NYC ACCELERATOR

CONSTRUCTING NEW ALL-ELECTRIC BUILDINGS

Guidelines for Small Commercial & Market-Rate Multifamily Buildings

About This Resource

These guidelines are for developers, architects, engineers, and construction professionals planning the construction of new small commercial buildings or market-rate multifamily buildings with all-electric systems. Buildings in these categories are between four and seven stories tall and feature apartments, offices, or other leased commercial spaces at market rates.

Why All-Electric?

In 2019, New York signed the Climate Leadership and Community Protection Act into law, requiring a dramatic reduction of economy-wide greenhouse gas emissions over time and setting a goal of 100% carbon-free electricity by 2040.

New York City is doing its part to meet these ambitious targets. Nearly 70% of the city's carbon emissions come from the fossil fuels used to heat, cool, and power our buildings. Several local laws now require building owners to measure, report on, and reduce their energy use and carbon emissions.

Installing energy-efficient electric equipment reduces emissions and has several other benefits. Electric equipment can also lower maintenance costs, increase operating efficiencies, and provide healthy, equitable, and inclusive spaces for occupants. Advance planning to comply with these laws will help building owners avoid future penalties.

Local Law 154

Local Law 154 (LL154), also known as the "All-Electric Law," sets strict carbon limits that effectively ban gas- and oil-fired appliances, such as stoves and boilers, in new buildings and major renovations. The law encourages the use of electricity as the sole power source for buildings, enabling them to run on cleaner fuels as the city expands its use of renewable energy.

Building Electrification

January 1, 2024	December 31, 2024	December 31, 2025	July 2, 2027	Dicember 31, 2027
• 1- and 2-family homes for all energy use • All other buildings < 7 stories, except for hot water systems	• NYC School Construction Authority	• Buildings < 7 stories with at least 50% affordable housing, except for hot water systems	• Buildings ≥ 7 stories for all energy use • Hot water systems in all buildings	• Buildings ≥ 7 stories with at least 50% affordable housing

Source: https://www.nyc.gov/site/buildings/codes/building-electrification.page

Local Law 97

Local Law 97 (LL97) requires buildings larger than 25,000 gross square feet to meet ambitious carbon emissions limits that tighten every five years. It sets annual fines for exceeding those limits. Developers of new buildings designed to meet or exceed energy code should not assume that their buildings will also automatically comply with LL97. To ensure compliance and avoid fines, developers should carefully incorporate low-carbon solutions like all-electric equipment early in the planning phases of new construction projects.

Getting Started

Before you begin, review the following steps, design options, and details to help ensure a successful all-electric construction project.

1. Know the site's opportunities and constraints.
2. Establish performance and occupancy goals.
3. Focus on load reduction first, then choose electric equipment.
4. Choose the right-sized electric equipment and consider electric domestic hot water (DHW) options.
5. Commit to testing, verification, and commissioning during construction.
6. Equip operations and maintenance staff with the tools they need to maintain peak building performance.
7. Monitor building energy use and commit to continuous commissioning.

Design Options

Energy Savings: Strategy that provides improved energy efficiency when compared to traditional strategies or results in reduced energy consumption when compared to code-minimum strategies.

Comfort: Strategy that provides improved occupant satisfaction and experience.

Health/Indoor Air Quality (IAQ): Strategy that reduces, dilutes, and/or removes indoor air pollutants.

Building Resilience: Strategy that improves the building's ability to maintain safe, habitable conditions during periods of climate change-induced stressors.

System	Elements	Strategies	Co-Benefits			
			Energy Savings	Comfort	Health/IAQ	Building Resilience
Load Reduction	Building Envelope	Best practive envelope and air barrier design	↗	↗	↗	↗
	Ventilation	Direct, balanced, and verified ventilation	↗	↗	↗	
	Controls	Electrical monitoring with internet-enabled controls	↗	↗	↗	
All-Electric	Heating & Cooling	Mini-split and multi-split heat pumps	↗	↗		
		Cold climate packaged terminal heat pumps (ccPTHPs)	↗	↗		
		Ground source heat pumps (AWHPs)	↗	↗		
	Domestic Hot Water	Central air-to-water heat pumps (GSHPs)	↗			
		Central water-to-water heat pumps (WWHPs)	↗			
		Wastewater heat recovery	↗			
	Appliances	Induction cooktops	↗		↗	
	Renewables	Solar PV	↗			↗

LOAD-REDUCTION ELEMENTS

Building Envelope

Strategy: Best Practice Envelope and Air Barrier Design

Strategy Description

A superior envelope is essential to a well-designed all-electric building. Best practice standards, such as Passive House, include airtight construction, climate-zone appropriate insulation and fenestration, and minimal thermal breaks to reduce building loads. The strategy proposed in this guidebook involves high-performance fenestration and continuous air barrier and insulation with minimal thermal breaks, verified through performance testing. Traditional code-compliant construction requires continuous air barrier and insulation, although details and installation may be less scrutinized for continuity. This less rigorous approach can result in indoor temperature fluctuations, air and moisture infiltration, and increased energy costs.

To achieve best performance, architects and consultants should carefully review wall details for thermal continuity. Designers should review insulation continuity at junctures and note elements such as cladding attachments, balcony penetrations, and dunnage that may require special thermal break pads to ensure a robust envelope. Windows should have low U-values and climate-appropriate **solar heat gain coefficients**. This strategy also requires an envelope commissioning process, with installation quality assurance in the form of progress inspections and performance testing. Whole-building envelope performance testing and verification is essential to confirm the overall airtightness of the building envelope, and to assure the mechanical engineer that oversized heat pump capacities are unnecessary.

Impact

Schedule	Overall Building Performance	Upfront Costs
Requires an additional day of whole-building air leakage testing. Intermediate tests and inspections will not impact the construction schedule if mockups/first installs are airtight.	Buildings with tighter and better insulated envelopes reduce mechanical equipment size. These are critical features of buildings with low energy use intensities (EUIs).	Inspections for consistent quality installation and for intermediate testing are critical and can add cost.

Ventilation

Strategy: Direct, Balanced, and Verified Ventilation

Strategy Description

Energy code may require energy recovery ventilation (ERV), which recovers heat from the exhaust stream to preheat incoming fresh air. ERVs have the added benefit of providing ventilation rates balanced with the exhaust rate. These systems may be centralized or unitized. Centralized systems require fewer penetrations through the air barrier and thermal boundary and provide easy access points for maintenance. Careful duct sealing is critical for centralized systems to ensure performance. Decentralized systems require two penetrations per system, making air barrier and thermal continuity more challenging. Filters must be changed two to three times per year, so designers must evaluate hallway access points with the shortest duct runs possible when considering decentralized systems.

Ventilation flow rates should be confirmed against design by hiring a qualified third-party contractor to test, adjust, and balance the system. Hiring **National Environmental Balancing Bureau** or **Associated Air Balance Council** certified professionals provides assurance that contractors are well-versed in the correct balancing procedures.

In high-occupancy spaces, like common areas, designers should specify demand control ventilation to avoid ventilating during unoccupied periods. After installation and balancing, the proper function should be tested and verified.

Impact

Schedule	Overall Building Performance	Upfront Costs
Air sealing and proper testing, adjusting, and balancing should not impact schedule if it is planned during design and contracting.	Direct, controlled, verified ventilation can cause higher heating loads, which can be mitigated with energy/heat recovery.	This strategy requires an increased level of duct sealing and verification.

Controls

Strategy: Electric Monitoring with Internet-enabled Controls

Strategy Description

All-electric systems are inherently more digital and responsive than gas-fired systems, so there is a higher **return on investment** on well-detailed control systems, strategies, and goals. Energy code requires whole-building electrical monitoring through a device capable of recording and reporting consumption. This requirement can be met thoughtfully to get the most useful data from the building. Bring Internet access to all-electric equipment and Wi-Fi enabled controls and integrate this data into a cloud-based system. This utility data should be made available to building operations staff and property managers so that issues or equipment failures resulting in tenant discomfort or increased energy consumption can be quickly detected. At a minimum, the following end-uses should be monitored: heating (including distribution equipment), ventilation, domestic hot water (including distribution equipment), cold water, lighting loads, plug loads, and elevators.

Impact

Schedule	Overall Building Performance	Upfront Costs
Proper specifications should lead to limited schedule impact. Sequences of Operation (Spec 230910) must be fully detailed and job/equipment specific. If this is not detailed in the specifications, this could lead to startup delays. Because controls are finalized at the end of design, it is common for this spec to be updated/refined via a bulletin.	To ensure that the building performs as intended, thoughtful, accessible, and transparent electrical monitoring is important. For decentralized systems, like mini-split HPs and PTHPs, networked thermostats allow monitoring that enables optimization in the operations phase. These systems can also be used to support energy efficiency options such as temperature-limiting controls.	If Wi-Fi or an IP access point is coordinated in design, most manufacturers offer some web-enabled features. Manufacturers also offer extended warranties and allow the factory to monitor/troubleshoot the system for low/no cost.

ALL-ELECTRIC ELEMENTS

Heating & Cooling

Note: Don't Oversize Heat Pumps!

Most HVAC systems in the NYC market are oversized. Oversizing increases the upfront and operational system costs and can lead to comfort issues as well. This issue is more important with electrified heat pump systems for a few reasons. The incremental costs for larger capacities are more expensive for heat pumps than for gas-fired systems. Air source heat pump capacity is lower when the outdoor temperatures are lower, and more heating is needed. This varies by manufacturer and can cause engineers to include unnecessary safety factors. Finally, electricity costs more than natural gas, so the efficiency reductions from cycling have larger cost impacts.

Cold climate air source heat pumps maintain more of the nominal heating capacity in extreme cold conditions, as opposed to a steep drop in capacity below 20°F ambient temperature. Consider selecting products shortlisted at ashp.neep.org/#!/product_list, which references numerous regional efficiency programs.

Code and best practices require detailed thermal load calculations per room and building zone. The ASHRAE 1% and 99% outdoor design conditions are recommended when calculating heating loads (17°F and 86.5°F). If the conservative 0.4% design heating conditions are used (13°F), the design indoor temperature should not be higher than 68°F. In any new construction building with specified air sealing testing and inspections, a "tight" air infiltration value below three air changes per hour is typical.

Oversized heat pumps

- Increase capital expense for equipment and electrical infrastructure
- Decrease efficiency and equipment life due to cycling
- Decrease humidity control and comfort

Strategy 01: Mini-split and Multi-split Heat Pumps (Decentralized)

Strategy Description

Mini-split **heat pumps (HPs)** have a single indoor unit for every outdoor unit. Multi-split HPs can have multiple indoor units for every outdoor unit, but the indoor units can only be in heating or cooling mode, not both simultaneously.

The most common mistake made when designing and purchasing mini- and multi-split HPs is oversizing. Correctly sizing this equipment is extremely important to achieve nameplate efficiency and comfort. This is especially important for low-load buildings that have airtight, high-performing thermal envelopes, since it can be difficult to find heat pumps smaller than 6,000 MBH.

Mini- and multi-split HPs can be ducted or ductless. Ducted systems must be designed thoughtfully by the mechanical engineer. Engineers should design these systems with fully ducted return air instead of open plenums or boxed plenums. Open or boxed plenums can pull air from adjacent spaces and the plenums instead of the intended space. They can also expose the return air to additional heat gain, such as lighting, and particulate matter or debris, which can clog filters and negatively impact indoor air quality.

Metering Considerations

The outdoor unit can be powered from the apartment panel and therefore can be billed directly to the tenant.

Impact

Schedule	Overall Building Performance	Upfront Costs
Many manufacturers have penetrated the market, and contractors are familiar with installation. This system also requires less refrigerant piping than a centralized system. All these factors mean a simple installation process with limited impact on the schedule. Ducted systems require additional inspections to verify air sealing and air tightness.	Mini- and multi-split units have high efficiencies and are less likely to have refrigerant leaks from large piping runs or improper installation. However, if these systems are not sized appropriately, listed efficiencies will not be realized.	Increased labor options allow for comparable upfront costs. These systems are straightforward with limited control needs, also leading to comparable upfront costs.

Strategy 02: Cold Climate Packaged Terminal Heat Pumps (Decentralized)

Strategy Description

Cold climate packaged terminal heat pumps (ccPTHPs) are decentralized packaged heat pumps for heating and cooling that maintain heating output in the colder NYC weather. Project teams must carefully review the product before selection to make sure it is cold-climate compatible. It is also extremely important that the design team carefully sizes this equipment for optimal comfort and efficiency. A ccPTHP requires through-wall penetrations that will impact the overall thermal performance of the building envelope, and thorough air-sealing around the sleeve and unit is key. Finally, additional condensate drainage is required for each ccPTHP to handle the substantial defrost drainage in heating mode.

Electric resistance heat is not typically needed in a building that is 2020 energy code-compliant and has accurate load calculations.

Metering Considerations

These units are powered by the apartment panel and can be billed directly to the tenant.

Impact

Schedule	Overall Building Performance	Upfront Costs
A ccPTHP is simple to install, with unitized, basic controls and integrated refrigerant piping. Additional details, time, and materials are required to properly air and water seal around penetrations.	It is important to specify cold climate PTHPs to ensure high-efficiency performance and comfort for tenants during the winter season. Through-wall penetrations undermine the overall thermal performance of the envelope.	A ccPTHP is much less expensive than an HP system. Installation is simple, and most installers are familiar with similar PTAC (package terminal air conditioning) installation. Limited products and an immature market may increase lead times.

Strategy 03: Ground Source Heat Pumps (Centralized)

Strategy Description

Ground source heat pumps (GSHPs) are an effective strategy if the specific site has good geothermal potential. The NYC Geothermal Pre-feasibility Tool is a free web tool that maps geothermal potential across NYC. Instead of complex cooling tower and boiler systems, GSHPs heat and cool the building using a hydronic loop that runs through a geothermal well heat exchanger. There is an upfront, manageable risk associated with well sizing and leaks. However, this is balanced by an efficient, simple, and low-cost maintenance phase. There are also companies that will provide a turnkey geothermal well field by charging a low rate in the operations phase while absorbing the underground risks.

The NYC geothermal market has significantly matured in the last 10 years. With dozens of large NYC multifamily geothermal installations, state legislation in 2023 reduced regulation hurdles for closed-loop geothermal wells over 500 feet deep, and the Con Ed Clean Heat Program incentivizes the substantial upfront costs. As a result, there are more drillers, contractors, and engineers with geothermal familiarity, and this option is ideal for a long-term investment when considering operational costs and simplicity.

Metering Considerations

These units are powered by the apartment panel and can be billed directly to the tenant.

Impact

Schedule	Overall Building Performance	Upfront Costs
Geothermal boreholes must be drilled, piping laid, and pressure tested, which can delay foundation slabs for 3–6 months. However, the startup and warranty phase is simpler since there are minimal central plant systems to coordinate, startup, and debug.	GSHP buildings perform very well, with low operating costs given the simplicity of the system's maintenance and operation. Peak heating and cooling kW demand is reduced, mitigating expected increases in electric demand charges.	Well drilling has a significant cost impact. Quality control scopes in the drilling and flushout phase are recommended to confirm system integrity before pouring slabs. Large incentives are available to offset some of the cost premium.

Strategy 04: Variable Regrigerant Flow (Decentralized or Centralized)

Strategy Description

Variable refrigerant flow (VRF) systems allow for one outdoor unit to serve multiple indoor units, reducing the quantity and associated space needs of outdoor units. VRF systems use variable-speed compressors to vary the amount of refrigerant flow so that part load conditions can be met.

VRF systems have two configurations: heat pump and heat recovery. Indoor units sharing the same outdoor unit cannot simultaneously provide heating and cooling, resulting in less flexibility in comfort and control. **VRF heat recovery** systems allow for indoor units connected to the same outdoor unit to provide heating and cooling simultaneously. These systems have high efficiency potential if zoned correctly to take advantage of heat recovery between spaces. They also provide increased comfort and control flexibility.

Refrigerant piping installation, leak testing, and charging are extremely important with VRF systems and have significant impact on the overall system efficiency.

Impact

Schedule	Overall Building Performance	Upfront Costs
VRF systems require more refrigerant piping and careful verification throughout installation, startup, and functional testing than mini-split HPs, which may impact the construction schedule. VRF systems with heat recovery also require additional piping and equipment (branch selectors) than VRF heat pump systems.	VRF systems, if designed and installed correctly, have higher efficiencies than mini-split HPs. VRF systems with heat recovery can take advantage of heat recovery between zones, delivering even higher performance, comfort, and control.	VRF installation requires skilled labor. Verification of experience and certification are important to ensure proper installation and startup, leading to increased upfront costs. VRF systems with heat recovery are more expensive than mini-split HPs and VRF systems without heat recovery due to the additional refrigerant piping and equipment required.

Domestic & Service Hot Water

Strategy 01: Air-to-water Heat Pumps (Centralized)

Strategy Description

This strategy involves central **air-to-water heat pumps (AWHPs)** with storage. For the NYC climate, AWHPs that utilize carbon dioxide (CO2) as the refrigerant must be used to be able to produce target DHW storage and supply temperatures. Additionally, sizing and hydronic balancing of the recirculation line is crucial. Over-pumping due to oversized recirculation pumps or unbalanced recirculation lines will lower the overall efficiency of the system. Right-sizing and balancing also reduce Legionella concerns by minimizing the amount of hot water storage volume needed for the building.

Impact

Schedule	Overall Building Performance	Upfront Costs
There are limited products in the market that use CO2 refrigerant, which can cause longer lead times and delays in the construction schedule.	This strategy will result in carbon and energy use reduction, especially for buildings with high DHW EUI, like multifamily buildings.	These systems have high upfront costs, particularly when using AWHPs with CO2 refrigerant. Due to limited models in the market and lack of labor familiarity, higher labor costs are also possible. Additionally, AWHPs require a considerable amount of outdoor space, which can reduce the occupiable square footage of the building.

Strategy 02: Water-to-water Heat Pumps (Centralized) – Small Commercial Buildings Only

Strategy Description

This strategy is typically coupled with a GSHP or other hydronic loop system and involves central water-to-water heat pumps (WWHPs) with storage. WWHPs can also be used in series with another AWHP to increase the leaving water temperature during periods of cold outdoor temperatures. However, this will lower the overall system efficiency due to the additional condenser. This system is an option for buildings pursuing a GSHP as the central heating system and with any unique space uses (e.g., commercial kitchens, labs) that require storage to meet varying service hot water (SHW) loads.

Impact

Schedule	Overall Building Performance	Upfront Costs
As this system can be coupled with a few different primary heating systems, there should be limited impact to the overall construction schedule.	Because WWHPs can recover waste heat from water loops in the summer, these systems offer increased overall efficiency for the GSHP system.	This system does require high upfront costs to meet 100% of the SHW load. However, as these systems can be coupled with primary heating systems, there should not be significantly increased labor costs for installing this system.

Strategy 03: Point-of-use Electric Water Heaters (Decentralized) – Small Commercial Buildings Only

Strategy Description

Point-of-use electric water heaters (POU EWH) are a simple solution for low-SHW load buildings, such as office spaces. They can be installed at the specific location where hot water is needed, like office bathrooms or kitchenettes.

Impact

Schedule	Overall Building Performance	Upfront Costs
POU EWHs are easy to install due to minimal piping and electrical connection needs. There should be limited impact to the construction schedule.	These are simplified systems that are an easy electric solution for low-load buildings, like commercial office buildings.	This is a cost-effective system for low-load buildings, like commercial office buildings. While a decentralized system does mean more equipment, POU EWHs are widely available and inexpensive.

Strategy 04: Wastewater Heat Recovery Water-to-water Heat Pumps (Centralized)

Strategy Description

This strategy involves water-to-water heat pumps (WWHPs) with a central retention tank. These systems recover waste heat from the building's sanitary drainage. Typical wastewater heat recovery systems require additional foundation work to install the retention tank low enough to allow gravity drainage to a central location. All water from the building's sinks, showers, and toilets combine in the sanitary pipes and typically leave the building at 70°F. A solids macerator and water-to-water heat pump cool that effluent to 40°F and recover the heat for the SHW. Because heat is recovered from the cold and hot water in the building, a WWHP can meet 80–100% of the SHW load.

Impact

Schedule	Overall Building Performance	Upfront Costs
The additional foundation work required to install a retention tank does impact the construction schedule overall.	DHW systems with wastewater heat recovery have the potential to achieve efficiencies four times greater than DHW systems with gas boilers.	These systems are new to the market and there are limited technological options available, contributing to increased upfront costs. The additional foundation work also impacts upfront costs.

Appliances

Strategy: Induction Cooktops

Strategy Description

Induction cooktops are a much more efficient option for cooking than traditional electric cooktops. They also result in a healthier indoor environment than gas cooktops, which are known to release hazardous levels of indoor air pollutants. Gas stoves emit nitrogen dioxide at levels that often exceed safe indoor concentration guidelines and outdoor standards.[1]

Impact

Schedule	Overall Building Performance	Upfront Costs
These are relatively recent technologies, but they are gaining maturity in the market, particularly in residential applications.	Induction cooktops are significantly more efficient than electric resistance and gas cooktops.	Induction cooktops are more expensive than electric resistance or gas cooktops. But this can draw a premium in tenant rents.

Renewables

Strategy 01: Solar Photovoltaic

Strategy Description

Local Law 92 and Local Law 94 require all new buildings to have sustainable roofing—solar photovoltaic (PV), green roof system, or both—covering 100% of the eligible roof area. Project teams must balance roof space for solar generation with other needs, such as rooftop space needed for mechanical equipment and clearances for maintenance, egress, or amenity space. This is a particularly attractive strategy for buildings located in an area with limited shading.

Impact

Schedule	Overall Building Performance	Upfront Costs
If coordinated appropriately during design, coordination, and construction milestones, there should be limited impacts to the overall schedule.	Solar is an important strategy for all-electric operation. While the state continues to clean up the electricity grid, rooftop solar offers on-site clean energy that can be used to lower utility bills.	Upfront costs associated with solar PV are dependent on the size and racking system. For example, a canopy racking system has a higher cost, compared to a more traditional ballasted system.

[1]Source: https://rmi.org/insight/gas-stoves-pollution-health/

Considerations

Planning	Schematic	Design	Coordination	Construction	Management
• Evaluate site for building orientation and on-site solar optimization. • Evaluate site for **GSHP** potential. • Specify project energy, carbon, equity, and inclusive design goals in the **Owner's Project Requirements (OPR) and Basis of Design**. • Evaluate other properties within the portfolio for energy usage, maintenance, and best practices to incorporate into OPR. • Understand code, above code certification, and incentive requirements. • Incorporate envelope and HVAC **commissioning (Cx)** at this stage and develop a Cx RFP (Request for Proposal) based on code requirements.	• Contract a **Cx Provider (CxP)** for Cx and **building envelope commissioning (BECx) early**. • Complete a Simple Box Model. • Determine **window-to-wall ratio (WWR)** that optimizes overall envelope performance. • Establish site **EUI** and **greenhouse gas** emissions targets. • Determine whether central or decentralized HVAC and plumbing systems are appropriate for the building—consider metering of end uses and understand space needs and constraints. • Evaluate electric HVAC, DHW, and appliance technologies from existing vendor relationships.	• Focus on load reduction first by specifying continuous air barrier and insulation. CxP should review to confirm constructability and effectiveness. • Equipment load-sizing calculations should be performed once envelope performance is specified. CxP must review. • Determine on-site renewable layout. • Specify monitoring and control strategies. • Perform modeling efforts to evaluate and compare design strategies. • Engage an Accessibility Consultant to perform plan reviews of design and construction documents for inclusive design strategies. • Review specifications with the CxP and Accessibility Consultant.	• Require Cx review of **value engineering** set against OPR and energy model assumptions. • Establish contractor and trades training schedules. • Outline inspections and performance-testing requirements. • Create detailed checklists of typical inspections, unique inspections, and whole-building blower door test plans.	• Include the CxP and Accessibility Consultant in the submittal review and approval process. • Conduct a kick-off meeting with the CxP, Accessibility Consultant, design team, ownership, and contractors to ensure project requirements are communicated. • Include wall and window mock-up testing to ensure that the project is on the right track for final whole-building blower door testing. • Hold regular meetings to ensure that issues are addressed in a timely manner. • Ensure that the design team is involved through construction to advise on constructability details/issues. • Hire a qualified testing and balancing contractor who can submit a detailed balancing plan for Cx review.	• Tenant and building manager training must be provided to ensure a smooth transition from construction to operations. • Provide tenant and building manager manuals, including energy efficiency and inclusive design features. • Review energy usage reports and building emissions regularly. • Provide ongoing building management training. • Include continuous Cx so that operational issues are identified and addressed quickly.

Get the construction documents right!

- Include all details for effective installation, equipment startup, balancing, and operation.
- Increased envelope detailing, sequence of operations, controls schematics, startup procedures and documentation, and balancing details and requirements should all be included in the construction documents (CDs).
- These details must be reviewed by the CxP and Accessibility Consultant.
- Include mandatory contractor training in the CDs.

Know what inspections are needed.

- Regular visual inspections of the envelope.
- Visual inspection and spot testing of duct sealing, particularly for central ductwork.
- Functional performance testing once all equipment is started up.
- Spot testing of envelope assembly.
- Final whole-building blower door testing.

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READY TO GET STARTED?

Contact NYC Accelerator
for free technical assistance.

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