



CHARLES B. RANGEL INFRASTRUCTURE WORKFORCE INITIATIVE



The City College of New York

ANNUAL REPORT 2022 - 2023





TABLE OF CONTENTS

02 INTRODUCTION

04 MESSAGES FROM LEADERSHIP

06 MILESTONES

08 INFRASTRUCTURE LABOR MARKET CHALLENGES AND OPPORTUNITIES

10 THE CHARLES B. RANGEL WORKFORCE INITIATIVE: DEVELOPING A NEW INFRASTRUCTURE WORKFORCE

- A. Curriculum
 - B. Career Support Services
 - C. Trainees
 - D. Partners
 - E. The Honorable Charles B. Rangel
 - F. Advisory Board
 - G. Program and Instructional Staff
-

25 LOOKING AHEAD

26 ACKNOWLEDGEMENTS

28 TRAINING FACILITIES AND CONTACT INFORMATION

Introduction

The Charles B. Rangel Infrastructure Workforce Initiative at the City College of New York is a presidential-level initiative designed to operate within the rapidly evolving landscape of workforce development. The nexus of higher education and workforce development is undergoing a profound shift. Traditional higher education enrollments have plummeted. Employers are reevaluating advanced degree requirements. The age of skills-based hiring has risen, eclipsing traditional degree-centric evaluations. As a result, the narrative has shifted to job-centric learning.

Launched in spring 2022, with the first training piloted in summer 2022, the Rangel Initiative has grown into a robust, multidimensional workforce development program that has graduated over a 100 trainees from our baseline infrastructure training, awarded more than 250 industry credentials in workplace safety and hazardous waste management, and trained nearly 50 participants in commercial drone piloting in preparation for the FAA Remote Pilot Certificate exam. Our instructional staff are experts in their fields who together bring decades of work experience and the practical knowledge that go along with them. We have developed or improved more than 140 resumes and LinkedIn profiles and produced 82 professional LinkedIn portraits for trainees, hosted two career fairs, and placed more than a dozen trainees in employment and apprenticeships.

The success of the first year and a half is due in no small part to the support and partnership of New York Governor Kathy Hochul, U.S. Representative Adriano Espaillat, and our namesake, the Honorable Charles B. Rangel; infrastructure agencies at the federal, state, and city level; established community-based organizations in Harlem and beyond; and industry leaders across infrastructure sectors. Many of these supporters have visited the Rangel Initiative to see our training in action, including Governor Hochul, Representative Espaillat, and Mr. Rangel, as well as Marty Walsh, former U.S. Secretary of Labor, Jess Dannhauser, Commissioner of the NYC Administration for Children's Services, Lisa Fitzpatrick, Administrator of the NYC Human Resources Administration, and delegations from the U.S. Environmental Protection Agency (EPA) Region 2, the New York State Department of Labor, and the NYC Department of Transportation. Guiding our work is our Advisory Board, comprised of leaders from the Metropolitan Transit Authority, the NYC Economic Development Corporation, the NYC Mayor's Office of Environmental Remediation, and major infrastructure firms.

As we close the first year and a half of training, our key priorities are:

- ▶ **Practical Skills Emphasis:** Program focuses on tangible skills aligned with industry needs.
- ▶ **Targeted Credentials:** Recognized credentials showcase specialized skills valued by employers.
- ▶ **Personalized Learning:** Tailored pathways cater to diverse learner backgrounds and aspirations.
- ▶ **Industry Partnerships:** Collaborations validate curriculum, offering real-world exposure and job prospects.
- ▶ **Accelerated Learning:** Intensive, focused training enables swift skill acquisition.
- ▶ **Adaptable Curriculum:** Keeping pace with industry shifts ensures ongoing relevance.
- ▶ **Career Support:** Robust job placement services aid graduates' transition.
- ▶ **Holistic Approach:** Real-world projects and simulations foster well-rounded professionals.



Underpinning these priorities are four core lenses that shape every facet of our approach and curriculum:

- ▶ **Equity:** Ensuring equity is at the forefront, we provide access to all, empowering marginalized groups and bridging socioeconomic gaps.
- ▶ **Safety:** With a safety-oriented approach, we equip individuals to navigate infrastructural challenges, fostering a secure work environment.
- ▶ **Climate Change Resilience:** Our program instills skills for climate change mitigation and adaptation, cultivating a workforce equipped to address pressing environmental challenges. By nurturing resilience, we empower learners to contribute to resilient communities, prepared for various disruptions.
- ▶ **Building Resilient Communities:** By nurturing resilience, we empower learners to contribute to resilient communities, prepared for various disruptions.

Through these lenses, our program transforms lives, empowers communities, and champions a sustainable future.

Messages from Leadership

**THE HONORABLE CHARLES B. RANGEL,
STATESMAN IN RESIDENCE, THE CITY COLLEGE OF NEW YORK**



Dear Esteemed Readers,

It is with great pleasure that I extend my warmest greetings to each of you within these pages. As we navigate through the contents of this annual report, I am reminded of the incredible strides and collective efforts made by our esteemed university community. The achievements highlighted herein stand as a testament to the dedication and hard work of not only the faculty and staff but also the students and supporters who have played a pivotal role in shaping the success of the Charles B. Rangel Infrastructure Workforce Initiative.

The City College of New York launched the Charles B. Rangel Infrastructure Workforce Initiative to create a pipeline of skilled workers for the rapidly evolving urban landscape. It is heartening to witness the progress made by the Initiative since 2022 in shaping a conducive learning environment for the leaders and innovators of tomorrow. The introduction in 2023 of job-focused training programs like drone piloting, and the establishment of two new computer classrooms on campus, specially tailored for Computer Aided Design (CAD) software, mark a significant milestone in aligning education with the demands of a rapidly evolving technological landscape.

I look forward to continuing to work with President Boudreau, Executive Director Lampousis and the dedicated CCNY team to address the challenges of next-generation infrastructure development and the underrepresentation of our constituencies by providing education opportunities that will secure equity in these massive projects for them. I would like to acknowledge for their positive and substantive response to my own recent calls to action by my long-time friends, commissioner Ydanis Rodriguez of the New York City Department of Transportation; Michael Garner, Chief Business Diversity Officer of Mayor's Office of Minority and Women-Owned Business Enterprises, and Lloyd A. Williams, President and CEO of the Greater Harlem Chamber of Commerce.

Sincerely,

A handwritten signature in black ink that reads "Charles B. Rangel". The signature is written in a cursive, flowing style.

**DR. VINCENT BOUDREAU, PRESIDENT, THE CITY
COLLEGE OF NEW YORK**



Dear Friends of the Rangel Infrastructure Workforce Initiative,

As a public institution, I firmly believe that CCNY has a deep responsibility to think long and hard about the relationship between public interest and need, on the one hand, and our work on the other. That means turning our attention to the evolving needs of economic development and social justice and making sure that we are mobilizing our resources to meet those needs.

One consequence of this orientation is a deepening engagement, on my campus, with non-degree programs designed to develop the workforce we need. Another consequence is a need to pay particular attention to the political and economic currents outside the campus, and attend to what they suggest about our work. Both consequences converged one day in 2017 when Congressman Rangel took a seat in my office, told me that the reconstruction and modernization of America's infrastructure was inevitable, and insisted that CCNY should be a venue for making the opportunities associated with that inevitability available to people in Harlem and in other communities under-represented in the building and infrastructure trades.

The idea of an infrastructure workforce development initiative received immediate and enthusiastic support from Congressman Espaillat and, through his instinting advocacy, from the state and federal government. The report you now hold is a testament to the work that this advocacy has allowed us to pursue at CCNY. Within these pages, you will discover narratives that highlight the human aspect of our endeavors, all bolstered impressively by empirical and statistical representations of our progress. Each success story, every milestone we've passed, represent building blocks toward a vision of a more inclusive and dynamic workforce in infrastructure. I'm deeply proud of the progress we've made, boundlessly grateful for the support we've received, and utterly optimistic about the impact we can make on the infrastructure landscape of New York and beyond.

Warm regards,

A handwritten signature in black ink, appearing to read 'V. Boudreau', written in a cursive style.

Milestones



The Rangel Initiative Launches in Harlem

The Honorable Charles Rangel, U.S. Representative Adriano Espaillat, CCNY President Vincent Boudreau, and leaders of the Harlem community came together to celebrate the launch of the Rangel Initiative.



Governor Kathy Hochul and National Leaders Visit Our New Training Facility

The delegation, which included U.S. Secretary of Labor Marty Walsh, the Hon. Mr. Rangel, and Rep. Espaillat, met graduates of the pilot program and learned about the Rangel Initiative's plans for program expansion.



New Industry Credentials Courses Added to the Program

The Rangel Initiative added in-demand industry certifications to its training offerings, including 30-hour OSHA construction, 10-hour Site Safety Training per the NYC Department of Buildings, and 40-hour HAZWOPER.

April 14, 2022

July-Aug. 2022

Sept. 9, 2022

Sept. 2022

Fall 2022

Jan. 5, 2023



Pilot Program

With recruitment support from NYC Administration for Children's Services, 18 trainees completed the pilot Baseline Training. "I will definitely tell everyone I know about this," one pilot grad said, "because it's very useful and you can get into any field. It's unlimited."



First Meeting of the Advisory Board

Comprised of leaders from NYC agencies and infrastructure industries, the Rangel Initiative Advisory Board is much more than a steering committee. It is a brain trust dedicated to keeping our commitment to the community strong and our training program rooted in the workforce needs of infrastructure industries and agencies.



NYC Human Resource Administration and the Rangel Initiative Join Forces

HRA Administrator Lisa Fitzpatrick was joined by agency leadership and Rangel Initiative partners, including Harlem Congregations for Community Improvement and Living Redemption Community Development Corporation, in a visit to our training facility that marked the kickoff of our partnership and commitment to provide in-demand job skills training to New Yorkers. Together, we developed a commercial driver's license program that is set to launch in 2024.



U.S. Rep. Adriano Espaillat Visits an OSHA Class

Rep. Espaillat, hailed by CCNY President Boudreau as an “angel investor” in the Rangel Initiative, told OSHA trainees: “There’s lots of money coming out of Washington for infrastructure. So hopefully, those jobs that will be produced by that money, you will be competing for. And this is the training that’s so critical.”



The Rangel Initiative's Drone Pilot Course Takes Flight

The Honorable Rangel, CCNY President Boudreau, and leaders from the NYS Department of Labor and the NYC Department of Transportation visit the Rangel Initiative's second drone pilot class, which prepares trainees for the FAA commercial remote pilot licensing exam, a key credential in the many infrastructure sectors that have adopted drone technology for surveying and maintenance.



Inaugural Career Fair for Baseline Training Grads

EPA Region 2, the NYC Departments of Environmental Protection and Citywide Administrative Services, CCNY Public Safety, the Grove School of Engineering, Food Bank for NYC, and SESI Consulting Engineers were just some of the employers who met and interviewed trainees at our first career fair. On the same day, the Advisory Board gathered to discuss the program's development and meet Baseline grads.



Community Partners Lead to Highest Recruitment Numbers Yet

Community-based organizations, including SoBro, Living Redemption, We ACT for Environmental Justice, YouthBuild, Mixteca, and Harlem Congregations for Community Improvement, threw their support behind the Rangel Initiative and helped us reach our biggest cohort yet for the summer Baseline Training.



CCNY Opens CUNY's First Autodesk Authorized Training Centers

The Centers, located on CCNY's main campus in Harlem and in the Center for Worker Education in downtown Manhattan, will be a valuable resource for CCNY students, Rangel Initiative trainees, and NYC Department of Transportation (DOT) employees to receive training and earn professional certifications. The opening of the downtown location was a celebration of the power of partnership and a shared commitment to meeting workforce needs, with leadership from CCNY, DOT, and District Council 37, NYC's largest public employee union.

Infrastructure Labor Market: Challenges and Opportunities

The bipartisan Infrastructure Investment and Jobs Act of 2021 launched a historic \$550 billion investment in the redevelopment and renewal of American infrastructure, at a time when infrastructure industries and agencies were already experiencing labor shortages so great that they had begun to affect public and private services and supply chains.

As a result, the demand for skilled workers has never been greater. Our program focuses on training for in-demand entry-level jobs in sectors with the greatest need for workers:

- ▶ **Construction and building services:** The construction industry is facing a labor shortage and must hire an additional 546,000 workers in 2023 beyond its typical pace in order to meet expected demand.¹ Building operations and facility management companies are facing an aging workforce² and, as the nation moves to a net-zero carbon economy, are in need of workers with skills and knowledge necessary to maximize energy and cost savings in residential and commercial buildings.³
- ▶ **Energy services:** As the nation moves toward electrification, electricians are in high demand, with 80,000 estimated job openings per year through 2031.⁴ Meanwhile, 50% of the utilities workforce is set to retire by 2032, including critical line workers, technicians, plant operators, and engineers, and 48% of managers report they are concerned about an impending emergency labor shortage.⁵
- ▶ **Public transportation and commercial trucking:** In a survey of 190 public transportation agencies in July 2022, 96% of respondents said they were experiencing a labor shortage; meanwhile, 43% of transit workers are over 55.⁶ In 2021, the shortage of commercial truck drivers hit a record high of over 80,000 drivers and is projected to top 160,000 by 2030.⁷
- ▶ **Food production, processing, and distribution:** COVID-19-related labor shortages have persisted throughout the food system, forcing industries to rely on costly, less reliable, and often less productive temporary labor.⁸

¹ Associated Builders and Contractors, “Construction Workforce Shortage Tops Half a Million in 2023,” Feb. 2023

² Accruent, “How the Aging Workforce Affects Facilities,” 2016

³ U.S. Department of Energy, “Growing the Green Buildings Workforce,” June 2022

⁴ U.S. Bureau of Labor Statistics, “Job openings levels and rates by industry and region,” May 2, 2023

⁵ Librestream, “Powering the Utilities Workforce of the Future,” April 2022

⁶ American Public Transportation Association, “Transit Workforce Shortage,” March 2023

⁷ American Transportation Research Institute, “Integrating Young Adults into Trucking Careers,” July 2022

⁸ Jones Day, “Navigating Labor Shortages in the Food Industry,” Sept. 2022



- ▶ **Water and wastewater treatment and plumbing:** Public agency labor shortages that largely began with the COVID-19 pandemic have resulted in 10,000 fewer water and wastewater treatment plant operators in 2021 than in 2019, and the shortage has begun to affect basic water services in some areas.⁹ A 2022 study estimated the shortage of plumbers will grow to 557,000 by 2027 with an estimated economic impact of \$33 billion in 2022 alone.¹⁰
- ▶ **Environmental remediation:** Brownfields and other environmental cleanup projects face a similar labor shortage as the other sectors, fueled in large part by the increased demand for remediation, itself the result of a surge in federal investment and regulatory requirements, a lack of skilled workers, and an aging workforce. In a June 2023 survey of tristate area environmental remediation companies conducted by the Rangel Initiative, two-thirds of respondents said they were currently hiring.

⁹ Governing, “Government Worker Shortages Worsen Crisis Response,” Oct. 2022

¹⁰ Plumbing Manufacturers International, “Plumber Shortage Costing Economy Billions of Dollars,” Aug. 2022

The Charles B. Rangel Workforce Initiative: Developing a New Infrastructure Workforce

The widespread labor shortages in infrastructure industries can largely be attributed to two causes: a lack of training programs that bridge the gap between high school and the specialized skills and certifications that these careers require, and limited interest among young people, who often perceive these careers to be low-skilled, unexciting or presenting few advancement opportunities.

Our program seeks to not only bridge the training gap but inspire students, framing infrastructure industries as crucial drivers of technological innovation, climate change adaptation and mitigation, and social and environmental justice – as well as areas of promising career opportunity.

Emphasis is placed on technical and soft skills that are in-demand not just in infrastructure but in the job market as a whole. These include information technology, data management, operations, and logistics. On the soft skills side, they include reliability and self-discipline alongside critical thinking and analysis. The latter are among the most sought-after skills by employers in 2023, according to an annual survey conducted by a leading recruiting firm.¹¹

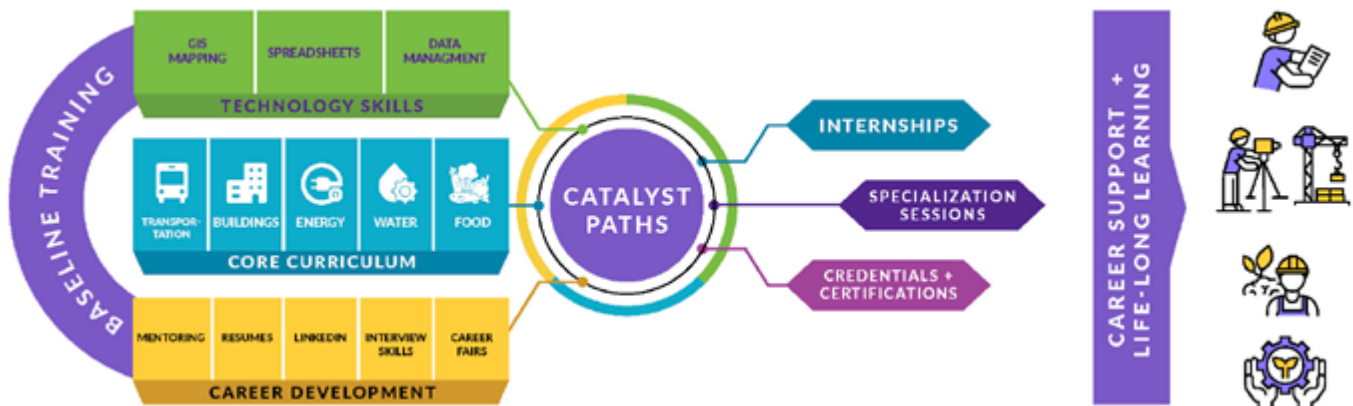
A. Curriculum

The Rangel Initiative's approach is modular and intentionally adaptive. Training is conducted over two phases, one required (Baseline) and the other optional (Catalyst). It offers students building blocks that they can stack according to their educational background, interests, and career aspirations. This approach was introduced for the fall 2022 training cycle in response to lessons learned during the summer 2022 pilot program. Conceived as a six-week curriculum that was taught both in-person and online, the pilot had an attrition rate of 25%, largely credited to the time commitment and hybrid model, which participants found challenging. Many did not complete online requirements. With a shorter, more intensive, in-person Baseline curriculum, the attrition rate is now averaging about 16% and student engagement is higher. The two-phase model allows for more flexibility for trainees without sacrificing depth and variety in skills training, especially for those who pursue Catalyst Training opportunities.



U.S. Representative Adriano Espaillat visits an OSHA class.

¹¹ Manpower Group, "The Talent Shortage," 2023



Baseline Training: The 40-hour, two-week Baseline Training curriculum offers an overview of five key infrastructure sectors highlighted for investment in the Infrastructure Investment and Jobs Act of 2021: Transportation, Buildings, Energy, Water, and Food. Students learn about job opportunities in each sector and participate in hands-on activities and simulations that introduce them to technologies and tools used in those jobs. Developed and taught by experts in their field, each infrastructure area is presented through the lens of social issues: sustainability, climate change mitigation and resilience, environmental justice, and worker safety.

Parallel to the infrastructure curriculum, students participate in digital skills workshops on spreadsheets (specifically, Microsoft Excel), data management, and geographic information system (GIS) mapping, all of which are used across infrastructure industries and are an asset for job-seekers even at the entry level. This is a particularly valuable offering, as 45% of our students have little or no proficiency with spreadsheets and data management, and few have experience with GIS.

Baseline Training participants also receive substantial career development support that meets them where they are (described in detail below). As of October 2023, the Rangel Initiative’s career support services will be strengthened through a collaboration with the New York State Department of Labor Division of Employment and Workforce Solutions, which will offer facilitation support for Baseline Training career development workshops as well as access to statewide Career Centers and job search assistance for trainees.

Catalyst Training: Upon completion of Baseline Training, students may apply to the optional Catalyst phase, which varies according to the training cohort but includes internships; intensive workshops in specialized topics, such as drone piloting and technology skills; industry certifications and credentials in environmental remediation and workplace safety (see “Specialized Curriculum” below).

Internships: Internships allow trainees to develop specialized infrastructure skills, improve communication and workplace skills, and take the first step in their professional careers. In the first year, the Rangel Initiative implemented an in-house, team-based internship model, where Baseline Training graduates selected for internships received advanced training around specialized topics, including environmental site remediation, HAZWOPER certification, and GIS mapping, and worked collaboratively to build ArcGIS StoryMaps. Interns received a stipend as well as additional one-on-one career mentoring.



In the coming years, the Rangel Initiative will expand the internship program to include:

- ▶ In-house projects centered around specific infrastructure areas, such as earning the NYC Department of Sanitation’s Master Composter Certificate and working on the implementation of CCNY’s composting initiatives.
- ▶ External project-based internships with infrastructure firms and agencies, defined in collaboration with employment partners. In order to ensure their success once placed in internships, the Rangel Initiative will continue to support trainees with career mentorship and oversight.



Baseline trainees learn about smart urban gardening at CCNY.

Specialized Curriculum

In an effort to continuously improve the Rangel Initiative's educational offerings and ensure that they are closely aligned with specific skills and knowledge required by infrastructure industries, we've added a number of credentials, certifications, and training programs to our Catalyst Training offerings since the fall of 2022. Additionally, we have specialized courses in development with city agency and workforce development partners.

- ▶ *OSHA construction training:* The Occupational Safety and Health Administration's Outreach Training Program for the Construction Industry offers significant value for job-seekers across various industries, including construction, manufacturing, healthcare, and warehouse logistics. It provides essential knowledge and awareness of workplace safety hazards and measures to prevent accidents, injuries, and illnesses, and is often a job site requirement to meet safety regulations. Widely recognized and respected by employers, the certification enhances a job-seeker's employability and demonstrates not only skills that may reduce workplace incidents but, as with all professional credentials, a commitment to personal development and continuous learning.
- ▶ *HAZWOPER:* The Bipartisan Infrastructure Law invested more than \$5 billion in cleanup of legacy Superfund and brownfields sites, a testament to the important role that environmental remediation plays in infrastructure development. HAZWOPER (Hazardous Waste Operations and Emergency Response) certification is a versatile and in-demand credential, required not only for jobs in site cleanup but in hazardous waste management, chemical manufacturing, and emergency response as well. This training is made possible by CCNY's FY 2021-2024 Environmental Workforce Development and Job Training (EWDJT) grant from the U.S. Environmental Protection Agency, which was incorporated in the Rangel Initiative program in fall 2022.
- ▶ *FAA Unmanned Aircraft General - Small (UAG) Exam Preparation:* Drones, also known as unmanned aerial vehicles (UAVs), are increasingly utilized in various infrastructure jobs to improve efficiency, safety, and data collection. The FAA Remote Pilot License is required for commercial drone piloting and, in spring 2023, the Rangel Initiative debuted a one-week intensive Catalyst course to prepare students for the licensing exam, taught by Peter Kalaitzidis, Robotics Program Manager at the New York Power Authority (NYPA). With this credential, they are eligible for jobs related to surveying, mapping, and monitoring construction sites, inspecting and maintaining built infrastructure, and more. As one might imagine, this course has proven popular with trainees.



The Hon. Charles Rangel, CCNY President Boudreau and NYC Dept. of Transportation leadership visit drone pilot training.



CCNY, NYC Dept. of Transportation, and District Council 37 celebrate the launch of a new Autodesk Authorized Training Center.

Curriculum In Development

Through conversations and collaboration with city agencies and workforce development partners, we've identified new courses for development or adaptation that will address specific workforce skill gaps and expand our current Catalyst offerings. These include:

- ▶ **Commercial Driver's License Training:** In consultation with the NYC Human Resource Administration and its affiliate Pathways to Industrial and Construction Careers · (PINCC), a federally-funded program, this course will train students for well-paid careers in commercial trucking, where the worker shortage is at an all-time high.
- ▶ **AutoCAD and Building Information Modeling (BIM) Training:** Based on deliberations with the Division of Bridges of the NYC Department of Transportation (DOT), the Rangel Initiative will field several new courses focusing on computer-aided design related to large infrastructure projects including best practices for continuous monitoring and planned maintenance. In October 2023, the Rangel Initiative opened CUNY's first two Autodesk Authorized Training Centers (ATC), located on CCNY's Harlem and downtown Manhattan campuses. The ATCs are a valuable resource not only for students from the Rangel Initiative and CCNY, but for DOT staff as well, offering them the opportunity to train in civil engineering and design software and earn professional certifications.
- ▶ **Green Professional Training (GPRO) Fundamentals of Building Green, Construction Management, and Operations and Maintenance Essentials:** The Rangel Initiative is adapting Urban Green's popular continuing education courses for building industry professionals who want to improve energy efficiency and reduce waste at every phase of the building's life cycle, from initial design to ongoing maintenance. As an established credential in the field, trainees with a GPRO certificate on their resume will have a significant leg up in the job market.
- ▶ **Healthy Housing Principles:** In a similar vein, the Rangel Initiative is adapting the Building Performance Institute (BPI)'s course that teaches participants how to analyze, diagnose, and address common home-based environmental health and safety hazards – an important credential across a number of jobs in residential buildings, including operations and maintenance, property management, and design.

B. Career Support Services

Job skills training is just one part of the Rangel Initiative's workforce development program. A second critical component is our career support services, designed to give trainees a boost in confidence as they embark on their job search as well as networking opportunities with employers in infrastructure fields.

Led by our on-staff Career Mentor, these services include:

- ▶ Career Fairs, held at the close of every Baseline Training, are an opportunity for participants to meet employers across infrastructure fields, learn about their work and potential career paths, and practice their networking and interviewing skills. In the summer 2023 training cycle, the Career Fair led to four placements at the NYC Department of Environmental Protection alone – just one example of their success in connecting trainees to jobs.
- ▶ Workshops covering topics such as interviewing skills and managing “imposter syndrome” for trainees entering new careers.
- ▶ One-on-one counseling to identify trainees’ goals, strengths, and interests, and chart the next steps in their professional training, job search, and career path.
- ▶ Resume and LinkedIn profile development workshops and personalized support. To date, 66 participants received assistance in building their resumes and 72 completed their LinkedIn profiles.
- ▶ Professional LinkedIn profile photos of Baseline Training participants, with button-down shirts available for those who need them. Since we added this service in the Winter 2023 cycle, a professional photographer has produced 82 portraits, many of which are proudly displayed on our alumni’s LinkedIn profiles.
- ▶ Job search support, including referrals for placements with partner employers, interview preparation, and follow-up counseling for those who need it post-placement.
- ▶ Alumni newsletters that keep graduates informed about opportunities such as job openings, career fairs, networking events, and advanced training.



We offer professional LinkedIn portraits for all Baseline Training participants.



C. Trainees

The Rangel Initiative was founded on the principle that equity of opportunity and diversity in the workforce is the key to unlocking innovation, resilience, and progress. As we see it, diversity isn't just a buzzword; it's a catalyst for creative new solutions rooted in the experiences and needs of communities who historically faced barriers to entry in infrastructure careers and had limited influence on local infrastructure development. Our program seeks to break down these barriers and provide life-changing economic opportunities to New Yorkers in need.

To this end, we work closely with community groups and front-line social service agencies to recruit trainees from underrepresented communities facing barriers to career advancement. Approximately 50% are unemployed, 37% have earned a high school diploma or GED as their highest level of education, and 19% have neither a high school diploma nor a GED. Furthermore, 40% of our trainees are women and 1% are nonbinary, indicating we're reaching genders that traditionally have been discouraged from entering infrastructure fields.

Placements

While only about half of Rangel Initiative trainees are actively seeking employment, 15 have gone on to jobs, apprenticeship programs or internships in infrastructure-related agencies and companies since the start of 2023, when tracking began. These placements include:

- ▶ The NYC Department of Environmental Protection
- ▶ The U.S. Army Corp of Engineers
- ▶ The NYC Department of Education
- ▶ Momentum Solar
- ▶ vEKtor Consultants
- ▶ AmeriCorps

As our program gains traction with job-seekers and we continue to develop relationships with employers, we aim to place 80% of graduates who are seeking employment.

Alumni Spotlight: Derrick Payne

With just a GED, Derrick Payne attended our Spring 2023 Baseline Training, and on the recommendation of our Career Mentor, he was quickly hired for the NYC Department of Environmental Protection's (DEP) two-year apprenticeship program. A native of Memphis and a New Yorker of ten years, he learned about the Rangel Initiative from our recruitment partner, SoBro (South Bronx Overall Economic Development Corporation). Four months into his apprenticeship, he's working 16-hour shifts repairing manholes, fire hydrants, and water mains. "It's worth it," he said of the long hours. "The money is good, the benefits are good. In less than two years, I can be making six figures."

Derrick's dedication is paying off, and he sees a clear path for advancement at DEP. After passing the agency's supervisor test, he may have his eyes set on a management position, though he'd miss the challenges of work in the field. Derrick credits the Rangel Initiative for giving him a foundation in Microsoft Excel and workplace safety that has carried forward in his daily duties. His success is a testament not just to the value of continuing education and hard work, but of the Rangel Initiative's collaboration with community organizations and infrastructure employers, which helped make Derrick's story possible. "It's a good program," he said. "If not for Rangel and me going to class and learning I wouldn't have gotten the job. I'd recommend it to anyone."



““

**It's a good program.
I'd recommend it to
anyone.”**

– DERRICK PAYNE
Rangel Initiative Alumnus

Alumni Spotlight: Anzim Sultan

Anzim Sultan came to the Rangel Initiative as a CCNY student majoring in Earth System Science and Environmental Engineering. While his research, data collection, and analytic skills were strong, he saw the Rangel Initiative as an opportunity to add in-demand technology skills, broaden his infrastructure knowledge, and, as he put it, “establish strong connections with industry professionals.” In fall of 2022, he took classes in GIS, environmental infrastructure, and renewable energy, and later participated in the drone pilot Catalyst course, which prepares trainees for the FAA commercial remote pilot licensing exam.

Following his training, he was an active participant in Rangel Initiative networking events, which he credits for landing his position as a geologist at the NYC Department of Environmental Protection (DEP). He contributes to a project that aims to keep New York City’s waterways free of pollutants, and says his Rangel Initiative training has served him well in this effort. He applies his GIS skills on a daily basis, and “my knowledge of environmental infrastructure from Rangel is instrumental when working in the field.” He plans to return to higher education and aspires to become a researcher focusing on environmental contamination and its effects on human health.

Anzim’s experience illustrates the adaptability of the Rangel Initiative curriculum, which was designed to offer both broad workforce development training as well as fill in gaps in skills and knowledge for those with advanced training or four-year degrees. Whether the end goal is a good-paying job with growth potential or a Ph.D., we aim to be a resource for all those who will impact the next phase of infrastructure development.



“**My knowledge of environmental infrastructure from Rangel is instrumental when working in the field.”**

— ANZIM SULTAN
Rangel Initiative Alumnus

D. Partners

Since our founding we have been dedicated to developing partnerships with a diverse range of people and organizations within government and in infrastructure-related sectors, and the reason is simple: it is only through partnerships that our program can make the greatest impact. Our partnerships include the following:

Institutional, Government, and Labor Partners

Collaboration with CCNY academic departments builds our capacity for delivering a cutting-edge workforce development program that offers a broad range of topics and experiential learning opportunities. Top-level partnerships with governmental agencies focusing on infrastructure, workforce development, and front-line social services ensure that our program is accessible to disadvantaged populations and is aligned with the policy initiatives, investments, and technology innovations that are shaping infrastructure development. Through our partnership with District Council 37, New York's largest public employee union, we are helping fill vacancies at city agencies by prioritizing and delivering training for its members. Our partners include:

City College of New York:

- ▶ Office of the President
- ▶ Office of Continuing and Professional Studies
- ▶ Division of Science
- ▶ Grove School of Engineering
- ▶ Bernard and Anne Spitzer School of Architecture

Government:

- ▶ New York State Department of Labor
- ▶ New York City Administration for Children's Services
- ▶ New York City Human Resources Administration and the Pathways to Industrial and Construction Careers (PINCC) Training Program
- ▶ New York City Department of Transportation
- ▶ New York City Office of Environmental Remediation

Labor:

- ▶ District Council 37



NYC Dept. of Transportation Commissioner Ydanis Rodriguez at the opening of the downtown Autodesk Authorized Training Center.



Community Partners

Partnerships with community groups enable us to recruit trainees who've traditionally been underrepresented in infrastructure industries. In the spring and summer 2023 training cycles, we hosted recruitment open houses at community and youth centers operated by our partners, which allowed us to meet candidates in their own spaces and generated more than 55 participants. Additionally, partners distribute recruitment materials to their constituents and often invite us to participate in citywide job fairs that they are involved in. A major advantage of working with organizations that have deep roots in social service is that many offer wraparound support services to trainees they've recruited, including job readiness training and stipends, which boosts retention and job placement.

The model has proven successful: in the three 2023 training cycles to date, collaboration with recruitment partners and other social service organizations has resulted in 75 Baseline Training enrollments. These partners include:

- CCNY STEM Institute High School
- Harlem Congregations for Community Improvement
- Living Redemption Community Development Corporation
- Mixteca
- Services for the UnderServed (S:US)
- Silicon Harlem
- South Bronx Overall Economic Development Corporation (SoBro)
- WE ACT for Environmental Justice
- Youth Action Youth Build



The Rangel Initiative's collaborators include Clayton Banks of Silicon Harlem and Charles Callaway and Pamela Stewart-Martinez of WE ACT.



The EPA Region 2, CCNY Public Safety and the Food Bank for NYC participate in a Baseline Training career fair.

Placement Partners

Partnerships with employers ensure that our graduates have opportunities to network and find employment in the infrastructure fields that interest them. The Rangel Initiative Career Mentor works closely with placement partners to identify candidates for referral to open positions, and many partners regularly participate in Rangel Initiative career fairs, where they make initial connections with trainees. Other partners are industry associations that promote our program – and our graduates – to employers in their field. Our partners include:

- ▶ U.S. EPA-Region 2
- ▶ U.S. Army Corp of Engineers
- ▶ NYC Department of Environmental Protection
- ▶ NYC Department of Citywide Administrative Services
- ▶ NYC Department of Education
- ▶ Metropolitan Transit Authority
- ▶ Brownfield Coalition of the Northeast (BCONE)
- ▶ NYC Brownfield Partnership
- ▶ Licensed Site Remediation Professionals Association
- ▶ AmeriCorps
- ▶ Food Bank for New York City
- ▶ GROW Externships
- ▶ Crescent Companies
- ▶ SESI Consulting Engineers
- ▶ Momentum Solar
- ▶ vEktor Consultants



E. The Honorable Charles B. Rangel

Charles B. Rangel, war hero, history-making congressman, master lawmaker. A founding member of the Congressional Black Caucus, he made history as the first African American member of Congress to lead the powerful Ways and Means Committee. He served for 23 terms in the House of Representatives and was cited as the most effective lawmaker in the House, leading all of his colleagues in passing legislation. He was a prime contributor to President Obama's historic health care reform law.

Growing up on the other side of the tracks on Lenox Avenue in Harlem, he was transformed from high school dropout to war hero after volunteering for service in the Army during the Korean War. Wounded in an attack by waves of Communist Chinese troops, he was awarded a Purple Heart and the Bronze Star for Valor after leading his surviving comrades from behind enemy lines.

With the aid of the G.I. Bill, he earned degrees from New York University and St. John's University Law School. He began his public service as an assistant U.S. Attorney for the Southern District of New York and was later elected to the New York State Assembly. He went to Washington in 1971 to serve in the House after defeating the legendary Congressman Adam Clayton Powell, Jr.

Demonstrating his commitment to education, he created financial mechanisms to construct and rehabilitate public schools across the country. In Congress, following Saint Matthew's teaching, he was a stalwart champion for the "least among us," advocating powerfully and persistently to improve the lives of working people. A leading advocate for equal rights and equal opportunity, Congressman Rangel boosted the incomes of millions of working families with the Earned Income Tax Credit, and pumped billions of dollars into revitalization of communities across the nation, including Harlem.

Congressman Rangel is currently Statesman in Residence at The City College of New York for the City University of New York. He initiated the Charles B. Rangel Infrastructure Workforce Initiative at CCNY to address the workforce skills gap and develop new pathways of opportunity for traditionally underrepresented communities to enter specialized infrastructure industries. At the height of the COVID-19 pandemic, President Vincent Boudreau mobilized CCNY's infrastructure research and workforce development resources to develop the initiative at a crucial time in the reconstruction of the American economy and infrastructure.

"We all know that underprivileged communities have been left behind as transportation and infrastructure projects with billion-dollar price tags have filled the pockets of developers, contractors and union workers," Congressman Rangel said. "It is high time that we address the underrepresentation of our constituencies – we need to secure equity in these massive projects for them."

Congressman Rangel retired from Congress in 2016. Mr. Rangel still resides with his wife, Alma, in Harlem, where he was born. They have two adult children and three grandchildren.



Executive Director Angelo Lampousis and the Honorable Charles Rangel.



Advisory Board members meet with leadership from EPA Region 2 and the Rangel Initiative.

F. Advisory Board

The Rangel Initiative's Advisory Board is composed of representatives across infrastructure sectors, including privately-held companies and public agencies, as well as leaders in community organizing and workforce development. Their guidance keeps our commitment to the community strong and our training program rooted in the workforce needs of infrastructure industries and agencies.

Advisory Board Members

- ▶ Alicia Aniello, General Manager of New York and New Jersey, Triumvirate Environmental
- ▶ Clayton Banks, CEO, Silicon Harlem
- ▶ Samara Barend, CEO, AION Biosystems
- ▶ Michael Garner, Chief Business Diversity Officer, New York City Mayor's Office of Minority and Women-Owned Business Enterprises
- ▶ Andrew Genn, Senior Vice President, New York City Economic Development Corporation
- ▶ Lee Ilan, Chief of Planning, New York City Mayor's Office of Environmental Remediation
- ▶ Michael Salvato, Vice President, Infrastructure Advisory Services, Enterprise, Investment & Transformation Practice, Mott MacDonald
- ▶ Sam Schwartz, Founder, Sam Schwartz Consulting, LLC
- ▶ Frank J. Sciamè, Jr., CEO and Chairman, Sciamè Construction, LLC
- ▶ Charles Shorter, Senior Consultant, AGB Consulting, and former Trustee of the City University of New York
- ▶ Luis Tormenta, Principal Partner, Laland Baptiste



Rangel Initiative staff and advisors with NYC Administration for Child Services Commissioner Jess Dannhauser and pilot training grads.

G. Program and Instructional Staff

Executive Director

Angelo Lampousis, Ph.D.

Program Officers

- Ravine Harrell
- Maria Henriquez
- Jason Iwanesky
- Nora Sherman

Administrative Assistant: Nicole Mbisike

Instructional Technologist: Daniel Klinger

Instructional Staff

- Thomas Abdallah, P.E., LEED AP, Deputy Vice President and Chief Environmental Engineer, Metro Transit Authority (MTA) New York City Transit
- Andrew Burgie, Adjunct Professor of Environmental Health Sciences, NYU School of Public Health
- Peter Kalaitzidis, Robotics Program Manager, New York Power Authority (NYPA)
- Dr. Tarendra Lakhankar, Lecturer & Research Scientist, NOAA-CREST Institute
- Michael Matthys, CHST, COSS, QSSP, OSHA Outreach Trainer
- Alexander Nuciforo, Autodesk Instructor
- Jake Toth, CHST, Construction Management Trainer



Looking Ahead

The year ahead will see across-the-board expansion for the Rangel Initiative: in our facilities, partnerships, and curriculum.

In collaboration with the CCNY STEM Institute, the Rangel Initiative will more than double its training and administrative space, adding 2,400 square feet in adjoining space to our existing facility in CCNY's Shepard Hall. With a planned renovation, we'll add two large classrooms, shared work spaces, a recording studio, a reception area with gallery walls, and purpose-built training rooms for simulation-based learning and hands-on instrumentation training – the latter large enough for multiple groups to work at once with our rapidly growing instrument library.

Our focus on partnership development with New York State and City agencies, unions, and other workforce development programs in the Rangel Initiative's first year has borne fruit: through joint efforts with the NYS Department of Labor, NYC Human Resource Association, and the NYC Department of Transportation (DOT), we'll debut new specialized curricula in the coming months focusing on skills in high demand in today's labor market: career readiness, commercial truck driving, and AutoCAD and Building Information Modeling (BIM). Parallel to these efforts, the Rangel Initiative will help fill vacancies across city agencies through our partnership with District Council 37, NYC's largest public employee union, developing training for members who are unemployed or looking to move into vacant positions at other agencies. The opening of CCNY's second Autodesk Authorized Training Center in the Center for Worker Education in October 2023 was a testament to cross-sector collaboration, with DOT Commissioner Ydanis Rodriguez, District Council 37 Executive Director Henry Garrido, and Dean Juan Carlos Mercado of the Center for Worker Education and the Office of Continuing and Professional Studies in attendance. The event included a presentation on the Rangel Initiative's drone pilot training program and a walkthrough of CCNY's Center for Worker Education. Finally, with a FY2024-25 Brownfields Job Training grant from the U.S. EPA, we'll expand our environmental training offerings and work with community and industry partners to place more than 60 Harlem and Upper Manhattan residents in environmental remediation jobs.

In the year ahead, we'll continue this synergistic approach, extending our reach with existing partners, building relationships with new ones, and working across sectors to identify gaps in high-demand skills training that the Rangel Initiative can fill for the next generation of infrastructure workers.



Acknowledgements

On behalf of the Charles B. Rangel Infrastructure Workforce Initiative team, we would like to express our sincere gratitude to the following individuals for their unwavering dedication and vision.

First and foremost, we extend our heartfelt appreciation to retired U.S. Congressman Charles B. Rangel, a true trailblazer, for his relentless pursuit of creating opportunities and advancing economic development. He has left an indelible mark on inner-city development during his 46-year political career which now continues through this initiative at The City College of New York. We would like to express our heartfelt appreciation to U.S. Representative Adriano Espaillat for his instrumental role in securing congressional funding for our workforce development program in New York's Thirteenth Congressional District. This funding will play a pivotal role in addressing the pressing need for modern infrastructure jobs and fostering economic development in underserved areas. His vision and leadership are instrumental in ensuring that communities have the necessary resources and opportunities to thrive. We also extend our thanks to Governor Kathy Hochul for recognizing the importance of Congressman Rangel's legacy and supporting this exceptional effort to train the next generation of infrastructure workers. Her endorsement and belief in the transformative potential of the Charles B. Rangel Infrastructure Workforce Initiative are invaluable. We acknowledge the crucial role played by CCNY President Dr. Vincent Boudreau and his team in championing this initiative. Their dedication to fostering a more representative workforce in the infrastructure field and their commitment to economic development in communities of color are truly commendable. Our gratitude extends to Dr. Robert E. Paaswell and Michael Bobker for their outstanding early contributions to the Charles B. Rangel Infrastructure Workforce Initiative and their continued support.





We gratefully acknowledge the following individuals who have contributed to the curriculum and have supported in various ways the Charles B. Rangel Infrastructure Workforce Initiative.

- ▶ Michael Bobker, Founding Director, Building Performance Lab, CUNY Institute for Urban Systems
- ▶ Tiffanie Burt, Community Projects Manager, CCNY Office of Institutional Advancement, Communications, and External Relations
- ▶ Mustapha Camara, Finance Manager, CCNY Office of Institutional Advancement, Communications, and External Relations
- ▶ Yusef Esa, Energy Specialization Content Developer, Rangel Initiative
- ▶ Milena Gutierrez, Career Counselor and Mentor, Rangel Initiative (2022-2024)
- ▶ Nury M. Gutierrez, Program Manager, Rangel Initiative (2022-2024)
- ▶ Salome Gvinianidze, Associate Program Manager, Rangel Initiative (2021-2022)
- ▶ Benjamin Kalmanowitz, Transportation Specialization Content Developer and Instructor, Rangel Initiative (2022)
- ▶ Said Mejia Manrique, GIS/Excel Tutor, Rangel Initiative (2023)
- ▶ Juan Carlos Mercado, Ph.D., Dean, Division of Interdisciplinary Affairs at the Center for Worker Education and Director, Office of Continuing and Professional Studies, CCNY
- ▶ Dee Dee Mozeleski, Vice President, CCNY Office of Institutional Advancement, Communications, and External Relations
- ▶ Ronald Olaizola, Food Specialization Content Advisor and Instructor, Rangel Initiative (2023), and Associate Director of Operations, Food Bank for New York City
- ▶ Robert Paaswell, Ph.D., Distinguished Professor of Engineering and Director, CUNY Institute for Urban Systems, University Transportation Research Center
- ▶ Abraham Rodriguez, Built Environment Specialization Content Developer and Instructor, Rangel Initiative (2022)
- ▶ Jessica Rodriguez, Instructional Designer, Rangel Initiative (2022)
- ▶ Michelle Stent, Project Manager, Congressman (Former) Charles B. Rangel, Statesman in Residence, CCNY
- ▶ Carla Tejada, Ph.D., Curriculum Advisor, Rangel Initiative (2022-2023)
- ▶ Terri N. Watson, Ph.D., Associate Professor of Educational Leadership, CCNY

Training Facilities and Contact Information



Visit Our Training Facility

The Rangel Initiative's main training facility is located in Shepard Hall on CCNY's historic Harlem campus. Please be in touch to schedule a tour, or stop by our offices if you're on campus.

Shepard Hall, Room 051
160 Convent Avenue
New York, NY 10031

To reach the facility, enter Shepard Hall through the entrance at 259 Convent Avenue. Room 051 is located on the ground floor.

On-Campus Staff

Shepard Hall, Room 051:

Maria Henriquez
Jason Iwanesky

Marshak Science Building, Room 926:

Ravine Harrell
Nicole Mbisike

Autodesk Authorized Training Centers

CCNY's Autodesk Authorized Training Centers, operated by the Rangel Initiative and the Office of Continuing and Professional Studies, are conveniently located in uptown and downtown Manhattan.

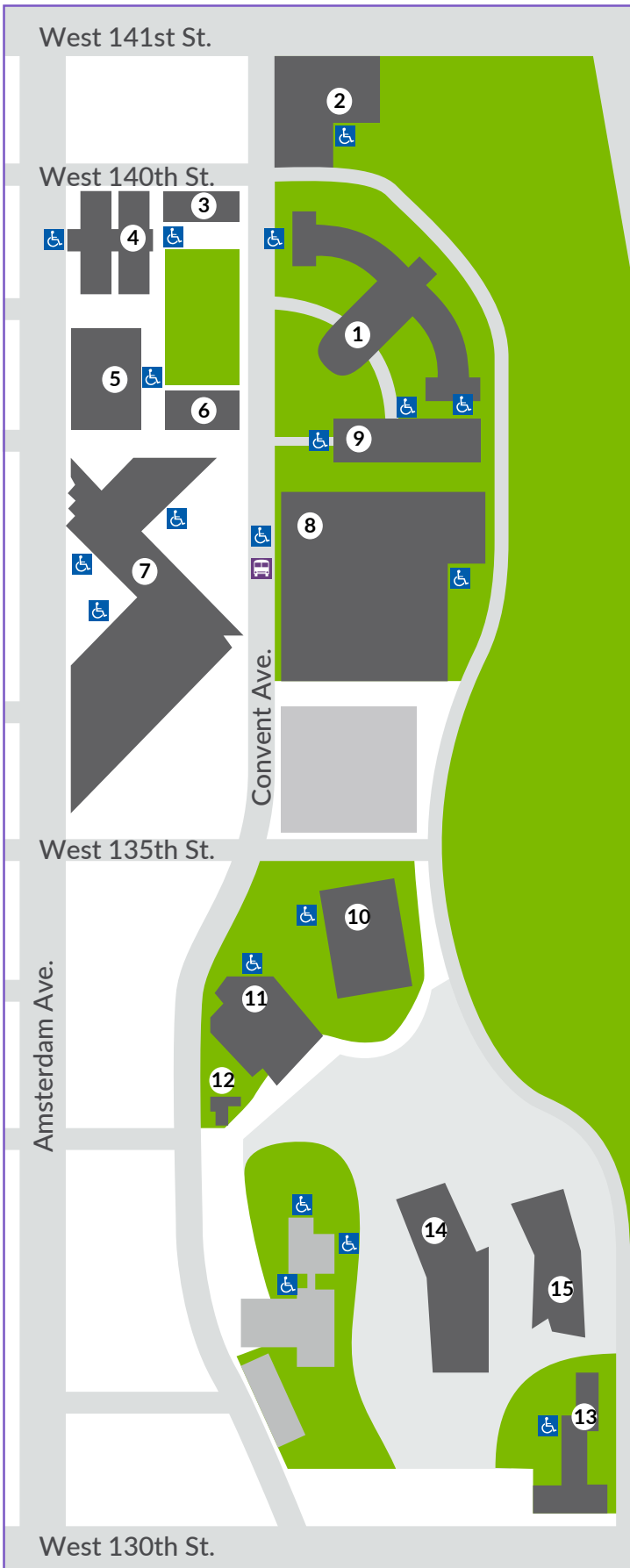
North Academic Center, Room 5/212
160 Convent Avenue
New York, NY 10031

Center for Worker Education, Room 7-54
25 Broadway
New York, NY 10004

Contact and Connect with Us

Telephone	212-650-6281
Email	rangelinfrastructure@ccny.cuny.edu
Website	www.ccny.cuny.edu/rangelinfrastructure
Social Media	LinkedIn: @ccnyworkforcedevelopment Instagram: @ccnyworkforcedevelopment Facebook: @ccnyworkforcedevelopment





The City College of New York

- 1 Shepard Hall
- 2 Steinman Hall - The Grove School of Engineering
- 3 Baskerville Hall
- 4 Compton-Goethals Hall
- 5 Townsend Harris Hall- CUNY School of Medicine
- 6 Wingate Hall
- 7 North Academic Center (NAC)
- 8 Marshak Science Building
- 9 Wille Administration Building
- 10 Spitzer Hall - The Spitzer School of Architecture
- 11 Aaron Davis Hall
- 12 Schiff House - Child Development Center
- 13 The Towers
- 14 City College Center for Discovery & Innovation
- 15 CUNY Advanced Science Research Center



CCNY Shuttle Bus

Shuttle will pick up + drop off at the location. Shuttle runs between W125, W145 and Marshak.



Handicapped Access

Access to Nat Holman Gym and Rooms 20 thru 28 only.



The City College
of New York

THE CHARLES B. RANGEL INFRASTRUCTURE WORKFORCE INITIATIVE
160 Convent Avenue, Shepard Hall, Room 51, New York, NY 10031
rangelinfrastructure@ccny.cuny.edu | www.ccny.cuny.edu/rangelinfrastructure