

# **Garg Consulting Services, Inc.**

# Garg Consulting Services, Inc. QUALIFICATIONS



June 08, 2022

#### **SUBMITTED BY:**

Eugene Chuang, Ph.D., P.E. Garg Consulting Services, Inc. 2096A Silas Deane Highway Rocky Hill, CT 06067 Ph: 860.563.0582 Fax: 860.563.0825



### **CAPABILITY STATEMENT**

#### **COMPANY OVERVIEW**

Founded in 1990, Garg Consulting Services, Inc. (Garg) is a multi-disciplinary engineering firm headquartered in Rocky Hill, CT with an office in Princeton, NJ. Garg currently employs over 80 employees, mainly working on Federal and State projects in Connecticut, Massachusetts, New York, New Jersey, and Pennsylvania. Garg is DBE/MBE/SBE certified with many agencies, particularly throughout the Northeast.

#### **CORE SERVICES**

- Rail Systems Engineering
  - Traction Power / Catenary
  - Signals / Communications
- Facilities
  - o HVAC
  - Lighting / Electrical
  - o Plumbing
  - o Communications
  - o Fire Alarm Systems
- Structural Engineering
- Construction Management

#### **CONTRACT CLIENT LIST**

- Massachusetts Bay Transportation Authority (MBTA)
- Metro-North Commuter Railroad (MNR)
- New York City Transit Authority (NYCT)
- Long Island Rail Road (LIRR)
- Connecticut DOT (CTDOT)

#### **EXAMPLE PROJECTS**

- Quincy Bus Maintenance Facility, Phase III-VI, MBTA
- Replacement of NHL Substations at Mamaroneck & Harrison, MTA MNR
- Design-Build Services for Accessibility Upgrades at Eight Stations in Five Boroughs of NYC, MTA
- Darien Railroad Station Improvements, CTDOT
- Third Track Extension Design / Build, LIRR
- Station Platform Rehabilitation Program Phase III, WMATA

**Garg Consulting Services, Inc. – Eugene Y. Chuang, Ph.D., P.E., Owner** 2096A Silas Deane Highway, Rocky Hill, CT 06067 • Phone: (860) 563-0582 • Fax: (860) 563-0825 13 Roszel Road, Suite 223C, Princeton, NJ 08540 • Phone: (856) 429-8010 • Fax: (856) 429-0453

#### **Company Data**

#### NAICS Codes:

- 541330 Engineering Services
- 541614 Process, Physical Distribution, and Logistics Consulting Services.

Unique Entity ID: Active Business Size: Small Business

#### **Certifications**

DBE/MBE – MassDOT, MassUCP DBE/MBE – MTA, NYS UCP SBE/MBE – Port Authority of NY and NJ DBE/SBE – CTDOT, State of Connecticut

**References** 

Norbert Joseph, MNR (212) 499-4439 Yure Kuljis, CTDOT (860) 944-1111 Michael Mendick, CTDOT (203) 401-5160

#### **Contact Person**

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#### Website

www.garginc.com

### Quincy Bus Maintenance Facility, Phase III-VI



Garg Consulting Services, Inc.

The MBTA Quincy Bus Maintenance Facility project is part of the MBTA Bus Facilities Modernization Program. The goal of this project is to construct a new MBTA Quincy Bus Maintenance Facility by 2024 at a new location in Quincy, in line with fleet procurement strategies. The new facility will be designed to support a larger fleet and support future fleets will with alternative fuel sources such as battery electric buses.



The new facility will be located at 599 Thomas E. Burgin Parkway, Quincy, Massachusetts, proximate to the Quincy Adams Station on the Red Line. The new bus maintenance facility will provide additional capacity to support future service growth, swing space to support other facility projects, and potential changes related to a transition to battery electric buses, including charging capacity. The facility will initially support diesel hybrid buses but will provide for future conversion to a battery electric bus fleet. The facility will store and maintain 120 buses but will be permitted to allow for up to 135 buses (an increase from the current facility capacity of 86 buses). The facility will contain storage, fueling, washing, maintenance, support, administrative, and management capabilities required to support a fleet of this size. All transit vehicle maintenance and storage functions will be performed indoors.

The complete scope for this project includes, but is not limited to, 75% and 100% design submissions, cost estimates, construction schedule, PDG participation, risk analysis, value engineering, community and public outreach, PS&E submission and bid package development in accordance with MBTA standards, bid phase services, and construction phase services. In addition, scope includes the 100% design submission for Early Release Construction Package at the 75% design stage. Initial scope of services shall include Phase III through Phase VI.

Garg Consulting Services, Inc. (Garg) is providing MEP / HVAC engineering support services for the 30%-100% Design Phase, Bid Phase, and Construction Phase Services.

Organization Name	Location	Owner Contact	Project Duration			D An	Prime/Sub- Consultant	
MBTA	Quincy, MA	Steven Belanger, P.E.	Contract Date	Start Year	Completion Year	Firm's Fee	Project Cost	Sub-Consultant
		(617) 222-5118	Dec. 2020	2020	2022	\$524,347	\$23 M	

# **MTA Metro-North Railroad Replacement of NHL Substations at Mamaroneck** & Harrison



Garg Consulting Services, Inc.

Metro-North Railroad's autotransformer (MNR) substations on the New Haven Line date back to the late 1970s. They were built to support the conversion of the line from 25 Hertz, 11,000v catenary to 60 Hertz, 12,500v. The conversion took place in late 1986 and the system has performed well for almost 40 years.

As part of MNR's policy of maintaining its physical plant in a state-of-good-repair, it determined several years ago that these substations had reached the end of their useful lives. The autotransformers have tolerated thousands of short circuits due to faults on the catenary system. The original vacuum circuit breakers are out of production and spare parts are scarce. In addition, the substations are open air outdoor facilities that are exposed to the elements, which is an inherent safety risk for the employees who maintain them.

Under this contract, the Consultant Team designed new replacement substations at Mamaroneck (128) and



Harrison (178), NY. MNR chose a state-of-the-art prefabricated "metal clad indoor substations" for the replacements, which they have used as replacements elsewhere on the New Haven Line. All substation apparatuses are located inside the building except for the autotransformers.

Garg's tasks on this project included:

- Providing technical advice and guidance on substation operations.
- Providing input in drawing design and substation layout.
- Foundation design for the substation vaults and autotransformers.
- Assisting in developing specifications for new equipment and structural items or work. •
- Providing guidance on constructability, scheduling safety, and maintainability.
- Providing QA/QC on design and construction.

Organization Name	Location	Owner Contact	Project Duration			Doll Amo	Prime/Sub- Consultant	
MNR	Mamaroneck / Harrison, NY	Norbert Joseph	Contract Date	Start Date	Completion Date	Firm's Fee	Project Cost	Sub-Consultant
		(212) 499-4439	January 2020	2020	2021	\$215,195	\$3.4 M	

### A37151 Design-Build Services for Accessibility Upgrades at Eight Stations in the Five Boroughs of NYC



This project includes the design and construction of Americans with Disabilities Act (ADA) improvements at eight (8) stations located in the five (5) boroughs of New York City, NY. These improvements will achieve full vertical accessibility at the stations through the installation of a total of eighteen (18) elevators and other ADA-compliant upgrades.

Garg Consulting Services, Inc. is providing electrical and lighting design services at the following stations:

- 7<sup>th</sup> Avenue: an underground station in Brooklyn on the IND Sixth Avenue Line serving the 'F' & 'G' trains. (1) two-stop traction and (2) two-stop hydraulic elevators will be installed.
- Lorimer Street: an underground station in Brooklyn on the BMT Canarsie Line serving the 'L' train. (1) two-stop traction and (2) two-stop hydraulic elevators will be installed.



Existing Normal EDR at Metropolitan Avenue Station

- Metropolitan Avenue: an underground station in Brooklyn on the IND Crosstown Line serving the 'G' train. (1) two-stop traction and (2) two-stop hydraulic elevators will be installed.
- Grand Street: an underground station in Brooklyn on the IND Canarsie Line serving the 'L' train. (2) two-stop traction elevators will be installed.
- Beach 67<sup>th</sup> Street: a viaduct station in Queens on the IND Far Rockway Line serving the 'A' train. (1) threestop traction and (1) two-stop traction elevators will be installed.
- Dyckman Street: an elevated station listed on the National Register of Historic Places located in Manhattan on the IRT Broadway Line serving the '1' train. (1) two-stop traction elevator will be installed.
- East 149<sup>th</sup> Street: an underground station in the Bronx on the IRT Pelham Line serving the '6' train. (2) twostop traction elevators will be installed.
- New Dorp (SIR): an embankment station located in Staten Island serving Station Island Railway (SIR) trains. (2) two-stop traction elevators will be installed.

Responsibilities include, but are not limited to:

- Performing electrical field verifications of the existing site conditions and documenting the electrical system, including inventory, photographs, and measurements of the existing electrical rooms and equipment.
- Electrical Service Design Packages existing and proposed one-line diagram, electrical load estimate, load letter, Proposed Electrical Distribution Room (EDR) plan, main distribution panel schedule, and related specifications.
- Preliminary Design Reports (30%), Intermediate Design (60%), Final Design (100%), and Release for Construction Design (RFC).
- Performing voltage drop calculations, feeder, raceway, transformer, and switchboard sizing calculations.
- Design of the Uninterruptible Power Supply (UPS) in the communication rooms for the complete replacement of the existing APC power plant systems with new Benning power plant systems at (3) stations and augmented design of the existing Benning power plant systems at (4) stations.
- Utility coordination with Con Edison and PSEG Long Island.
- Development of lighting design including the necessary details for relocation of the existing luminaries, or replacement, for maintaining light continuity and lighting level.

Organization Name	Location	Owner Contact	Project D Duration Ar				llar ount	Prime/Sub- Consultant
MTA C&D	New York City, NY	Endrio Scalise (646) 252-3344	Contract Date	Start Year	Completion Year	Firm's Fee	Project Cost	Sub-
		Endrio.Scalise@nyct.com	12/31/20	2021	2023	\$898,239	\$149M (est.)	Consultant

### Darien Railroad Station Improvements



The Darien Railroad Station Improvements Project is part of the New Haven Line Improvement Program. This project aims to address the structural deficiencies at the station through the replacement of the existing concrete double-tee platform superstructure, ramps, stairs, railings, catenary structures, and rehabilitation of the existing elevators.

Garg Consulting Services, Inc. (Garg) is providing electrical engineering and catenary design services for this project. Specific tasks include:



- Design of the catenary attachments and reinstallation of the overhead contact system that are related to the replacement and relocation of the four catenary portals.
- Design of an emergency generator / uninterrupted power supply.
- Development of a short circuit and protective relay / circuit breaker coordination study for the electrical system, electrical load calculations, and electrical one-line diagram.
- Design of a station grounding and bonding system which will eliminate touch and step potential from rail return power and deter copper theft.
- Development of power and lighting panel schedules, lighting schedules, electrical site layout, and electrical demolition plans.
- Design of electrical upgrades related to a heated platform system, elevator rehabilitation, new security system, communication system, and other replaced / rehabilitated systems and equipment associated with this project.
- Perform Photometric Analysis for the replacement of the existing lighting with LED lighting and new lighting as required.
- Utility design (dry standpipe) and electrical utility coordination.
- Construction staging / railroad staging, and sequencing related to design work.

Garg will also be providing contract documents (including developing all front-end documents), bid phase services, specifications / special provisions, cost estimates, and schedule input related to design work.

Organization Name	Location	Owner Contact	Project Duration			D An	Prime/Sub- Consultant	
CTDOT	Darien, CT	Yure Kuljis, P.E.	Contract Date	Start Year	Completion Year	Firm's Fee	Project Cost	Sub-Consultant
		(860) 594-2895	Dec. 2019	2020	2022	\$405,750	\$40 M (est.)	

## LIRR Third Track Extension Design / Build – Contract No. 6240



The \$2.6 Billion Third Track expansion includes 50 projects to modernize 9.8 miles along the congested Main Line of the Long Island Rail Road (LIRR) between Floral Park and Hicksville. These projects included adding a third track, eliminating all 7 street-level grade crossings within the project corridor, adding new power substations, and parking, and modernizing track and signal infrastructure. Project elements along the Main Line corridor include 9.8 miles of a new third track, 7 grade crossing eliminations, 7 bridge replacements and modifications, 5 station improvements, 7 substation replacements, and 7.5 miles of sound/retaining walls.

Garg provided Independent Technical Review and analysis to confirm that designs adhered to LIRR standards, formats, and were in accordance with industry standards:

- Track and Signal Routing (TSR), including the speed command logic, conformity of the position of the Master

Locations to the TSRs, and proper application of LIRR Signal Engineering Operations Manual (SEOM) rules.

- Signal Power designs.
- Traction Power Third Rail designs.

Structural design responsibilities included the design and constructability review of:

- Mineola Station design of (4) stair towers supporting (2) pedestrian overpasses (designed by others), including (2) elevator shafts support and housing for various railroad utilities.
- Westbury Station design of (4) stair towers supporting (2) pedestrian overpasses (designed by others), including (2) elevator shafts support and housing for various railroad utilities.

Organization Name	Location	Owner Contact		Project Duration	1	Dollar Amount		Prime/Sub- Consultant
LIRR	Floral Park / Hicksville, NY	James Entenmann	Contract Date	Start Date	Completion Date	Firm's Fee	Project Cost	Sub- Consultant
		(718) 558-3563	10/10/18	2018	2022	\$1.25M	\$2.6B	

# WMATA Station Platform Rehabilitation Program – Contract 3



Garg Consulting Services, Inc.

The Metro system has 45 outdoor rail stations constructed with concrete platforms. These platforms were designed and built over four decades ago safely accommodate customers to waiting for trains and boarding Metro railcars. The Platform Improvement Project is a multi-year effort to improve the safety of platforms at 20 exterior stations with significant deterioration due to routine wear and tear combined with exposure to weather and the agents used during de-icing.



Phase 3 will reconstruct platforms at Blue Line stations (Arlington Cemetery and Addison Road) and northern Green Line stations (West Hyattsville, Prince George's Plaza, College Park, and Greenbelt). The Rehabilitation Program includes lighting upgrades in which the installation of new, brighter lights will improve visibility as well as enhance safety and security while reducing energy costs. Metro will install energy-efficient LED lighting on the platforms, track beds, pylons, and parapets. The stations' lighting will be ten times brighter while using a fraction of the energy.

Garg Consulting Services, Inc. provided platform lighting design services at the Green Line Stations for this project. Project tasks included, but were not limited to:

- Lighting Fixture Plans.
- Electrical Lighting Panels.
- Photometric analysis for the Platforms, Mezzanines, and Passageways.

Organization Name	Location	<b>Owner Contact</b>	Project Duration			Dollar Amount		Prime/Sub- Consultant
WMATA	Washington, DC	Tiffany Lockhart	Contract Date	Start Date	Completion Date	Firm's Fee	Project Cost	Sub- Consultant
		(202) 962-1336	Nov. 2020	2020	11/15/2021	\$848,111	\$ N/A	



Charles D. Baker, Governor Karyn E. Polito, Lieutenant Governor Jamey Tesler, Acting Secretary & CEO



December 13, 2021

Mr. Eugene Chuang Garg Consulting Services, Inc. 2096A Silas Deane Highway Rocky Hill, CT 06067

#### This letter serves as sole and exclusive proof of your firm's DBE certification

Dear Mr. Chuang:

Congratulations! The Massachusetts Unified Certification Program (MassUCP), is pleased to notify you that we have renewed your company as a disadvantaged business enterprise (DBE). Your company continues to be assigned NAICS Code(s) 541330 and 541614 with the certified business description of RAILWAY ENGINEERING; TRACK STRUCTURES; SIGNALING; CATENARY DESIGN; GENERAL INSPECTION SERVICES and will remain listed in our certified business directory.

As a DBE, you must inform MassUCP in writing of any change in circumstances affecting your ability to meet size, disadvantaged status, ownership, control requirements or any material change in the information provided in your application form. Changes in management responsibility among members of a limited liability company are covered by this requirement. You must attach supporting documentation describing in detail the nature of such changes. The notice must take the form of an affidavit sworn to by the owners of the firm before a person who is authorized by state law to administer oaths or of an un-sworn declaration executed under penalty of perjury of the laws of the United States. You must provide the written notification within 30 days of the occurrence of the change. If you fail to make timely notification of such a change, you will be deemed to have failed to cooperate under 49 CFR 26.109(c).

To renew your firm's DBE certification and if it continues to meet the applicable criteria, on or before your firm's certification anniversary date of **December 31, 2022**, and each year thereafter, please send the MassUCP the following documents:

- (1) No Change Affidavit (will be sent with reminder letter)
- (2) A <u>signed</u> copy of your company's, and all of its affiliates', U.S. Tax Returns including all schedules and attachments for the year(s) indicated.
- (3) A signed copy of your personal tax returns for years(s) indicated.
- (4) If a sole proprietor, <u>a signed</u> copy of your Schedule C for year(s) indicated.
- (5) A <u>statement</u> of the <u>number only</u> of full and part-time employees (including owner) for each year indicated.

If you have changed your company name or address, please notify Ms. Nedra D. White, in writing on the company's letterhead in order to update your state vendor file.

MassUCP reserves the right to monitor, perform random spot checks, re-evaluate the firm or revoke the firm's certification if it no longer meets the certification criteria.

During the period of your certification, if you have further questions regarding annual review, please contact Ms. Nedra D. White, Director, MassUCP at (857) 368-8659.

Very truly yours,

Negra D. White, Director MassUCP/DBE Certification Program