications *(selected):*
McLaren, Malcolm G., "Superstorm Sandy's Impact on the NY Waterfront and How Its Effects Are Changing Coastal Design," Lecturer. Structural Engineering Institute of ASCE, Mohawk Hudson Chapter, Albany, NY, October, 2013.Reprised to Albany E-Week sponsored by NSPE and ASCE, February 2014, the Society of American Military Engineers, Albany Post, New York Capital District, May 2014.

Experience:
Mr. McLaren has more than 40 years of design, engineering and inspection experience for structural, bridge/highway/rail, site/civil, geotechnical, marine, and forensics projects nationwide. He has participated as engineer or manager on more than 11,000 projects varying in scope and difficulty. Design specialties include design of mixed-use high rise building structures; land use development; waterfront structure inspection and rehabilitation, especially relative to marine borer activity; design of unique bridge and rail structures; waterborne transportation facility design; intermodal transportation planning; the design and use of composite materials; forensics investigations and litigation testimony; and the design of complex theatrical staging and mechanized effects. Representative projects include:

- **Transmitter Park; Brooklyn, NY; for NYCEDC/NYCDPR/AECOM;** Project Executive for this contract involving open space improvements that include a pier, waterfront esplanade, and a waterfront park with the objective of giving the community much needed recreational space, connecting residents to the waterfront and accommodating future ferry service. Services included underwater inspection of timber low-level relieving platform and concrete seawall, schematic design, and consultation for the park.
- **Haverstraw Ferry Terminal and Parking Garage; Haverstraw, NY; for Village of Haverstraw;** Project Executive for engineering services to design a multi-purpose ferry terminal and develop scoping for an integrated 450 car parking structure. Includes designs for a temporary parking lot and a temporary commuter shelter. The ferry terminal will consist of docking space and associated piers, wharfs and

bulkheads, a terminal building, internal and external lighting, and infrastructure improvements, including electric, sewerage, site drainage and water collections, as well as support for SEQRA and NEPA processes and local, state and federal environmental laws.

- **Structural and Marine Engineering Design Services On-Call Agreement Citywide; for NYCDPR / New York City Department of Design and Construction; *Phase I Beach Restoration Project;*** Project Executive for the preparation of construction documents for over of $140M worth of construction in response to beach damage caused by Superstorm Sandy within six (6) weeks. This unprecedented effort yielded the production of over 950 drawings in four (4) separate contracts within the construction deadline. Public access to the beaches was restored by the Summer of 2013 with all the amenities as in previous seasons.
- **Williamsburg, The Edge Waterfront Redevelopment; Brooklyn, NY; for NYCEDC;** Project Executive for the structural engineering and load rating analysis in designing a concrete staircase and platform as part of this extensive waterfront development project. The mixed-use facility will be primarily utilized for residence, with the goal of maximizing the number of residential units that face the Manhattan skyline.
- **Battery Park City Ferry Terminal; Battery Park City, NY; for Port Authority of New York & New Jersey;** Project Executive and Chief Engineer for this contract to provide structural, marine, geotechnical and civil engineering design services for a 32,000 sq ft floating terminal for the PANYNJ.
- **Maryland Live! Casino; Hanover, Maryland @ Arundel Mills Mall (Anne Arundel County);** Project Executive for the 1,700,000 sq ft building. The building is comprised of a 115,000 sq ft steel framed casino ground floor with a six (6) story precast concrete parking structure above the casino. The casino structure is 300 feet wide by 1,000 feet long and provides approximately 4,500 parking spaces.
- **Harbors at Haverstraw; Haverstraw, NY; for Ginsburg Development, LLC;** Project Executive for this waterfront redevelopment contract consisting of approximately 900 residential units. Includes site/civil engineering; waterfront site development services that include marina development, geotechnical engineering, fathometric survey of the shoreline, shoreline investigation and assessment, and shoreline design alternatives; and construction administration.
- **Design of an Oceanfront Pier, Ferry Terminal and Waterfront Destination; Long Branch, NJ; for the City of Long Branch;** Project Executive for full marine, site/civil and structural engineering services needed for the design and construction of a new oceanfront pier in Long Branch, NJ. The pier design includes multi-functional retail and entertainment facilities, a learning center, a ferry terminal providing commuter access to New York City and incorporating renewable energy resources. The pier is a critical aspect of the City's redevelopment plan, enhancing its identity as a premier United States destination.
- **Piermont Landing; Piermont, NY; for Kaestle-Boos Associates, Inc.;** Project Executive for the conversion of a former paper mill factory (Building 28 and 41) to a mid-rise luxury housing complex. This 3-story, 90,000 sq ft structure includes 119 townhouse units, a 268-car parking garage, and a one-acre rooftop plaza. McLaren provided foundation design services and structural engineering.
- **Ridgeway Shopping Center; Stamford, CT; for DKH Associates, Inc.;** Project Executive for the rehabilitation and additions to an existing shopping center. Included design of a seven-level precast parking structure, elevated roadway and three-level retail structure.
- **Maxwell House Waterfront Site Development; Hoboken, NJ; for P.T. Maxwell, LLC;** Project Executive for the conversion design of the former Maxwell House Coffee industrial site to a residential mixed-use facility. Plans prepared included conversion and modifications of existing buildings, design of roadways that connect to local streets, site and utility development, marine design and bulkhead rehabilitation design, the conversion of one industrial pier and full replacement of one pier for use as a pedestrian park as part of Hudson River Waterfront Walkway.
- **Waterfront Park Fishing Pier and Floating Docks; Dobbs Ferry, NY; for Village of Dobbs Ferry;** Principal-In-Charge for the design and oversight of construction of new fishing pier and floating dock structures within the Waterfront Park currently under restoration.

Steven L. Grogg, P.E.
Chief of Site/Civil Division
Project Role: Project Manager

Education:
Bachelor of Science, Civil Engineering, University of Maryland, 1975

Professional Registrations and Certifications:
Professional Engineer: New York #062708-1-1986; New Jersey; Pennsylvania; Delaware; Maryland; California

Professional Societies:
American Society of Civil Engineers Member
National Fire Protection Association
National Society of Professional Engineers Member
New York Society of Professional Engineers Member

Awards:
Engineer of the Year, presented by the New York State Society of Professional Engineers - Rockland Chapter, 2013

Proven Management Experience
"I wanted to thank each one of you for your contribution to the Beaches Restoration project. It really is impressive what we were able to do in so little time. I attribute our success to the amazing group of designers, our constant communication, and Steve Grogg's incredible talent for coordination and management."
- Angelyn Chandler of the NYCDPR on August 2, 2013,

Experience:
Mr. Grogg is Vice President of McLaren's Site/Civil division and has 39 years of civil engineering experience encompassing: site development plans, infrastructure design, subdivision plans, environmental impact statements, storm water management, construction support services and green storm water and infrastructure design. His diverse and extensive experience includes preparation of storm water pollution prevention plans, hydrologic/hydraulic analysis, utilities and infrastructure coordination, drainage, sanitary and water supply, public outreach, expert testimony, parking layout and demand analysis, highway design, traffic signal design, airport design, parking garage functional design. Relevant project experience includes:

- **Structural Engineering Design Services On-Call Agreement Citywide; Staten Island, Rockaway Beach and Coney Island, NY; for New York City Department of Parks & Recreation; *Phase I Beach Restoration Project;*** Project Manager for the preparation of construction documents for over of $140M worth of construction in response to beach damage caused by Superstorm Sandy. Mr. Grogg managed seven (7) A&E sub-consultants for this project. This unprecedented effort yielded the production of over 950 drawings in four (4) separate contracts within a six (6) week period. Mr. Grogg managed engineering design for the Boardwalk repairs, repairing damaged ramps and stairs, reconstructing damaged concrete boardwalk and ramp/stairs, design of facades, slope stabilization, beach access paths and ramps, ADA accessibility, utility rehabilitation, and reconstruction and repair of DRR comfort station, concession, and lifeguard buildings.
- **SUNY Maritime - Facilities Master Plan; for Perkins Eastman;** Lead Civil Engineer responsible for the civil engineering services required in support of the campus' master plan. Projects tasks included an assessment of conditions including 4 selected buildings, summary of soils and drainage, infrastructure and site utilities, marine and shoreline facilities, analysis of space needs, development of facilities master plan concept alternatives and final recommendations.
- **Engineering Services Crestwood Lake Apartments Master Plan; for Lee Weintraub Landscape Architecture, LLC;** Project Manager responsible for the civil engineering services need to develop a Master Plan for the upgrade and improvements. McLaren's responsibilities included drainage analysis, development of recommended improvement for the complex and preparation of the initial Drainage Improvement Funding grant application as well as identify other potential funding grants.
- **Henry Hudson Quadricentennial Park and Waterfront Promenade; Haverstraw, NY; for Town of Haverstraw;** Project Manager for the design implementation of the waterfront park improvements. Mr. Grogg led the project emphasizing organization (with specific work product objectives and regular review meetings to measure the team's progress), communication (using a team workshop approach and emphasize early and ongoing communication with stakeholders), thoroughness (ensuring a complete understanding of the existing conditions, issues, needs, and goals), design excellence (to devise and

implement the most imaginative, responsive and buildable solution). Tasks included: hydrographic surveys of areas requiring slope/shoreline stabilization, phase I ESA, soil investigation, archeological and historic resource survey, wetland assessment and ecological evaluation, schematic design alternatives, SEQR, construction requirement analysis, final design and construction documents, permits, and bid and construction phase services.

- **Pelham Pedestrian Safety Study; Pelham, NY; for Town, Village and School District of Pelham, and Pelham Manor;** Project Manager for the investigation of pedestrian safety for students walking along Sanford Boulevard, under the Bronx River Parkway ramp and several street intersection from the Pelham High/Middle School to offsite recreation fields. The Study addressed crosswalk locations and changes to traffic signal operation, safety barriers in areas of narrow sidewalk and traffic calming measures to address safety at crosswalks. The study was presented to the Client and at a public information meeting to the public.
- **Haverstraw Ferry Terminal and Parking Garage; Haverstraw, NY; for Village of Haverstraw;** Lead Site/Civil Engineer responsible for engineering services for a multi-purpose ferry terminal and scoping for an integrated 450 car parking structure. Includes designs for a temporary parking lot and a temporary commuter shelter. The ferry terminal will consist of docking space and associated piers, wharfs and bulkheads, a terminal building, internal and external lighting, and infrastructure improvements, including electric, sewerage, site drainage and water collections, as well as support for SEQRA and NEPA processes and local, state and federal environmental laws.
- **Maxwell House Site Development; Hoboken, NJ; for ICCI Construction;** Lead Site/Civil Engineer for conversion design of the former Maxwell House Coffee industrial site to a residential mixed-use facility. Plans prepared included conversion design and modifications of existing buildings, design of roadways that connect to local streets, site and utility development, and the addition of a connecting two-level underground parking area,as well as the conversion of one industrial pier and full replacement of one pier for use as a pedestrian park as part of Hudson River Waterfront Walkway.
- **Harbors at Haverstraw; Haverstraw, NY; for Ginsburg Development, LLC;** Site/Civil Engineer for this waterfront redevelopment and shoreline design project that features nearly 900 residential units. Responsibilities included revisions to the shoreline design based on the client's architectural preferences, production of construction documents, and performed field inspections to monitor the progress of the construction work. The project included site/civil engineering; waterfront site development services that include marina development; geotechnical engineering; fathometric survey of the shoreline; shoreline investigation, assessment and design; and construction administration.
- **Transmitter Park; Brooklyn, NY; for NYCEDC/NYCDPR/AECOM;** Lead Civil Engineer for the open space improvements that include a pier, waterfront esplanade, and a waterfront park with the objective of giving the community much needed recreational space, connecting residents to the waterfront. Services included design of park infrastructure and grading, stormwater design and permitting, DEP connection permit and construction phase services, and consultation for the proposed park.
- **Vessel Siting Study; Beacon, NY; for City of Beacon;** Lead Civil Engineer for the study and assessment of Beacon's Harbor Management Plan. The Plan defines how the Beacon Harbor could accommodate research vessels, vessel facilities, and a docking pier associated with the addition of a state-of-the art research center. Project includes assessing the potential locations of the research vessels and their facilities, performing site and environmental studies, selecting a preferred location, obtaining regulatory permits and approvals, and designing the associated vessel facilities and pier.
- **Reconstruction of the Battery Park and Perimeter Bikeway; for Quennell Rothschild Partners;** Project Manager for the civil, geotechnical, and structural engineering services needed to perform preliminary and final design for landscaping and bikeway improvements within Battery Park. Contract also included preliminary design for modifications to existing sidewalks surround the Park along Battery Place and State Street, relocation of monuments, utility coordination and evaluating potential impact to the MTA subway structures passing under Battery Park. Permitting and construction administration were also provided.

John F. Lange, PP
Director of Planning
Project Role: Planning Lead

Education:
Master of Urban Planning, CUNY-Hunter College, Department of Urban Planning
Bachelor of Arts in Geography, State University of New York at Binghamton

Registrations & Certifications:
Licensed Professional Planner – New Jersey

Professional Training:
Wharton School – IBM Marketing Analysis and Planning
Geographic Facilities Information Systems Software, GFIS Center, Houston, TX.
ARC INFO Geographic Information Systems Software, Redmond, CA.
Westchester County Soil Erosion and Sediment Control, White Plains, NY
Site Planning and Design Considerations for Green Infrastructure
New York State Stormwater Training for Construction Site Stormwater

Professional Societies and Affiliations:
Member Community Design Review Committee(CDRC) – Town of Ramapo
Member Architectural Review Board (ARB) – Town of Ramapo
Former Treasurer of GFIS Users Group
Chairman - Dalton Farm Homeowner's Association: Member Architectural Review Board; Chair, Dalton Farm Property Committee

Experience:
Mr. Lange is a seasoned, Licensed Professional Land Use and Environmental Planner experienced in both public and private sectors. He has experience in land use planning, zoning, environmental planning and sustainability consulting. He has thorough working knowledge of current environmental regulations including, NEPA and New York State Environmental Quality Review Requirements, Federal and State Stormwater Regulations and Soil Erosion Control Regulations.

Mr. Lange has provided leadership in creating Low Impact/Sustainable Developments (LID) and regulations. He has prepared numerous Environmental Impact Statements and Assessments and serves multiple communities as planning consultant. In addition to consulting services, Mr. Lange's analysis of impacts and mitigation efforts resulted in the recovery of $300,000.00 on behalf of a municipal client as compensation for impacts from a major development in a neighboring municipality. He continues as an advocate for sustainable solutions in the designs and regulations for the communities he serves. Mr. Lange is well versed in Geographic Information Systems technologies and has served as an adjunct instructor for Geographic Information Systems at the undergraduate level. Representative projects include:

- **Haverstraw Ferry Terminal; Haverstraw, NY; for Village of Haverstraw;** As the Planner, prepared Haverstraw-Ossining Ferry Technical Report supporting the findings of the environmental report. Issued a letter of support for a new project to upgrade the existing ferry terminal at lower costs and significantly reduced environmental impacts.
- **Continuing Planning Services; for Frederick P. Clark Associates, Inc.; Senior Planning Consultant;** Provision of advisory consulting services on comprehensive planning, continuing planning, transportation planning, zoning, development and redevelopment matters including subdivision, site plan, special permit, and rezoning reviews; sustainability reviews and energy efficiency analyses; infrastructure planning; large scale development review and guidance; architectural review board services, parks and recreation planning including: rail trail conversions, parks and open space plans as well as recreation fee studies, environmental assessment and impact statement reviews, preparation and guidance on New York State Environmental Quality Review Act (SEQRA) procedures for multiple NY communities including the Town of Ramapo, Village of Suffern, Town of Somers, Town of Hyde Park, and Village of Ossining. The NYS SEQR activities include preparation of Environmental Impact Statements and Assessments, preparation of Supplemental Environmental Impact Statements for Traffic, Water and Sewerage Facilities

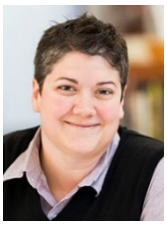
and preparation of detailed Findings Statements. Design services provided for private clients including site planning, preparation of supporting environmental impact documents, low impact development, sustainable developments and energy efficiency. Special planning services include planning for RLUIPA compliance. **Special Projects:** Preparation of Environmental Impact Statement for Project Grand Slam Minor League Ball Field; Affordable Housing Environmental Impact Assessments; Prepared Impact Analysis Study on Cross Roads Development for Village of Suffern; Preparation of Hospital Zone for Village of Suffern. Preparation of Design Concept for Downtown Monsey Redevelopment Project; Preparation of Revised Zoning and Subdivision Ordinances for Town of Ramapo; Preparation of Supplemental EIS for the Town of Ramapo; Design of Ramapo Pedestrian Path (Railroad Conversion Project); Preparation of Architectural Design Standards for the Town of Ramapo; Preparation of Wetlands and Watercourse Regulations for Town of Ramapo; Preparation of Scenic Roads Ordinance for Town of Ramapo; Preparation of Natural Hazard Mitigation Plans; Preparation of Architectural Design Guidelines for Village of Ossining; Brownfield Redevelopment Studies for the Town of Fishkill, New York. Preparation of documents for and testimony for commercial clients for Zoning projects, Preparation of View Shed Analyses and Visual Simulations of proposed developments; Planning Consultant for Community Design and Review Committee (CDRC) and Architectural Review Board (ARB). *September 2003 to January 2015*

- **Project Grand Slam; Ramapo, New York;** Planning Consultant: Prepared Environmental Impact Statement for Construction of a 3,500 seat baseball stadium for the Town of Ramapo which now houses the Rockland Boulders. Mr. Lange prepared the EIS which included a traffic simulation study, contaminant mitigation from an old Orchard, Phase 1A&B archaeological studies, and visualizations.
- **Scenic Roads Law;** Town of Ramapo, New York; Project Consultant: Prepared proposed law to preserve views from Scenic Roads within the Town of Ramapo including Environmental Review of the impact of the law.
- **Planning Consultant, Comprehensive Plan Update; Northern Ramapo;** Prepared proposed comprehensive plan update for the northern third of the Town of Ramapo. Evaluated residential and commercial potentials within this area focusing on backup plans for a golf course and economic.
- **Planning Consultant – Village of Suffern – Hospital Zone;** Prepared new hospital zone for Good Samaritan Hospital on behalf of the Village of Suffern. Provided new multiple setback requirements to isolate the noise impacts of the hospital and set Floor Area Ratios for future development with Visual Analysis to show projected impacts.
- **Planning Consultant; Town of Ramapo, New York;** Preparation and Evaluation of Potential Environmental Impacts for the update of the Comprehensive Plan for the Town of Ramapo. The plan provided for new multi-family housing, mixed use land uses, floating zones for over 55 residential communities as well as evaluated the infrastructure needs of the proposed developments.
- **Director of Marketing and Sales; for M.A. Young and Associates Inc.; Responsibilities:** Preparation and Execution of Marketing Strategy for Asset++ Suite of Facilities Management Software Solutions and Consulting Services including lead generation; revenue projections, sales, customer support and business shows; preparation of marketing materials, deliverables and packaged demonstrations. **Special Projects:** Tidal Electric Generation – facilities mapping and modeling of zero pollutant electric generation; New York, NY; Biological remediation of oil pollutants; mapping of time series data.
- **Mayo Lynch and Associate – Principal Planner**; **Special Projects:** Creation of Master Plans, Facilities Plans, Wastewater Facilities Plans for municipal clients in northern New Jersey and southern New York State; feasibility study for lime stabilization of sewage sludge; housing rehabilitation plans.
- **New York City Planning Department – Resource Conservationist; Staten Island, NY Special Projects:** Open Space Plan for South Richmond; Staten Island Rapid Transit Study.

Kari Hewitt, LEED AP, CEM, ENV SP

Sustainability Planner

Project Role:
Stainability Lead



Education

MA, Urban and Environmental Policy and Planning, Tufts University, 2008

BA, Sociology, Smith College, 2004

Registrations

LEED Accredited Professional, 2008

Certified Energy Manager, 2010

Envision™ Sustainability Professional, 2013

Affiliations/Memberships

United States Green Building Council

American Planning Association

American Society of Adaptation Professionals

Association of Energy Engineers

Kari Hewitt is a Sustainability Planner and Project Manager working with local governments on sustainability planning and reporting, climate action and strategic energy planning, and stakeholder engagement. Kari oversees technical components of the firm's municipal planning efforts, including conducting greenhouse gas (GHG) emissions inventories; assessing energy baseline usage; and quantifying GHG reduction potential, energy savings, and cost savings from existing and proposed strategies. She has considerable familiarity with green building practices, energy efficiency strategies, and carbon markets.

9 years of professional experience

Albany Unified Sustainable Development Ordinance, Albany, NY

Kari is part of a consultant team retained by the City of Albany to undertake "ReZone Albany," a comprehensive update of the City Code to incorporate sustainable design and smart growth principles with a specific emphasis on zoning. She is preparing the Performance Benefits Metrics Report in accordance with NYSERDA requirements under the Cleaner, Greener Communities Program. Kari is identifying performance metrics for inclusion in the Performance Benefits Metrics. Sector-Common Metrics could include vehicle miles traveled, trip reductions, transit ridership, community-scale sector-specific energy reductions, waste metrics, and others to be determined.

New York State Climate Smart Communities Certification Pilot Program, NY

Kari was part of a team that developed a pilot phase of the Climate Smart Communities (CSC) Certification program. The CSC Certification program was developed to further engage New York State local governments in the CSC program, to provide a more robust framework to guide local governments in their climate protection efforts, and to recognize their achievements as they make progress. Kari supported development of a checklist of actions structured around each of the ten CSC Pledge Elements along with a robust guidance document to support communities in understanding each of those actions. Specifically, she has led the development of the checklist and guidance for actions related to energy efficiency and green economic development.

New York State Climate Smart Communities Coordinator Program, NY

Kari supports the design and delivery of technical assistance to nearly 50 Climate Smart Communities members in the Lower Hudson Valley and Capital District regions of New York. Through this project, the team helps drive local climate and sustainability programs through the provision of direct services related to completing greenhouse gas (GHG) emissions inventories, climate action and sustainability plans, implementation of GHG reduction and other sustainability measures, identification of funding opportunities, and reporting and tracking of sustainability metrics. Kari has led the development of multiple custom technical assistance service strategies for local governments, tasks associated with greenhouse gas inventories, education and training, and supported the development of tools and resources for the project as well.

New York State Cleaner Greener Communities, Capital Region Sustainability Plan, NY

Kari was involved in a number of components of the Capital Region Sustainability Plan through the Cleaner Greener Communities program. She oversaw greenhouse gas inventory tasks for the project and was responsible for the design and implementation of an evaluation process for all recommended initiatives for the eight focus areas of the Sustainability Plan: Climate Adaptation, Economic Development, Energy, Food Systems, Land Use and Livable Communities, Transportation, Waste, and Water. She helped lead the work of the Energy Technical Committee in identifying goals, initiatives, and metrics for this focus area of the Plan.

Energy and Climate Footprint Action Planning Services, Schenectady County, NY

Kari served as the task leader for the completion of the greenhouse gas (GHG) emissions inventory and forecast for government operations for the County. She was responsible for working with County staff and other stakeholders to collect data, calculate emissions, conduct emissions forecasting, and develop a report and methodology for the GHG inventory.

Cleaner Greener Communities, Capital Region, NY

Kari was involved in a number of components of the Capital Region Sustainability Planning process through the Cleaner Greener Communities program. She oversaw Greenhouse Gas Inventory tasks for the project and was responsible for the design and implementation of an evaluation process for all recommended initiatives for the eight focus areas of the Sustainability Plan: Climate Adaptation, Economic Development, Energy, Food Systems, Land Use and Livable Communities, Transportation, Waste, and Water. She helped lead the work of the Energy Technical Committee in identifying goals, initiatives, and metrics for this focus area of the Plan.

Electric Vehicle Infrastructure Feasibility Study, Albany, NY

Kari played a lead role in the development of an Electric Vehicle Infrastructure Feasibility Study for Albany, New York. The goal of this project was to encourage an increase in the number of electric vehicles (EVs) throughout the Capital Region through strategic placement of charging infrastructure and EV friendly policies and permitting requirements. Through this initiative, VHB developed a methodology and a set of evaluation criteria for effective siting of electric vehicle supply equipment.

Hudson Master Plan, Hudson, MA

Kari led the process for completing the Energy chapter of the Hudson Master Plan. She was responsible for coordinating the Energy component of a Public Forum for the Master Plan, coordinating with the municipal utility, Hudson Light & Power, and developing energy recommendations for the Town for inclusion in its Master Plan.

Energy Baseline and Greenhouse Gas Emissions Inventory, West Palm Beach, FL

Kari led the data collection and analysis portion of the 2008 energy baseline and greenhouse gas emissions inventory task for the City of West Palm Beach's sustainability planning effort. She worked directly with City staff to collect all energy data for both government operations and the community at large from Florida Power & Light, the Solid Waste Authority, Treasure Coast Regional Planning Council, and Palm Beach County. Originally completed in 2011, this project continues with a 2013 update to the City's GHG inventory and measurement of progress to date.

Monroe County Sustainability Action Plan, Monroe County, FL

Kari managed VHB's role on the development of a Sustainability Action Plan for Monroe County, Florida, which included an update of County operations and community-scale greenhouse gas inventories, an assessment of progress on energy targets, and development of energy goals, strategies, metrics, and implementation plans. She also assisted with online and in-person public engagement and communication of the plan, which included both climate change mitigation and climate resiliency components. Building off its role on this projects, VHB was also contracted to support and environmental and greenhouse gas assessment in the County's process of determining its yard waste management vendor and process.

Matthew T. Carmody, PE

Director of Transportation

Project Role:
Transportation Lead

Education

BS, Civil Engineering, Clemson University, 1998

Registrations

Professional Engineer NY, 2004

Matt Carmody is a Director of Transportation skilled and experienced in the management and performance of traffic engineering and transportation planning services. He specializes in traffic and parking impact analyses, Complete Streets planning, bicycle/pedestrian studies, and multimodal transportation safety, and is a frequent speaker and presenter on contemporary transportation issues at industry conferences and events.

17 years of professional experience

Town of Yorktown Comprehensive Plan, Yorktown, NY

Matt participated in transportation evaluations and recommendations within a new master plan for the Town of Yorktown, encompassing roadway capacity improvement actions, traffic calming and safety actions, and transit options. He mapped existing and future baseline conditions; participated in public outreach events; developed transportation improvement alternatives to enhance vehicle, bicycle, and pedestrian safety; and developed roadway management actions to mitigate the effects of future development. He also prepared the "Transportation" chapter of the Draft and Final Generic Environmental Impact Statements.

Building a Better Broadway Complete Streets Design, Kingston, NY

Matt is Traffic and Safety Task Leader for a Complete Streets corridor plan on the central one-mile stretch of Broadway between the historic Stockade District and Rondout neighborhood in the City of Kingston. He has analyzed crash data and led a walkability audit from Liberty Street to Chester Street with stakeholder representatives, and is working with the team, Technical Advisory Committee, and client to develop Complete Streets improvements on Broadway including alternative parking concepts such as angled back-in parking, road diets, bicycle route markings and signage, reconfiguring intersections, and traffic calming. He will also manage a Synchro traffic modeling effort to test the feasibility of alternative improvement scenarios, and provide tables showing parking gained or lost as a result of safety and mobility improvements.

Village of Brewster Urban Renewal Plan, Brewster, NY

Matt is leading the Complete Streets task for the Village of Brewster Urban Renewal project. His responsibilities have included a Complete Streets walking tour; determining the positive impact of planned bicycle and pedestrian improvements currently under design by NYSDOT and Putnam County; assessing current peak period traffic and determining future traffic growth; coordinating with Metro-North Railroad on potential station access and parking improvements; and developing Complete Streets improvements such as new midblock crossings, filling in gaps in missing sidewalks, recommending a multi-use path through a new park, and developing concepts to reconfigure intersections and "pedestrianize" portions of streets to increase the useable open space in the Village. Future work will include coordination of improvements with the developer of a transit-oriented development site adjacent to Brewster Station.

Newburgh Area Transportation & Land Use Study, Newburgh, NY

Matt was involved in a comprehensive multimodal transportation and land use study for the City of Newburgh and nearby towns and villages in western Orange County. He performed roadway safety and walkability assessments for the proposed "Complete Streets" redesign of the Broadway corridor to incorporate potential transit and bicycle/pedestrian initiatives, as well as to calm traffic and enhance public space. He was also involved in a community design charrette as part of the project's stakeholder outreach program, and facilitated a public workshop for the Orange County Non-Motorized Transportation Plan.

MOVEPGH Transportation Plan, Pittsburgh, PA

Matt conducted traffic, bicycle, and pedestrian safety analyses for MOVEPGH, the transportation and mobility element of Pittsburgh's first-ever comprehensive plan. MOVEPGH provides a blueprint for livable communities and sustainable systems; prioritizes investments that impact transportation, land use, and the environment; and guides a complete multimodal transportation system for the city's future. He collected and summarized vehicular, bicycle, and pedestrian safety and crash data collected from the City of Pittsburgh and Pennsylvania Department of Transportation for critical intersections and streets. He analyzed the crash data to identify priority locations and guide the early conceptual identification and development of infrastructure projects to address safety deficiencies.

White Plains BID Retail Study, White Plains, NY

Matt is Transportation Project Manager of a retail study for the White Plains Business Improvement District to analyze the factors that affect the supply and demand of office, residential, and retail markets. He is overseeing the stakeholder outreach and discussions of issues with attendees of public meetings. The team is studying electronic parking utilization records, develop recommendations for wayfinding signage and ideas for electronic distribution of parking information as well as for optimizing on-street parking regulations, and determine siting potential locations for consolidated valet operations.

Hudson Square Traffic Management Plan, New York, NY

Matt was Project Manager for a planning study on behalf of the Hudson Square Business Improvement District (BID) to investigate traffic, parking, and pedestrian issues and opportunities within the Hudson Square neighborhood in Manhattan. He led traffic and pedestrian investigation walking tours with Hudson Square BID and NYCDOT representatives to identify key intersections and priority locations; discuss and examine community concerns related to traffic congestion and circulation, parking capacity, and pedestrian safety; and identify potential interim improvements at each location. He developed a toolbox of short- and long-term improvements and prepared improvement assessment matrices to compare the relative costs and benefits of the interim improvements.

Cherry Street Traffic Calming, Bedford, NY

Matt conducted a traffic calming study on behalf of the Town of Bedford on Cherry Street. He conducted site visits with a Lieutenant with the Town of Bedford Police Department and the Town Commissioner of Public Works. Staff collected sight distance measurements; tabulated traffic and crash data collected by the Town of Bedford Police Department; collected and tabulated pedestrian, bicycle, and vehicular counts at two intersections; performed an assessment of pedestrian crossings at one location; and recommended improvements designed to reduce speeds, improve sight distance, and increase the visibility of pedestrians crossing the street. Matt met with Town representatives to describe the recommended improvements and he prepared a traffic study.

4 Old Mill Lane Group Home Traffic Review, Katonah, NY

Matt performed an independent analysis of the potential traffic impacts that the conversion of a four-bedroom single-family home to a four-unit group home would have on Old Mill Lane in West Nyack. He conducted a site visit with the Town of Bedford Director of Planning, tabulated traffic and crash data collected by the Town of Bedford Police Department, projected and compared traffic using several different ITE rates, and performed a review of the traffic study submitted by the applicant. Matt also prepared a traffic study report submitted to the Town to assist in their review of the application.

SECTION C

Project Schedule & Details

I. PROJECT UNDERSTANDING

The Village of Nyack (Village) aims to meet current and future demands in a sustainable manner, growing efficiently and in a way that supports economic development and increased mobility while improving the environment and health of the Village and surrounding communities. Nyack's membership and leadership on NYSERDA Cleaner Greener Communities is recognized, and the McLaren Team applauds the Village's creation of the Sustainability Desk, Sustainability Coordinator, Green Policy Task Force, and the "Sustainable Nyack Action Plan 2015-2016." The Village has completed or identified over 20 sustainable pledge actions under the guidance of its Sustainability Coordinator and Green Policy Task Force since taking the Climate Smart Communities Pledge in November 2013.

The Village is also pursuing sustainable transportation options. In early 2014, the Village requested a sustainable transportation consultation meeting from the Cleaner Greener Communities Custom Service Strategies. VHB assisted with this consultation, and at that meeting, potential ferry landing locations, ferry service and use, pedestrian and bicycle transportation connections, parking, and a green transportation conference were discussed. The existing Comprehensive Plan was created in 2002 and the most recent update was completed in 2006 with recommendations for the Gateway, Waterfront, residential and downtown areas.

Although Nyack is a small village, the difficulty in trying to meld three (3) distinctly different areas of character – the Gateway west of the Thruway/Route 59 crossing, the waterfront (east of Broadway), and the downtown proper is a formidable one. Addressing these challenges helps us recognize the opportunities and the synergies of these efforts. Transportation and sustainable development are key in helping the Village reach its goals. We are prepared to help the Village define and implement this vision.

Traditionally improvements to mass transportation to and from Nyack are driven by the need to get to and from work. The same improvements can also be a vehicle to bring new consumers to Nyack to eat, shop and reside in the Village while building a more sustainable base. Transit oriented development helps develop critical masses of people and commerce around transit facilities to support local businesses while minimizing and in some cases eliminating the reliance on the automobile.

To move people from a transit center or Transit Orient Development (TOD) in the Gateway to the downtown and the waterfront/ferry site (or vice versa), a localized transit system, such as Clarkstown Mini-Trans will be required. Supporting this approach, a mixed use commercial/residential complex designed within and around the ferry complex provides the hub for access from both water and land. A small system designed to support these locations can rapidly adapt to peak ride demands, and can provide the increased frequency of service necessary for people to want to use it. Park your car in a convenient lot (or leave it at home), jump

Maxwell Place Waterfront Community

on the trolley, and catch the ferry; take the trolley to work or to shop; take the trolley to the Ferry. The master of moving large numbers of people is Disneyworld, and a micro scale implementation of the ease of transfer between modes could be followed here. When one thinks about people moving successes in urban environments, San Francisco with its trolly service offers parallels with the slope to the water and the water borne transportation system integration. Jersey City's light rail system feeds residential neighborhoods to the ferry and rail system to New York providing a mixed mode identity with easy transitions between nodes.

Although transportation is not the only focus of this study, we believe it is integral to its success. Financially and sustainably, Federal and State grants and subsidies can be obtained. We understand that JARC (Job Accessibility/Reverse Commute) monies are available for communities in our Metropolitan Planning Area.

The McLaren Team is well poised to assist the Village in this regard, with:

- VHB's transportation knowledge and experience with NYSERDA and Federal grants (including TAPs).
- As Commissioner of Planning and Public Transportation for the County of Rockland, Mr. Vanderbeek managed a $30 million budget with Federal grants, state subsidies, and farebox revenue, without County funds. He is well experienced having directed the Mass Transit Task Force and County Bus system.

Key Project Issues

In order to execute the design of this proposed scope of work, we will provide the Village with an accurate, efficient and well-managed program. To accomplish this, we have identified several key issues, which we intend to address throughout the project. They are as follows:

- Streetscape Requirements – and ensuring integration and consistency with the TAPs project on Broadway
- Climate Resiliency and Sea Level Rise – a mixed challenge of waterfront development and protection of life and property
- Pedestrian and Bicycle Solutions – limited space competes with parking and business needs
- Mass Transportation Solutions, Regionally and Locally – from potential ferry and BRT service, to existing TOR, TZx, and Coach USA bus service, to potential local mini-trans, supported by Federal and state funding
- Maintaining the Character/Persona of the Village
- Defining the Village at its Borders - the Gateway, the north end of Broadway, the south end of Broadway, and the waterfront
- Defining Transit Oriented Development to provide support for the transit initiatives and to reduce automobile trips
- How to efficiently manage the movement of people between neighborhoods and hubs

These issues will be further defined and refined during the intensive public outreach program. We believe that the McLaren Team offers, by far, the most resources to the Village; in terms of experience, local work and knowledge, and ingenuity.

II. PROJECT APPROACH

Below we describe the following tasks in detail:

- Task 1 – Contract Management
- Task 2 – Develop Public Outreach Strategy
- Task 3 – Evaluate Current Plans, Zoning Regulations and Other Relevant Policies
- Task 4 – Conduct Public Workshops
- Task 5 – Conduct Design Charrettes
- Task 6 – Zoning Code Evaluation
- Task 7 – Comprehensive Plan Update
- Task 8 – Zoning Code Updates for Sustainability
- Task 9 – Planning and Environmental Review
- Task 10 – Presentation to Village Board
- Task 11 – Final Adoption of Updates

TASK 1 – CONTRACT MANAGEMENT

TASK 1A – CONTRACT MANAGEMENT AND QUARTERLY PROGRESS REPORTS

Steven L. Grogg, PE
Project Manger

The McLaren Team will provide Project Manager, Steve Grogg, PE, as the single point of contact for the Village, and will comply with the requirements and scope in the RFP, which includes: participation in conference calls and meetings, as outlined below; preparation and submission of quarterly reports, as outlined below; coordination and management of all subcontractors; and review of all deliverables prior to submission to the NYSERDA Project Manager. The McLaren Team will submit quarterly progress reports within 30 days after the end of each quarter, in a template provided by NYSERDA. During each calendar year, quarter start and end dates as follows:

Quarter 1: January 1 - March 31

Quarter 2: April 1 - June 30

Quarter 3: July 1 - September 30

Quarter 4: October 1 - December 31

Each Quarterly Progress Report will provide:

- A summary of progress and accomplishments over the previous quarter, including a discussion of major tasks and deliverables in the prior quarter;
- Explanation of Contract management activities completed in the previous quarter with backup documentation including timesheets showing hours worked, hourly rate, staff person, and title;
- Explanation of current quarter's activities and plans, including tasks and deliverables to be completed; and
- Discussion of any major issues or problems encountered during the prior quarter, deviations from schedule and budget, and other issues related to the successful outcome of the project.

TASK 1B – CONFERENCE CALLS AND MEETINGS

The McLaren Team will comply with the requirements and scope in the RFP; the number of meetings is limited to a maximum of 16 under this task, as shown in the timeline in the RFP.

The McLaren Team participate in periodic conference calls and project meetings as needed to gauge project status and verify the completion of project milestones. The McLaren Team will attend an initial project meeting with the Village to review project requirements, site conditions, roles and responsibilities, identify planning issues, and share information on existing and ongoing planning documents and processes that would assist in the completion of the project.

TASK 1C – FINAL REPORT AND TECHNOLOGY TRANSFER

The McLaren Team will prepare and submit a comprehensive Final Report, in a template provided by NYSERDA (limited to no more than 15 pages plus attached final products), which describes the work performed and the results associated with each task.

The McLaren Team will make all final project deliverables available for public use and agree to work with the Village and, if necessary, any other relevant governmental agencies, to promote the project throughout its implementation. McLaren will also honor any reasonable request made by the Village or relevant governmental agencies to provide additional information necessary to create a press release or case study showcasing this project.

TASK 1D – DRAFT PRELIMINARY PROJECT BENEFITS METRICS REPORT

The McLaren Team's sustainability planners emphasize the importance of metrics, indicators, and tracking systems for every plan or project we work on—recognizing that "you can't manage what you don't measure" and that understanding the impact of a community's actions is critical to continuous improvement, reporting progress, and prioritizing future actions. We have found that our technical analysis of baseline data, target setting, and development of indicators and metrics—and especially establishing innovative, user-friendly systems for tracking data—provides critical added value to all of our sustainability plans and projects.

The McLaren Team proposes the following steps for developing a draft and final Performance Benefits Metrics Report (PBMR) and conducting the analysis to quantify the benefits of achieving the goals, actions and policies developed as part of this Comprehensive Plan Update:

1. As part of the development of the Project Execution Report, we will establish scope and parameters for developing the performance metrics, benefit values, necessary data collection, and calculation methods for the Comprehensive Plan Update. This will include the following steps in order to complete a Draft PBMR, which will be:
    - Identify performance metrics for inclusion in the PBMR and benefit values likely to be quantified (benefit values will be determined based on the measures identified for the plan)
    - Identify data needs and data sources
    - Review required performance metrics, Common Planning Metrics and Sector-Common Metrics that are most relevant for Nyack
    - Review the Mid-Hudson Regional Sustainability Plan for any additional applicable metrics
    - Review national programs/rating systems for relevant indicators and metrics, e.g., LEED for Neighborhood Development and the STAR Communities Program. The McLaren Team has a strong working knowledge of programs, like STAR and LEED ND, that local governments can reference to be consistent with national sustainability standards.

- Identify the overall data needed to measure the chosen indicators, metrics and benefits

2. In addition to utilizing data collected as part of other tasks within this Comprehensive Plan Update, we will coordinate with the Village to determine any existing data collection, tracking and reporting processes/systems in the Village that may be complimentary to tracking PBMs and/or assist in the quantification of benefit values.
3. Based on the results of steps 1 and 2, we will submit a Draft PBMR that includes the reporting schedule for metrics, methods likely to be used for quantifying benefit values, any assumptions that have been used, and the requirements for further data collection.
4. Once the Comprehensive Plan Update has been drafted, including zoning updates, sustainability recommendations, and transportation-related recommendations, we will revise any metrics and estimate benefit values wherever feasible for strategies identified. This estimate is based on industry best practices, case studies, and rule of thumb estimates for benefits, wherever quantifiable, from the implementation of such measures. The McLaren Team relies on extensive experience with, and knowledge of, tools and resources for Update, which will include at a minimum the Required Performance Metrics referenced in Appendix A of the RFP, three (3) or more Common Planning Metrics, and additional Sector-Common Metrics. The Sector-Common metrics could include vehicle miles traveled (VMT), trip reductions, transit ridership, community scale sector-specific energy reductions (residential, commercial, industrial), waste metrics (tons MSW generated/diverted, recycling rate, etc.), and/or others to be determined. The Final PBMR will include:
    - The RPMs, CPMs and SCMs to be included
    - Relevant Mid-Hudson Regional Sustainability Plan indicators and metrics
    - Baseline data for these metrics, as provided by the Village and/or collected during the Comprehensive Plan Update process
    - Estimated benefit values, wherever feasible
    - Methods for data collection and quantification of benefit values (including assumptions/resources)
    - Data collection requirements
    - Final tracking process
    - Provide detailed guidance, and potentially training, to Village staff and other appropriate governmental entities for ongoing data collection, tracking, and reporting methods and understand how to update and/or modify the process, if and when needed

The Final PBMR will be developed in accordance with the instructions and structure outlined in Appendix A of the RFP.

TASK 2 – COMMUNITY OUTREACH/PUBLIC VISIONING SESSIONS

The McLaren Team, with the assistance of the Village, shall prepare a method and process to encourage community participation in the project. The McLaren Team will submit a Public Outreach Strategy for the Project which shall include, at a minimum:

- A description of the Comprehensive Plan Steering Committee ("Committee") to guide development of the Plan Update, including a description of the Committee purpose, anticipated number of members, stakeholders to be included, the selection process for Committee members, purpose of each planned meeting and tentative schedule of meetings; public meetings that are open to the general public and focus on discussion of the Project, including meeting format, purpose and objectives, anticipated locations, advertising strategy, and presentation materials including slide presentations and handouts to be prepared by the McLaren prior to each meeting and tentative dates for the proposed public

meetings; the use of design charrettes to gather public feedback on key elements, including the waterfront, transportation and sustainable neighborhood design;

- Public hearings to assure full opportunity for citizen participation in the preparation of the Plan Update;
- Interviews, surveys or other outreach methods used to reach directly impacted property owners or other stakeholders;
- Government or other approvals that will be included in the Plan Update development process that will also present opportunities for public comment;
- Methods for documenting meeting outcomes and materials for public communications, including posting of materials to the website and social media;
- Any other means used to solicit or gather public input and comment to be identified by the McLaren and approved by the Village and NYSERDA Project Manager.
- McLaren will maintain and submit meeting minutes, presentation materials, and an attendance list to document results of Steering Committee Meetings. Other public meetings and workshops and design charrettes should include notes of participants' input, presentation materials and attendance lists.

As part of the Public Outreach Strategy, it is anticipated that there will be at least six (6) Steering Committee meetings, four (4) public workshops and three (3) design charrettes focusing on specific topics.

TASK 3 – EVALUATE CURRENT PLANS, ZONING REGULATIONS AND OTHER RELEVANT POLICIES

The McLaren Team will review the following existing and adopted documents to determine how they relate to community sustainability, alternate transportation, transit oriented development and waterfront development.

- Basic Studies Documents
- The Village of Nyack Comprehensive Plan
- The Village of Nyack Zoning Law
- Village of Nyack Subdivision Regulations
- The Local Waterfront Development Guide
- Transit Oriented Development Documents
- Waterfront Development Guide
- Sustainability Plans
- Traffic and Circulation Studies

Sustainability is the sum total of effort, not just a single component. Implementation of key ideas over time will produce continual benefits – one of the goals of sustainability.

Each document will be reviewed in terms of the original goals, objectives, and strategies to determine if gaps exist which may need to be addressed. Particular attention will be paid to any issues identified and not resolved. Further, it should be remembered that sustainability is the sum total of effort, not just a single component. Implementation of key ideas over time will produce continual benefits – one of the goals of sustainability.

The McLaren Team will review existing departmental procedures which may actually impede progress to greater sustainability. The plan may be willing, but the ability for one department to influence or direct another may be weak or lacking. For example, the land use plan may suggest using rain gardens or other sustainable storm water practices, yet public works may not wish to have these rain gardens interfere with established snow plowing practices. Likewise, providing

underground storage of runoff in cul-de-sacs to the center area with vegetative cover also impedes plowing and maintenance of more sustainable practices may be unfamiliar to public works. For these reasons, it is critical to understand how regulations are implemented to assess sustainable efforts.

TASK 3A – SUSTAINABILITY INDICATORS, ASSOCIATED METRICS, AND TRACKING METHODS

The McLaren Team not only brings sustainability planning experience, local knowledge, and community outreach expertise as separate skills, but in fact emphasizes and relies on the integration of community outreach and stakeholder engagement throughout any sustainability planning process. Based on this experience and approach, our Team also utilizes customizable tools to support the process and emphasizes an understanding that planning for sustainability requires ongoing evaluation, monitoring, and continuous improvement efforts.

The McLaren Team not only brings sustainability planning experience, local knowledge, and community outreach expertise as separate skills, but in fact emphasizes and relies on the integration of community outreach and stakeholder engagement throughout any sustainability planning process.

If its use is desired for this project, the McLaren Team has also developed a baseline assessment and data collection tool as part of its suite of Sustainability Planning Optimization Tools (SPOT) that would facilitate a streamlined approach to this task and serve as a database for the Village to utilize for ongoing planning efforts. We have learned that this baseline data collection tool, as well as the rest of the SPOT suite, provides significant added value to sustainability planning projects as such tools set the Village up for future success and continuous improvement, as opposed to a one-time plan/project.

THE SELECTOR™

This tool screens potential initiatives using sustainability evaluation criteria to determine goal applicability, feasibility, costs, and benefits. Village staff and other stakeholders will be asked to help identify goals, potential measures, key challenges/opportunities, and criteria by which to evaluate any potential measures. This will be done through the Public Workshop discussed in the next task. All of this information will be collected and organized within the Selector tool and used to organize goals, potential measures, and details about those measures in one Excel workbook. The Selector will also contain the evaluation criteria, which will then be used to screen each potential measure for overall feasibility, applicability, and benefit for Nyack in achieving its sustainability goals.

The evaluation process utilizing this Selector tool will involve a high level assessment of each potential initiative utilizing the McLaren Team's technical expertise and extensive knowledge of best practices from around the country. The Selector provides a transparent method for scoring each potential initiative and then those receiving the highest score rise to the top as priorities for implementation.

THE IMPLEMENTER™

This tool typically provides context and guidance for efficient initiative implementation through the development and distribution of Initiative Implementation Sheets. Within the context of this Comprehensive Plan Update, the Implementer can be used to develop specific zoning, code, and policy updates necessary for achieving sustainability goals and objectives.

THE TRACKER™

Provides the framework to monitor the progress of Nyack's Comprehensive Plan Update and can be utilized to incorporate PBMR metrics and develop the final PBMR for the Plan.

THE REPORTER™

Provides a structured format for the Village to report both internally and to the public on key achievements and benefits associated with implementing sustainability measures and progress on achieving its goals.

TASK 4 – CONDUCT PUBLIC WORKSHOPS

The McLaren Team will prepare for, conduct and document two (2) Sustainability Workshops and two (2) Transportation Workshops, which can be conducted as standalone public meetings or combined with other Comprehensive Plan workshops. It is envisioned that the first of each workshop would focus on presenting existing, available data and gathering input from the stakeholders and community on additional data, issues and concerns. The second of each workshop would focus on group activities so that participants could constructively evaluate and share their views on future conditions as envisioned by the Comprehensive Plan.

TASK 5 – CONDUCT DESIGN CHARRETTES

The McLaren Team will organize and conduct Design Charrettes in accordance with the Public Outreach Strategy. We will organize and employ a participatory process to brainstorm and solicit ideas and recommendations for integrated, sustainable development in the village gateway, downtown and waterfront. Themes shall include, but shall not be limited to: Transportation to include TOD, BRT, parking, ferry, trolley/shuttle and zoning; sustainable neighborhood development to include gateway, downtown and waterfront; and waterfront to include ferry terminal location alternatives and design, parking structures and garages, marina, public parks and access and zoning related to waterfront development.

Battery Park City Ferry Terminal

A maximum of three (3) charrettes are proposed. The McLaren Team has assumed that the Village will provide the location and reproduction of workshop materials.

TASK 6 – ZONING CODE EVALUATION:

Zoning is the set of rules which prescribe and govern the density of development, the setback and yard requirements all in accordance with the comprehensive plan. By law, the zoning ordinance must be in substantial conformance to the land use plan. Hence, in order to create a more sustainable set of zoning regulations, flexibility must be added to the land use plan. Zoning tends to be rigid by design as the Euclidian geometric policies govern regulations. Instead of bulk requirements, other zoning techniques may offer a better path to sustainable results. Form based zoning provides a less restrictive technique which may be of benefit for this study. More significantly, if sustainability features are what is ultimately desirable, then incentives should be in place to make them happen. McLaren will evaluate the ability for the land use plan and zoning to be modified for enhanced sustainability.

The McLaren Team has extensive knowledge of community scale sustainability rating systems, including LEED ND and STAR Communities. We were responsible for developing the Climate

Smart Communities certification program and guidance document. We have staff who are LEED AP, and ENV SP (Envision Sustainable Infrastructure rating system) certified, and VHB has supported documentation efforts for STAR Communities.

"For the Town of Bethlehem, VHB performed an extensive Energy and Land Use review with recommendations as part of the Greenhouse Gas, Energy, and Bicycle/Pedestrian Project as well as a separate guidance document on Green Development Strategy options as a Custom Service Strategy under the Climate Smart Communities Regional Coordinator program. "

The McLaren Team has conducted zoning code evaluation with a sustainability lens as part of many of its sustainability planning projects, including regional sustainability plans, technical assistance to Climate Smart Communities, Albany's Energy Master Plan, Albany 2030, and the Albany Electric Vehicle Feasibility Study, as well as other projects outside of New York State.

For this task, The McLaren Team will evaluate and comment on the existing zoning code under the lens of sustainability. Working with the Steering Committee, we will recommend updates that strengthen the code and its ability to guide sustainable growth in the Village.

The McLaren Team has conducted zoning code evaluation with a sustainability lens as part of many of its sustainability planning projects, including regional sustainability plans, technical assistance to Climate Smart Communities, Albany's Energy Master Plan, Albany 2030, and the Albany Electric Vehicle Feasibility Study, as well as other projects outside of New York State.

TASK 7 – COMPREHENSIVE PLAN UPDATE

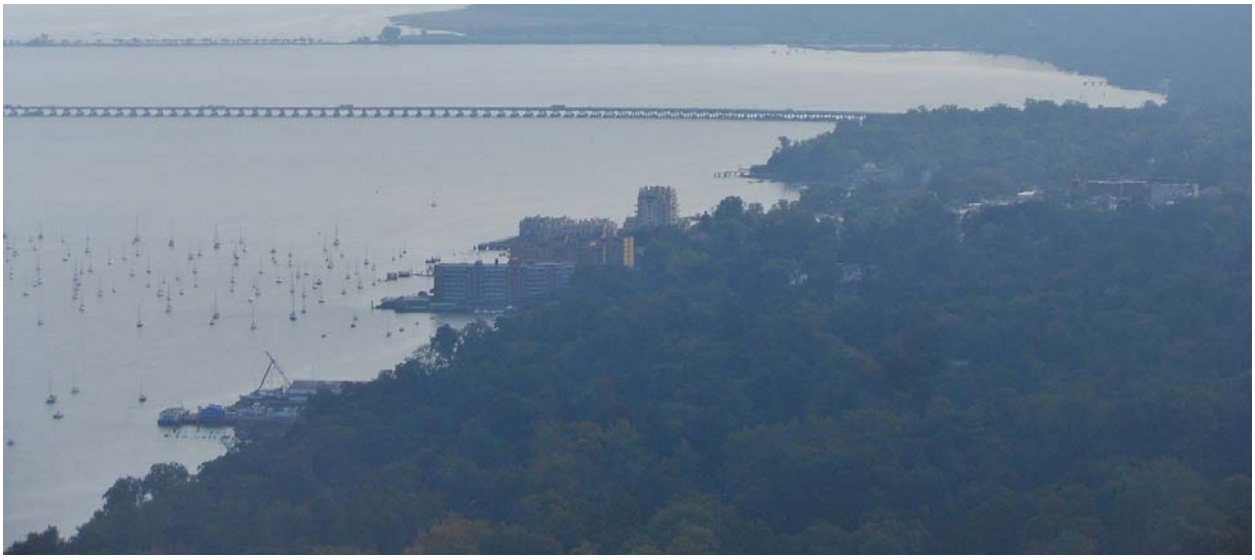
The McLaren Team will provide an updated comprehensive plan which will consist of the following chapters:

- Statement of goals, objectives and strategies upon which the plan was developed
- Consideration of regional needs and official plans of other governmental units including:
  - Mid-Hudson Regional Economic Development Strategy
  - Mid-Hudson Regional Sustainability Plan
- Updated sections for:
  - Demographics
  - Growth trends
  - Socio economic trends
  - Existing housing resources
  - Future housing needs
  - Affordable housing
- Review of historic and cultural resources.
- Review of coastal and natural resources.
- Sensitive environmental areas.
- Analysis of existing and proposed public and private utilities and infrastructure.
- Review of existing and proposed recreation facilities and parkland.

- Development of a new Transportation Chapter, including the updating of previous transportation analysis, traffic volumes, parking analysis and capacity, location of potential

parking garage(s), review of ferry studies, ferry landing alternatives and feasibility, Bus Rapid Transit (BRT), bike routing, and TOD in the Gateway to the Village at the NYS Thruway.

- Review and update of previous Downtown proposed development with appropriate design and development recommendations.
- Analysis of recommended specific policies and strategies for improvement of Village's economic climate.
- Analysis of increased potential for downtown development including retail environment and strategies to continue support for retail activity downtown, and potential for cultural, educational and institutional expansion.
- Analysis of local economic specific policies and strategies for improving the local economy;
- Analysis and propose recommendations for integrated public/private waterfront development including both public and private development, policy and design recommendations as well as linkages to improve public access and resiliency planning.
- Development of new Sustainability Chapter with recommendations to promote green infrastructure, energy conservation, reduction in GBG emissions, waste management and sustainable neighborhood design at waterfront, gateway and downtown.
- A prioritized list of recommendations for implementation, including, but not limited to zoning updates.



The Draft Comprehensive Plan will be submitted to the Steering Committee for comment and feedback. At least one (1) Public Hearing will be held where the general public will be able to comment either verbally or in written format. Based upon the comments received, final changes will be incorporated and the final product will be placed in electronic format for review by businesses, residents and prospective developers. It is anticipated that an Adobe PDF format will be used for the report, and that maps will also be created in PDF format for review, but in a suitable mapping format for future editing.

Transportation Chapter: The McLaren Team will perform a literature search of historic vehicle, pedestrian and bicycle crash data for the most recent five (5) years available, and obtain existing

traffic volume, pedestrian, bicycle, parking and transit ridership data. We will perform an inventory of the existing sustainable transportation network within the Village, such as a sidewalk inventory, transit stops, and bike infrastructure such as trails and paths. Next, we will evaluate the ability of the existing transportation system to handle future demands as envisioned by the Comprehensive Plan's development and growth alternatives. This evaluation will be conducted for vehicle travel, transit, pedestrian and bicycle trips, and parking capacity. In areas of the Village and within individual transportation modes where the future demands are projected to exceed the current capacities according to our evaluations, we will recommend sustainable solutions to encourage mode shift away from single occupancy vehicles and single use parking and toward multimodal, sustainable transportation and shared use parking.

We are cognizant of the long-term transportation plans within and bordering the Village, such as the Nyack New Connectivities Project, Ferry Landing Site Evaluation, Transit Oriented Development in South Nyack, New NY Bridge and Multi-Use Path, Thruway Interchange 10 Reconfiguration, and Bus Rapid Transit on the I-287 corridor. The transportation assessments undertaken within the Master Plan Update will recognize that the Village sustainable transportation solutions must fit in with other long-term plans in the region. The ultimate Transportation Chapter will also take into account the concerns and ideas of stakeholders and the public, as the transportation assessments will be engaged in the public outreach plan.

In support of Climate Smart Community goals and, hopefully, specific goals that will be set by the Steering Committee, the Transportation Chapter will assess specific metrics related to sustainable transportation improvements including:

- Estimates of vehicle miles traveled (VMT) under existing conditions, future conditions without improvements and future conditions with sustainable transportation improvements. This will show the estimated reduction in VMT related to specific improvements such as increased transit usage (ferry, trolley, BRT, shuttles, and increased TOR service), decreased reliance on single occupancy vehicle travel, improvements in sidewalks, crosswalks and bicycle infrastructure, and other strategies to be explored with the Steering Committee, stakeholders and public.
- Estimates of NOx, CO2, VOC emissions using Synchro traffic software at up to five (5) critical locations to be selected by the Village, addressing existing conditions, future conditions without improvements and future conditions with sustainable transportation improvements. For this task, we will use existing turning movement count data, or collect new data for one (1) peak period, to analyze the benefits of specific sustainable transportation improvements at five (5) key intersections. This will quantify the reduction in GHG and pollutants related to vehicle travel as a result of the Comprehensive Plan transportation strategies.

Sustainability Chapter: The McLaren Team's approach to sustainability is one that sees resiliency as integral to sustainability. You cannot have one without the other. We will seek to identify solutions that are win-wins for both climate change mitigation and climate resilience:

- Energy efficiency – reduced demand on a strained grid – enhances resiliency
- Green infrastructure improves stormwater management while reducing urban heat island and associated cooling needs, improves air quality and reduces GHGs
- Multi-modal transportation options such as strong pedestrian and bicycle connections, transit and ferries promote efficiency and redundancy
- Transit Oriented Developments to minimize automotive trips while supporting the "live where you have transit available, live where you work, shop where you live, philosophy."

We will provide Draft Transportation and Sustainability Reports that can be stand-alone documents appended to the Comprehensive Plan Update. Up to two (2) rounds of comments and revisions by the Steering Committee are assumed before becoming Final Reports. We can excerpt the Final Reports for inclusion into the Transportation and Sustainability Chapters of the Comprehensive Plan Update.

TASK 8 – ZONING CODE UPDATES FOR SUSTAINABILITY

The McLaren Team will comply with the requirements and scope in the RFP. The results of tasks 6 and 7 will be incorporated into draft zoning code amendments. We will prepare DRAFT proposed amendments to the Village's Zoning Code that implement the sustainability strategies of the updated Comprehensive Plan, which amendments are suitable for review and consideration by the Village and the public. The amendments should take into account the barriers to sustainability identified during the work plan and will emphasize green infrastructure and promote compact, walkable, mixed-use, mixed-income, energy efficient development.

TASK 9 – PLANNING AND ENVIRONMENTAL REVIEW

McLaren will prepare all necessary documentation to meet State Environmental Quality Review Act (SEQRA) requirements for the Comprehensive Plan Update and Zoning Code amendments; including the preparation of the Environmental Assessment Form (EAF) and/or Generic Environmental Impact Statement (GEIS). McLaren will be responsible for determining the lead agency and coordinating with stakeholder agencies and other interested parties, including public outreach, as applicable. McLaren will comply with all applicable provisions of Section 239-m of the General Municipal Law.

TASK 10 – PRESENTATION TO VILLAGE BOARD

The McLaren Team will comply with the requirements and scope in the RFP, and will present the proposed final Zoning Code amendments and Comprehensive Plan update to the Village Board in a public meeting.

TASK 11 – FINAL ADOPTION OF UPDATES

Under SEQRA, update or adoption of a municipality's land use plan and the zoning ordinance is typically a Type 1 action – one which is most likely to require the preparation of an environmental impact statement (EIS). The update to the Village of Nyack's land use plan and zoning law will be evaluated, and the evaluation will be determined by the extent of the impacts of the changes to the plan. Since the focus of the updates is to improve sustainability, it might be possible that no significant negative environmental impacts are generated. Regardless, all changes will be evaluated in conformance with the regulations governing under Section 617: State Environmental Quality Review. At a minimum, the criteria established under the law will be reviewed and a long form environmental assessment form will be completed for review and scrutiny. Any negative impacts will be assessed and mitigated to the maximum extent practicable.

III. SCHEDULE

McLaren is in agreement with the 12 month schedule as presented in the RFP.

TASK		SCHEDULE
1	Contract Management	
1a	Contract Management and Quarterly Progress Reports	Continuous over the 12 month period
1b	Conference Calls and Meetings	Continuous over the 12 month period
1c	Final Report and Technology Transfer	Month 12
1d	Draft Preliminary Project Benefits Metrics Report	Month 8
2	Develop Public Outreach Strategy	Months 1 and 2
3	Evaluate Current Plans, Zoning Regulations, and Other Relevant Policies	Months 1 and 2
3a	Sustainability Issues, Associated Metrics, and Tracking Methods	Months 2 and 3
4	Conduct Public Workshops	Months 3, 4, and 8
5	Conduct Design Charrettes	Months 3 and 4
6	Zoning Code Evaluation	Months 4 and 5
7	Comprehensive Plan Update	Months 6 and 7
8	Zoning Code Updates for Sustainability	Month 8
9	Planning and Environmental Review	Months 7, 8, 9
10	Presentation to Village Board	Month 8 or Month 11
11	Final Adoption of Updates	Month 12

McLaren ENGINEERING GROUP

- ✓ Bike Path Planning
- ✓ Construction Administration & Management
- ✓ Demographics & Growth Trends
- ✓ Geotechnical Engineering
- ✓ Master Planning
- ✓ NYSERDA Experience
- ✓ Parking Analysis
- ✓ Planning
- ✓ Public/Private Waterfront Development
- ✓ Public Outreach
- ✓ Recreation Facilities / Parkland
- ✓ Retail Development
- ✓ Site/Civil Engineering
- ✓ Surveying
- ✓ Sustainable Design
- ✓ Traffic
- ✓ Transportation Analysis
- ✓ Waterborne Transportation
- ✓ Zoning

100 Snake Hill Road
West Nyack, NY 10994
P: 845.353.6400
F: 845.353-6509