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## Transmittal

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**From: Bart M. Schwartz NYCHA Federal Monitor**

**Date: May 8, 2021**

**Subject: Transmittal of Approved NYCHA City Capital Action Plan**

Transmitted herewith, after consultation with each of your offices, attached you will find in final version, the *NYCHA City Capital Action Plan*, which I, as Monitor, have approved pursuant to Section VII, Paragraph 63(d) – (e), Exhibit C, Paragraph 70 of the HUD Agreement. Further revision, modification or replacement of this City Capital Action Plan may be directed by the Monitor pursuant to Paragraph 42 of the Agreement at his discretion, as the projects progress.

Please contact Susan Jurman should you have any questions. Thanks to all of you for your efforts and help in completing this.

Bart M. Schwartz





**CITY CAPITAL ACTION PLAN**

**Date: May 7, 2021**

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## I. Executive Summary

On January 31, 2019, the U.S. Department of Housing and Urban Development (“HUD”), the New York City Housing Authority (“NYCHA”), and New York City (“the City”) signed an agreement (the “HUD Agreement”) to remedy the deficient physical conditions in NYCHA developments, ensure that NYCHA complies with its obligations under federal law, reform the management structure of NYCHA, and facilitate cooperation and coordination among HUD, NYCHA, and the City during the term of this Agreement.<sup>1</sup>

Under Section VII, Paragraph 63(d) – (e) of the HUD Agreement, over the ten years following entry into the HUD Agreement, the City is to provide a total of \$2.2 billion in incremental funding for capital expenses to support NYCHA’s compliance with the HUD Agreement.<sup>2</sup> These funds include \$250 million per year for each of the four fiscal years beginning in FY 2019 and an additional \$200 million per year for each of the subsequent six fiscal years (together the “Agreement Capital Funds”). These funds are in addition to the City funding commitments referenced in Exhibit C of the Agreement.

Under Section VII, Paragraph 70 of the HUD Agreement, the funds must be spent pursuant to an Action Plan approved by the Monitor that is designed to meet NYCHA’s obligations under the Agreement (the “City Capital Action Plan”). Further revision, modification or replacement of this City Capital Action Plan may be directed by the Monitor pursuant to Paragraph 42 of the Agreement at his discretion, as the projects progress. NYCHA will report on its progress executing the projects described in this City Capital Action Plan on a quarterly basis, using a template that reflects the structure appended here as **Exhibit A**.

To address a portion of the key issues outlined in the HUD Agreement, NYCHA’s Capital Projects Division (“CPD”) will allocate a portion of the Agreement Capital Funds to implement the following capital improvement project types.

### **Summary of Proposed Funding Allocation**

<b>Project Type</b>	<b>Projected Costs</b>
Lead Abatement & Comprehensive Approach to Mold (2 developments)	\$450,884,475
Lead Abatement (Phased Program)	\$771,817,611
City Heating Scope Change (2 developments)	\$50,252,220
State Heating Scope Change (4 developments)	\$121,196,340
Elevator Escalation Costs (11 developments)	\$34,927,000
Waste Management (324 sites at 197 developments)	\$563,490,944
Contingency	\$207,431,410 <sup>3</sup>
<b>TOTAL</b>	<b>\$2,200,000,000</b>

<sup>1</sup> Pursuant to Section I.8 of the HUD agreement “Recitals.”

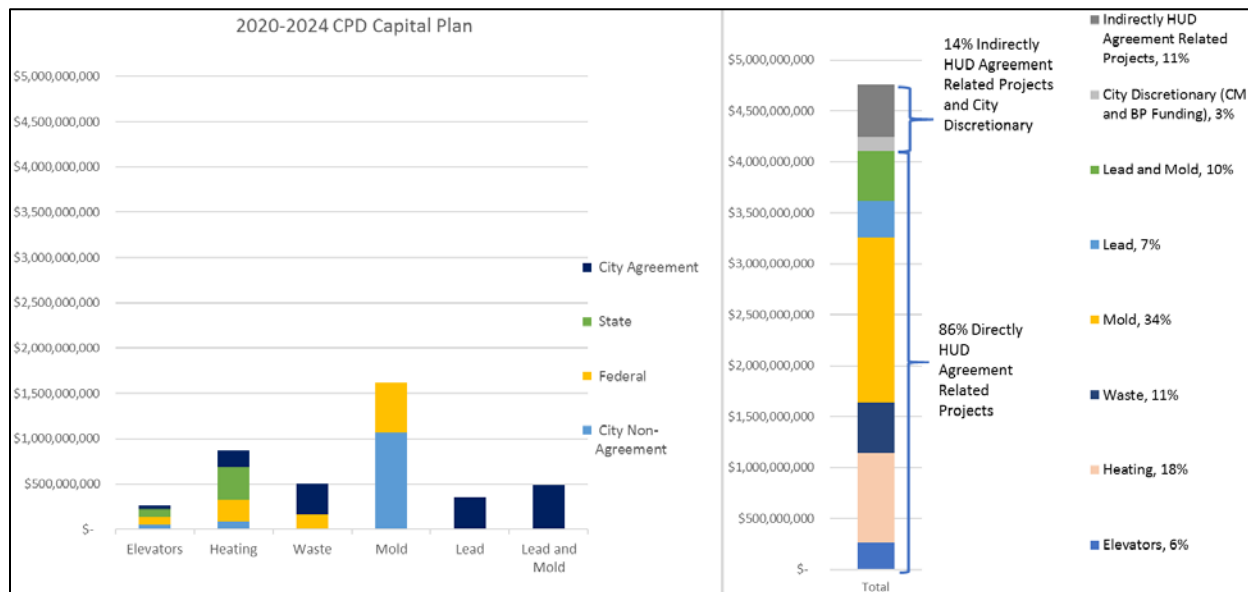
<sup>2</sup> NYCHA is aware that the HUD Agreement requires completion of capital improvements in multiple areas, including the five priority areas described in this Plan, many of which are described in separate Action Plans required under the HUD Agreement presently in existence or to be amended during this Year Three, which will require assembling addition funds in substantial amounts in order to timely complete and satisfy those Action Plans.

<sup>3</sup> NYCHA expects to provide periodic updates to this Action Plan for the Agreement Capital Funds, including to account for additional costs or alternative projects that may be funded using the contingency.

It is important to understand that the Agreement Capital Funds represent one piece of NYCHA’s capital and operational efforts to address conditions identified in the HUD Agreement.

The below chart shows, on the left side, an approximate amount of the overall five-year capital plan that is being dedicated to the pillars of the HUD Agreement. Each bar in the chart is also split up into various colors to show the sources of funds. The purpose of utilizing various colors is to show how NYCHA is utilizing federal, State and City funds from several programs to address each of the pillars of the HUD Agreement. As shown by the below chart, on the right side, overall, 86% of NYCHA’s five-year capital plan is being dedicated to projects that will directly address the pillars of the HUD Agreement. The chart on the right side also shows the breakdown of how the funds are being dedicated to each pillar, in total across all sources.

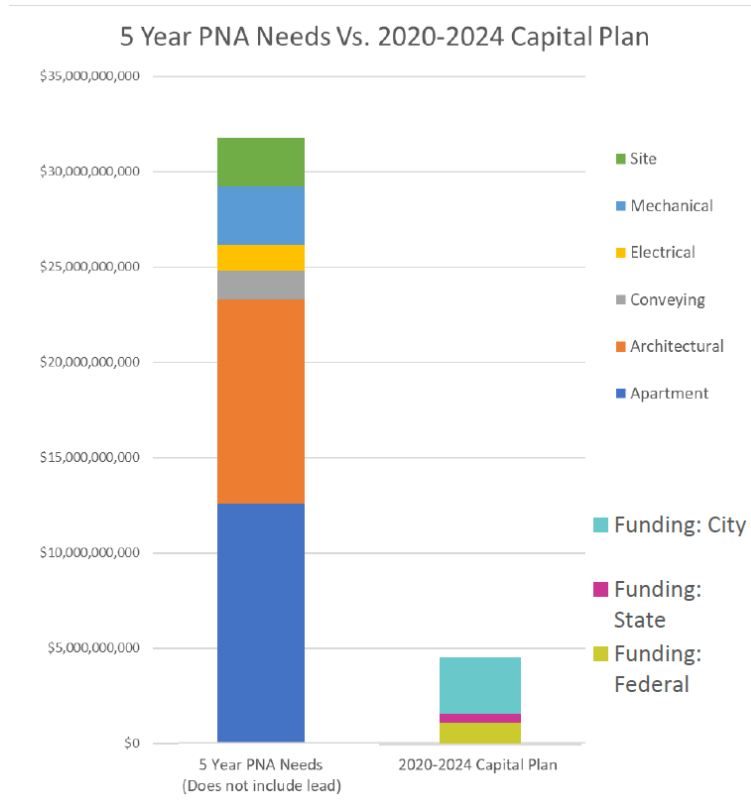
As an example, the chart on the left side shows how NYCHA has invested resources into a wide range of projects designed to reduce the occurrence of mold including (i) a \$1.3 billion City funded roofing, façade and brickwork repair program, (ii) a ventilation program, and (iii) a bathroom chase wall renovation project at certain pilot sites, among other programs. NYCHA has also been investing City, State and federal resources (through a wide range of federal programs including the FEMA funded recovery and resilience program, Energy Performance Contracts and the Public Housing Capital Fund) into heating related upgrades. The heating program includes efforts to (i) replace more than 300 aging boilers while decoupling hot water, (ii) upgrade other distribution system, and (iii) the installation of temperature sensor systems.



It is also important to understand that the five-year capital plan, even with the Agreement Funds, does not address all NYCHA’s capital needs. Every five to six years, NYCHA conducts a Physical Needs Assessment (“PNA”) to identify the capital expenditures needed to bring NYCHA’s housing developments to a state of good repair. The most recent PNA, in 2017, found a five-year capital need of \$31.8 billion.<sup>4</sup> Because NYCHA lacks sufficient funds to meet these needs, NYCHA is forced to defer maintenance and repair work and so the costs for these physical needs escalate each year. As shown in the

<sup>4</sup> The PNA also does not include all of NYCHA’s capital needs across the portfolio, such as capital needs for lead abatement.

table below, the \$4.5 billion over the course of the next five-years still falls short in meeting the physical needs across the portfolio:



Still, the improvements detailed in this Action Plan that are utilizing the Agreement Funds will positively impact the quality of life of NYCHA’s residents and will decrease maintenance tickets, expanding the limited resources available to support NYCHA’s efforts to preserve its aging building stock.

**II. HUD Agreement Obligations and NYCHA’s Capital Strategy**

In implementing the HUD Agreement, NYCHA’s Capital Projects Division is focusing on five priorities:

HUD Agreement	Obligations
Lead Abatement  Ex. A, Sec. C, Par. 8-11	<ul style="list-style-type: none"> <li>By January 31, 2024, NYCHA must abate Harlem River Houses and Williamsburg Houses.<sup>5</sup></li> <li>By January 31, 2029, NYCHA must abate all lead-based paint in 50% of apartment units that contain lead-based paint, and interior common areas that contain lead-based paint in the same building as those units. 75% of the portfolio must be abated by January 31, 2034 and 100% of the portfolio must be abated by January 31, 2039.</li> </ul>

<sup>5</sup> NYCHA plans to abate all lead-based paint at the Harlem River Houses and the Williamsburg Houses through the Permanent Affordability Commitment Together (PACT) Program. The PACT contracts for these developments are currently scheduled to close in mid-2021, and they will require the development partner to abate all lead-based paint in these developments.

	<ul style="list-style-type: none"> <li>Pursuant to a timeline to be set in an Action Plan approved under the HUD Agreement, NYCHA must abate exterior common areas that contain lead-based paint.</li> </ul>
Boiler Replacements Ex. B, Sec. A, Par. 14(c)	<ul style="list-style-type: none"> <li>By December 31, 2026, NYCHA must replace 297 boilers (including 70 within three years, and an additional 63 within five years).</li> <li>In parallel with boiler replacements, NYCHA will evaluate the condition of a development’s entire heating-related capital needs and take appropriate action.</li> </ul>
Mold Ex. B, Sec. B, Par. 15	<ul style="list-style-type: none"> <li>NYCHA must focus on reducing the occurrence of mold, with particular attention to units with recurring leaks and mold.</li> </ul>
Elevator Replacements Ex. B, Sec. C, Par. 34(b)	<ul style="list-style-type: none"> <li>By December 31, 2024, NYCHA must replace a total of 275 elevators (including 108 within three years).</li> </ul>
Waste Management Ex. B., Sec. D, Par. 45	<ul style="list-style-type: none"> <li>NYCHA must ensure that trash on the grounds or common areas of each building is collected and then either removed or securely stored, at least once a day, in a manner that prevents access by pests.</li> </ul>

As detailed above, CPD’s five-year capital plan focuses more than 86% of its overall capital plan on the pillars of the HUD Agreement. NYCHA plans to utilize several funding sources to meet its HUD Agreement obligations including, but not limited to, (i) the PACT program and other NYCHA 2.0 initiatives, (ii) the Agreement Capital Funds detailed, pursuant to Paragraph 70 of the HUD Agreement, in this City Capital Action Plan, (iii) the annual federal capital grant, (iv) funds provided by the State of New York, and (v) additional funds provided by the City of New York. In addition to a focus on the HUD Agreement’s explicit capital related obligations, NYCHA’s Capital Projects Division also focuses on the below five principles:

- 1. Comprehensive Project Scopes:** NYCHA is prioritizing implementing comprehensive scopes rather than scopes that include only one-for-one in-kind replacements.
- 2. Using Data:** NYCHA is using data to guide project selection, including by using the Physical Needs Assessment data for each development. NYCHA will also use operational data, such as work order tickets and other rankings, to select projects and make investments that will reduce management and operational costs.
- 3. Combining Funding Sources at a Development Level:** NYCHA works to leverage all available funding sources across every level of government. For example, if the City has allocated funding for a roof, we would then invest additional federal funds to do the brick work.
- 4. Logical Building Sequence:** Capital Planning will sequence work where possible in order to maximize investment and prevent damage or losses to recently completed projects. This sequence proceeds as follows:
  - Exterior work* first, including brickwork, windows and roofs, help make sure the building envelope is water-tight.
  - Building system replacement* investments in heat/hot water, elevators, domestic gas and electrical can then proceed as they are protected from leaks that could damage the new system.
  - Interior work*, including in kitchens and bathrooms, can be completed once the building envelope and interior systems have been addressed.
  - Grounds projects*, including site security and community centers, are then considered.
- 5. Coordinating Construction:** NYCHA will coordinate construction of various projects at a building or development if multiple projects are ongoing at the same site.

Throughout this City Capital Action Plan, we will describe briefly how the strategy for the Agreement Capital Funds will assist NYCHA in meeting the obligations outlined in the HUD Agreement and how the projects adhere to the principles outlined above.

### **III. Detailed Summary of Each Pipeline**

#### **a. Lead Abatement**

In April 2019, NYCHA kicked off an initiative to test 134,000 residential units for lead. NYCHA also has some testing information for lead in common areas. All the testing information is being processed and stored in Maximo, NYCHA's Asset Management database. This database will show every location and component that tests positive for lead-based paint within residential units.

Based on the information thus far, much of the lead within NYCHA developments is found on individual components rather than broadly throughout the buildings. There are examples in the portfolio where lead is pervasive in the development, such as Williamsburg Houses (1938) and Harlem River Houses (1939). Williamsburg Houses and Harlem River Houses will be addressed using the Permanent Affordability Commitment Together (PACT) program and so they are not detailed in this City Capital Action Plan.

To build resident trust and industry capacity for lead abatement, CPD is proposing to approach lead abatement in a stepped method adding more complex projects each year. CPD will use three phases:

1. In the first phase, NYCHA will focus on:
  - a. Abating units where a child under six resides in the unit, regardless of the number of components in the unit;<sup>6</sup>
  - b. Abating developments that have one or two simple components within the units and common spaces.
2. Upon completion, NYCHA will expand to the second phase which includes developments that have multiple components within the units and common spaces that can be abated with little to no disruption to the daily lives of the residents. This stepped approach will allow NYCHA to conduct lesson learned sessions with the residents, community leaders and the industry before moving on to more complex projects.
3. The third and final phase will consist of projects with higher complexity where disruption will increase due to scope. However, with careful planning, lessons learned and building of the lead abatement industry in New York City, it is achievable.

Like the comprehensive mold and lead projects described below, the scope of lead abatement in the third phase contemplates the relocation of residents into temporary housing located on site or within the neighborhood. Lessons learned on the mold and lead comprehensive approach projects will be

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<sup>6</sup> NYCHA's Initial Action Plan for Lead Based Paint, which was approved by the Monitor on January 20, 2021, details NYCHA's implementation of the Team for Enhanced Management Planning & Outreach (TEMPO) program. Under this program, units with a child younger than six years old that has two or fewer lead components will be abated on an expedited timeline by October 31, 2022. NYCHA is using other sources of funds, including a \$7.6 million grant from HUD, for this abatement program. Under the TEMPO program, a specialized team will also be performing all work that may disturb paint within units with a child younger than six years old that has three or more components. Some of the units with three or more components will also be abated as part of the PACT program. Units that will not be abated using PACT or under the TEMPO program will be abated in the first phase of the Lead Abatement pipeline detailed here by utilizing the Agreement Capital Funds.

used during this third phase. CPD, in conjunction with NYCHA Healthy Homes, will analyze the XRF database and categorize projects into the three phases.

For Phase I and II, CPD will procure IDIQ Requirement Contracts or Job Order Contracts (JOC) that consist of lists of components and pricing per unit. Components will be removed using lead safe work practices and dust control and replaced with new components that are lead-free. For example, if a residential entry door and frame test positive for lead, the entire door and frame will be removed and replaced with a new door and frame. Upon completion of the abatement, dust wipes will be performed, and the project will not be closed out until clearance is received. The required administrative work will be to provide a Tenant Protection Plan following EPA standards, to notify EPA within 7 days of the removal of the item, and, once the component is removed and the dust wipe has received clearance, the residents will be notified with a Notice of Hazard Reduction.

For Phase III, a combination approach will be taken depending on where the lead is identified and the complexity of the project. These projects will require more invasive abatement practices such as removal of finish plaster coats that have been infiltrated with lead paint.

In addition, it is foreseeable that some replacements will require full system replacement due to deferred maintenance. For example, abatement of gas risers will require depressurizing of the existing gas lines. Due to the age of the system, the gas lines will not re-pressurize, and a full gas riser replacement will be required. Still, this approach helps ensure CPD is taking a comprehensive approach wherever possible.

At this time, lead testing is ongoing, and information is still being gathered. The next stage will be to synthesize the XRF testing data from Maximo and submit to the Monitor an “Action Plan for Lead-Based Paint – Abatement,” pursuant to Exhibit A Paragraph 12 of the HUD Agreement. The updated Lead-Based Paint Abatement Action Plan will include, among other items, a project execution plan setting forth the units and developments that will be abated in each of Phase I, II and III. To help draft the Lead-Based Paint Abatement Action Plan and then manage the pipeline, NYCHA is hiring a Vice President for Lead Abatement in the Capital Projects Division and will be retaining a third-party professional project management firm.

#### Anticipated Deliverables and Completion: Lead Projects

- Draft RFP for Program Management Professional Services is under review as of March 21, 2021
  - Solicitation May 2021
  - Evaluation July 2021
  - Accommodation for Award – September 2021 Board
  - OMB / Comptroller – Registration / Task Order – November / December 2021
- Vice President for Lead Abatement in the Capital Projects Division

Allocating \$771.8 million over ten years specifically for lead abatement across the portfolio will help NYCHA meet its obligation under Exhibit A, Paragraph 9 of the HUD Agreement, which requires that NYCHA abate all lead-based paint in 50% of apartment units that contain lead-based paint, and interior common areas that contain lead-based paint in the same building as those units, by January 31, 2029.

Based on modeling performed for NYCHA’s Blueprint for Change scope of work, the total cost to abate lead-based paint in units and interior common areas across the 110,000 units not included in the PACT program is approximately \$1 billion. Exterior common areas will also need to be abated over time. Allocating \$771.8 in Agreement Capital Funds and combining that investment with the lead abatement work that will be completed as part of (i) the PACT program, (ii) the Comprehensive Mold and Lead



Abatement program outlined below and (iii) using other State and federal funds NYCHA has identified, will help ensure NYCHA meets its obligations to abate the portfolio. In addition, the phased approach and aggressive schedule will ensure NYCHA hits each percentage-based deadline on time.

**b. Lead Abatement and Comprehensive Approach to Mold**

In order to comprehensively address the pillar areas in the HUD Agreement, CPD will expand from replacement of components to a more comprehensive strategy at two sites. This comprehensive approach is critical at certain sites identified using relevant data, where we know mold is pervasive and cannot be addressed selectively (e.g. by replacing roof fans or roofs alone) and where lead-based paint is widespread. This pipeline is a pilot program and will serve as a model so NYCHA can learn lessons about the risks, impediments, schedules and budgets associated with conducting a larger scale rehabilitation of NYCHA's buildings. The pipeline will be adjusted as NYCHA proceeds and, to the extent all the funds are not spent down on the two developments described below, the pipeline will be expanded to other sites.

The scope of work and the cost analysis combine data collected from NYCHA's Physical Needs Assessment, CPD's Energy and Sustainability Department, the Healthy Homes Department, and a review of the work recently completed by third-party developers after a PACT conversion. For now, the per-unit cost breakdown includes a basic tier one scope and an added secondary scope. The tier one scope includes bathrooms, kitchens, certain heating and elevator related work, and other basic replacement work. The secondary scope includes other replacements such as windows, doors, flooring, improving grounds to prevent flooding and reduce pest populations, and community centers. Soft cost and contingency are included in this estimate. It is anticipated that the scope of work will be refined for each development once NYCHA starts the Design-Build program for these two projects.

The units will be abated of asbestos and lead, piping in chase walls (including cold and hot water supply, return risers and branching, sanitary waste risers and branching, and sanitary vent risers and branching) will be removed and replaced and, where required, ventilation will be upgraded. Construction means and methods will require bathrooms and in some cases kitchens to be renovated. When possible and required by the NYC Municipal Codes, residential units will be brought up to current codes including compliance with Section 504. Where required for lead abatement, renovation of common spaces will be directed.

The scope of the comprehensive remediation contemplates selective relocation of residents into temporary housing located on site or within the neighborhood. Personal property will be temporarily relocated into storage facilities. Vacancy of units in a residential line will allow for quicker, more efficient renovations. It is understood that resident relocation, estimated at \$15,000 per unit, is not capital eligible and will require NYCHA to allocate funds separate from the Agreement Capital Funds to cover the costs of temporary relocation. At this time, federal funds have been identified for relocation costs.

Comprehensive mold and lead abatement sites were selected using a criteria method that ranked developments based on a high volume of mold or leak work order tickets, a high percentage of components that have tested positive for lead, and a high number of children under six years of age. Based on CPD's logical building sequence of component replacement, the developments have (or will have) received significant investments on the exterior to make sure that they are water tight, including roof replacements and façade work. This will ensure that the comprehensive and multifaceted abatement work on the interiors will be part of a fulfilled investment.

CPD utilized the Strategic Planning Map tool developed by NYCHA’s Performance Tracking & Analytics Department (PTAD) to identify these sites. The Strategic Planning Map tool contains operational work order tickets related to lead, mold, water leaks as well as total population and number of children residing in the developments that are under six. The Strategic Planning Map tool has additional layers of current and planned major capital work citywide and was updated earlier in 2020 (refer to **Exhibit C** for sample screenshots).

NYCHA used the following filtering process on the Strategic Planning Map tool to identify the Comprehensive Modernization sites.

<b>Step:</b>	<b>Description</b>	<b>Number of Sites:</b>
Full List:	The PTAD Mapping tool and spreadsheet illustrates the full list of NYCHA developments.	312 Sites
Overall Ranking (based on Lead and Mold rankings):	The list was sorted to include only the developments with a high overall ranking based on the Lead and Mold criteria discussed above.	(-239 Sites) 73 Sites
PACT Sites:	The PACT and single-family homes repossessed by the Federal Housing Administration and transferred to NYCHA were filtered out of the total list of NYCHA developments.	(-26 Sites) 47 Sites
Logical Building Sequence:	The list was sorted to include only sites that have, or will have, significant Capital investment focused on complete development roof replacement (100% buildings completed), façade work (LL-11), and good condition heating/hot water systems and elevators.	(-31 Sites) 16 Sites
Children Under Six Years of Age:	The sites that had the lowest population of children under six were removed.	(-4 Sites) 12 Sites
Mold and Leaks:	The sites that had the highest average level of mold work order tickets and a high rate of leak work order tickets were identified.	(-6 Sites) 6 Sites
<b>Final Selections</b>		
Economies of scale to maximize investment	Of the remaining 6 sites, NYCHA selected one (1) large site to benefit the greatest number of residents and maximize the impact of the Capital investment.	1 Site (final selection)
Proof of Concept Project	NYCHA also chose one smaller site so CPD can pilot one project at a development with a low number of units to ensure the comprehensive mold and lead abatement project is manageable in scale and complexity.	1 Site (final selection)

Based on this selection process, CPD has proposed two (2) developments for comprehensive modernization and will use the most appropriate project delivery method to complete the phased work.

Development	Total Units	Lead Information		Mold Information		Total Cost*
		XRF Positivity Rate (As of 3/17/2021)	# of Units with Child Under 6	Leak Work Order rate/100 Units	Mold Work Order rate/100 Units (Avg - 59%)	
Todt Hill (SI)	502	78%	64	115.75	77.17%	\$111,774,818
Saint Nicholas (MN)	1,523	19%	202	232.11	69.90%	\$339,109,657
Total	2,025					\$450,884,475

\*Cost estimate based on the Blueprint for Change Scope of Work totaling \$222,659 per unit

### Proposed Commitment Plan

Development	Agreement Funding Year FY20	Total
Todt Hill	\$111,774,818	\$111,774,818

Development	Agreement Funding Year FY22	Agreement Funding Year FY23	Agreement Funding Year FY24	Total
Saint Nicholas	\$113,036,552	\$113,036,552	\$113,036,553	\$339,109,657

### Anticipated Deliverables and Completion:

- NYCHA hosted a Comprehensive Modernization Design Charette in partnership with the ACECNY, AIA and CMAA. The Charrette had over 140 participants to discuss topics including circulation, building interiors, sustainability, energy usage, building façade/envelope, heating and cooling, climate adaptation, phasing, and resident impact. The subtopics included project delivery, scheduling, industry standards and lessons learned. Although this event focused on comprehensively modernizing or ‘gut renovating’ of entire buildings, many principals and concepts can be used for a comprehensive mold and lead program specifically resident engagement, displacement, staging and delivery method.
  - i. Scope preparation with ACEC/CMAA/AIA Working Groups – April 2020-July 2020
  - ii. Design Charrette – was held on July 28<sup>th</sup> and July 29<sup>th</sup>
  - iii. White paper first draft November 30, 2020
  - iv. White Paper Development – August 2020-March 2021
  - v. Feedback-April-May 2021
  - vi. Final Draft Release – Anticipated for June 2021.
- Consultation with the industry and Design-Build Advisor on best construction delivery method.
- Release Design RFP or Design-Build RFQ/RFP for Todt Hill in 2022.

These projects will help ensure NYCHA meets its obligations under Exhibit A, Paragraph 9 by investing in lead abatement. The projects will also help ensure two sites with recurring mold conditions are mold safe so NYCHA can better allocate mold remediation operational resources and comply with Exhibit B, Paragraphs 15 through 17 of the HUD Agreement.

### c. Heating Systems<sup>7</sup>

NYCHA has been investing in its heating systems to replace more than 300 boilers across the portfolio using a range of funding sources. These investments include funds provided by (i) FEMA as part of the Recovery and Resiliency Program, (ii) HUD pursuant to the Public Housing Capital Fund, (iii) Energy Performance Contracts, (iv) the State of New York pursuant to a Grant Disbursement Agreement, and (iv) the City of New York using Mayoral funds outside of the Agreement Capital Funds.

NYCHA is planning to leverage the Agreement Capital Funds in order to invest in upgrades to improve the performance of its heat and hot water systems in the long-term at six developments.

NYCHA's goal is to invest in more sustainable, reliable and lower operational cost heating systems. NYCHA intends to move from steam heating systems to hydronic (hot water) heating systems and high-efficiency electric heat pumps. NYCHA also added domestic hot water decoupling to the scope of work. By decoupling hot water heating systems from space heating systems, NYCHA will increase the efficiency of its system and enhance operational capacity. Moreover, NYCHA will be able to conduct more comprehensive preventive maintenance in the off-season. Currently, when conducting preventive maintenance on a space heating system, NYCHA also may impact hot water service and must balance the need to conduct maintenance against the need to avoid long disruptions to hot water service. In addition, decoupling systems will ensure NYCHA provides more reliable hot water service for residents at these developments, in part by ensuring a system-wide space heating outage does not also impact residents' hot water service.

These investments will also help reduce energy consumption by utilizing more efficient heat systems. In 2020, NYCHA's utility spending averaged approximately \$45.2 million per month, and accounted for approximately 15% of NYCHA's total expenditures for the year. In addition to reducing costs, NYCHA's Design-Build heating systems program will also support NYCHA with its mandated goal to achieve 80% reduction in greenhouse gases by 2050 by moving the agency away from replacement-in-kind steam heating systems into more sustainable and reliable heating systems such as hydronic, split systems.

As part of its heating system investment strategy NYCHA may install different systems in different developments or in different buildings within one development.

Developments receiving heat system upgrades in NYCHA's overall heat pipeline are bundled into larger projects in the contract documents to provide maximum flexibility. Under this City Capital Action Plan, the Agreement Capital Funds will be combined with other sources of funds, as described below, to help fund three distinct bundled projects within the overall heat pipeline. These three bundled projects include seven developments. Six out of these seven developments will utilize Agreement Capital Funds, which will help NYCHA replace a total of 23 boilers.

Because NYCHA is using a design-build contracting method for these projects, the funding for each bundled project is combined and used to optimize design and meet the criteria described above for each bundle based on the fixed budget. All developments within a bundled project are to receive heating plant upgrades and better functioning and decoupled hot water heating systems but the exact type of heating system for each development will vary at the end of the project.

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<sup>7</sup> Prioritization of these sites in Phase I & Phase II was based on the 2017 Physical Needs Assessment and NYCHA operational data from 2018 that captured the number of outages, work order tickets and availabilities of parts. The table appended here as **Exhibit D** details the selection process for each site.

*i. Mayoral Funded Projects*

Two of the Mayoral funded, boiler replacement projects were initially conceived of, budgeted and allocated for replacement-in-kind of six boilers at two developments. The cost of newer more comprehensive scopes requires an additional approximately \$50.2 million, which will be covered by the Agreement Capital Funds.

The two developments, Brownsville and Saratoga Village, are connected to eleven other developments as part of NYCHA’s Design-Build heating systems program. All eleven sites have been bundled into five Design-Build Projects based on location and size. The funding for each Project (or bundle) is combined and used to optimize the carbon reduction of the entire bundle. All developments within a Project (or bundle) are to receive heating plant upgrades but the type of heating system at the end of project will vary:

<b>Development</b>	<b>Scope</b>
Brownsville	<ul style="list-style-type: none"> <li>• The Design-Build Agreement Scope of Work (“SOW”) entails comprehensive design, regulatory approval and construction services for new heating plant solutions delivered through a design-build approach.</li> <li>• The SOW includes a complete central boiler plant replacement, with new boilers sized according to NYCHA’s boiler sizing standards. At a minimum, domestic hot water is to be decoupled in Buildings 10, 11, 12, 9, and 22, and 6, using gas-fired condensing hot water heaters, with the balance of the buildings utilizing steam instantaneous hot water units.</li> <li>• If existing instantaneous units are deemed, upon inspection, to have 10 years of useful life, they may be retained, and they must be thoroughly descaled and reconditioned such that both redundant units in each tank room are fully functional.</li> <li>• Alternative DHW technologies may be included if such technologies will reduce the GHG intensity. Decoupling of more than the minimally required buildings may also be included.</li> </ul>
Saratoga Village	<ul style="list-style-type: none"> <li>• The Design-Build Agreement Scope of Work (“SOW”) entails comprehensive design, regulatory approval and construction services for new heating plant solutions delivered through a design build approach.</li> <li>• Proposals shall implement full electrification for heat using any heat pump technology singly or in combination, electrification of and hot water decoupled from heat using any electric technology, and shall include, at a minimum, the complete decommissioning of the existing central heating plant at Saratoga Village.</li> </ul>

Project 1 (# 124848), comprising modernization work at three Brooklyn housing developments

<b>Development</b>	<b>Original Budget</b>	<b>Additional Funding</b>	<b>Total Budget (City Contribution)</b>	<b>Total Budget of Project #1</b>	<b>Estimated Construction Start</b>	<b>Estimated Construction Completion</b>
	<b>City Funding FY 20</b>	<b>City Agreement Funds FY 21</b>				
Brownsville	\$8,400,000	\$34,000,000	\$42,400,000	\$42,400,000	2021	2025
Saratoga Village	\$4,200,000	\$16,252,220	\$20,452,220	\$20,452,220	2021	2025
Ocean Hill <sup>8</sup>	\$0.00	\$0.00	\$0.00	\$ 10,571,352	2021	2025

<sup>8</sup> Construction at Ocean Hill Apartments is funded using only State and Federal funds but is included here to provide visibility into the bundle.

<b>Total</b>	<b>\$12,600,000</b>	<b>\$50,252,220</b>	<b>\$62,852,220</b>	<b>\$73,423,572</b>	
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ii. *State of New York Funded Projects*

The State of New York is funding heating plants at two mixed finance developments, among other sites. Escalation costs and scope changes for the two developments, which due to regulations may not be funded using federal allocations, will be covered by the Agreement Capital Funds at approximately \$121.2 million.

All developments within a Project (or bundle) are to receive heating plant upgrades but the type of heating system at the end of project will vary:

<b>Development</b>	<b>Scope</b>
830 Amsterdam	<ul style="list-style-type: none"> <li>The existing low-pressure steam boilers will be replaced by (i) a Mitsubishi Electric CITY MULTI Variable Refrigerant Flow (VRF) Zoning System for heating and cooling and (ii) a Mitsubishi Electric CITY MULTI VRF hot water heat pump for domestic hot water.</li> </ul>
Berry Houses	<ul style="list-style-type: none"> <li>The three existing 331HP brick set 1950 boilers will be replaced with new 4-pass firetube low-pressure steam boilers with modern burner Low-NOx/Low excess air burners.</li> <li>The domestic hot water systems will be replaced with high efficiency condensing boilers and 600 gallons of storage.</li> <li>The low-pressure steam boilers will be supplied as follows: 30ppm Low-NOx/Low excess air burners with parallel positioning fuel-air ratio control with O2 Trim/VFD, and sequential draft control due to the combined and tall common stack.</li> </ul>
Marble Hill Houses	<ul style="list-style-type: none"> <li>The six existing 250HP brick set 1986 boilers will be replaced with new 4- pass firetube with modern burner Low-NOx/Low excess air burners.</li> <li>The domestic hot water systems will be replaced with high efficiency condensing boilers and 600 gallons of storage.</li> <li>The low-pressure steam boilers will be supplied as follows: 30ppm Low-NOx/Low excess air burners with parallel positioning fuel-air ratio control with O2 Trim/VFD, and sequential draft control due to the combined and tall common stack.</li> </ul>
Marlboro Houses	<ul style="list-style-type: none"> <li>The Design-Build Agreement Scope of Work (“SOW”) entails comprehensive design, regulatory approval and construction services for new heating plant solutions delivered through a design-build approach identifying innovative future-looking heating and hot-water-making technologies and design strategies helpful to NYCHA’s low-carbon transition, while providing reliable, comfortable, and consistent heat and hot water to the residents of the developments through full or partial replacement of the developments’ heating and hot-water-making infrastructure (i.e., central boiler plants, in-ground distribution networks, in-building distribution components including radiators and convectors).</li> <li>NYCHA seeks to implement beneficial electrification technologies, such as air-source heat pumps (ASHP) and air-water heat pumps (AWHP), as much as possible within the limits of the Project Budgets.</li> <li>The SOW includes demonstrating that the Project out-performs the 2024 GHG emissions goal of 6.75 mtCO2e/ksf as a minimum requirement, while pursuing more aggressive GHG reductions if possible.</li> <li>NYCHA envisions that each Project will include electrification of heat and/or DHW systems and that budgetary or technical considerations may require a mixed-technology, mixed-fuel approaches that implements different solutions at the development or building level within the Project.</li> </ul>

Marlboro Houses is part of Project #4 and based on the size is not bundled with any other developments.

Development	Original Budget	Additional Funding	Total Budget	Estimated Construction Start	Estimated Construction Completion
	State Funding FY 20	City Agreement Funds FY 21			
Marlboro	\$13,356,000	\$62,574,300	\$75,930,300	2021	2024
<b>Total</b>	<b>\$13,356,000</b>	<b>\$62,574,300</b>	<b>\$75,930,300</b>		

Marble Hill is part of a bundle managed by the New York Power Authority (NYPA) and it is included in Project #5. NYCHA is leveraging an existing energy services agreement with NYPA from 2005 to provide turnkey design-build services to implement heating plant replacement projects at three (3) developments with eleven (11) boilers, which includes the heating plants at 830 Amsterdam, Berry and Marble Hill. NYPA will manage these projects from inception to closeout as an extension of NYCHA staff. NYCHA is also utilizing a full-service project management firm to help oversee the work.

Development	Original Budget	Additional Funding	Additional Funding	Total Budget	Estimated Construction Start	Estimated Construction Completion
	State Funding FY 20	City Agreement Funds FY 21	Federal Funding			
Marble Hill	\$13,737,600	\$27,394,439	\$0	\$41,132,039	2021	2023
830 Amsterdam	\$ 4,452,000	\$ 21,591,009	\$2,388,180	\$28,431,189	2021	2023
Berry	\$6,678,000	\$9,636,412	\$15,090,120	\$31,404,532	2021	2023
<b>Total</b>	<b>\$24,867,600</b>	<b>\$58,621,860</b>	<b>\$17,478,300</b>	<b>\$100,967,760</b>		

As stated above, the funding for each Project (or bundle) is combined and used to optimize the carbon reduction of the entire bundle. The total budgets exclude the costs associated with NYCHA staff time and the costs associated with paying the Program Manager. All other hard and soft costs are included in these figures. In addition, although the budgets in these documents are separated by development, the projects are bundled in the contract documents to provide maximum flexibility to the design build firms.

Proposed Schedules:

Project Name (Development)	Design Build Procurement Start	Selection of Design Build Team	Anticipated NTP	Anticipated Construction Start	Anticipated Substantial Completion Date	Anticipated Final Completion Date (Close-out)
Brownsville	5/20/2020	10/6/2021	12/24/2021	6/6/2022	1/4/2025	7/5/25
Saratoga Village	5/20/2020	10/6/2021	12/24/2021	6/6/2022	1/4/2025	7/5/25
Marble Hill (LLC I) (NYPA)	2/5/2020	12/4/2020	5/31/2021	12/1/2021	7/30/2023	1/30/2024
830 Amsterdam (NYPA)	2/5/2020	12/4/2020	5/31/2021	12/1/2021	7/30/2023	1/30/2024

Project Name (Development)	Design Build Procurement Start	Selection of Design Build Team	Anticipated NTP	Anticipated Construction Start	Anticipated Substantial Completion Date	Anticipated Final Completion Date (Close-out)
Berry (NYPA)	2/5/2020	12/4/2020	5/31/2021	12/1/2021	7/30/2023	1/30/2024
Marlboro (LLC I)	5/20/2020	4/21/2021	7/14/2021	2/28 /2022	7/24/2024	1/22/2025

As part of the Design-Build Request for Proposals, firms are competing to provide the most efficient schedules based on innovative delivery of the project. All schedules noted above are projected dates. Final schedules with delivery milestones will be provided as part of the executed contracts.

Because NYCHA is already utilizing other sources of funds to meet its obligation to replace 297 boilers in-kind, CPD is utilizing the Agreement Capital Funds to meet its obligation under Exhibit B, Paragraph 14(c), which requires that NYCHA, in parallel with boiler replacements, simultaneously “evaluate the condition of a development’s entire heating-related capital needs [...] and take appropriate action.”

**d. Elevator Systems**

NYCHA has been investing in replacing more than 350 elevators across the portfolio using a range of funding sources. These investments include funds provided by (i) HUD pursuant to the Public Housing Capital Fund, (ii) the State of New York pursuant to a Grant Disbursement Agreement, and (iii) the City of New York using Mayoral funds outside of the Agreement Capital Funds. The elevator pipeline was designed based on the best available data, including the following prioritization criteria, among other factors: (i) the PNA rating, (ii) the total number of seniors or residents with a mobility impairment, (iii) the year the equipment was installed, and (iv) the number of elevator outages per car per month.

The State of New York allocated \$100 million in FY 2017 for the replacement of 148 elevators at 11 NYCHA developments.<sup>9</sup> It is anticipated that the reimbursement funds will be released starting in 2021. In order to realistically deliver the capital improvements, additional funds totaling approximately \$34.9 million will be covered by the Agreement Capital Funds.

The elevator replacement scope includes, but is not limited to:

- New gearless AC hoist machine with a rope break and rope gripper device,
- New controllers, dispatchers and selectors,
- A new governor and weight frame,
- New emergency stop button and cab emergency lighting,
- New elevator machine room (EMR) fixed louver complete with masonry unit and EMR access entrance,
- Remote elevator monitoring system (REMS),
- New cables,
- New cars and car door operator,
- New slide entrances on both the main floor lobby and all typical floors,
- Phase I fire service key switch fixture on the lobby floor,

<sup>9</sup> Prioritization of these sites was based on the 2017 Physical Needs Assessment and NYCHA operational data. The table appended here as **Exhibit E** details the selection process for each site.



- New car slings and safeties,
- Overhaul car and counterweight rails and roller guide assemblies,
- All new wiring and conduit,
- New top and bottom of car light fixtures,
- New car and counterweight spring buffers,
- New pit stop switch and pit access ladders, and
- New cab enclosures.

Since the State funds were allocated, NYCHA has not changed the scope of work for these projects except in those instances where it is necessary to address impacts arising from various cases. These include deferred maintenance that have led to, e.g., the need to include structural repairs or to address leaks in an elevator shaft that have worsened over time creating additional deterioration. Project estimates have been revised to reflect this additional work. Escalation costs have also led to an increase in the budget for some projects since the State funds were appropriated.

NYCHA is utilizing a contract with a full-service project management firm (the “PM”) to deliver the elevator replacement work. The PM is managing and coordinating all aspects of the projects including planning, funding management, grant administration and financial reporting, metric management, design coordination, procurement scheduling, construction scheduling and coordination, and close-out. NYCHA issued solicitations for design services from NYCHA’s IDIQ pool of firms for eight of the ten developments and task orders were issued to an engineering services firm. Queensbridge North’s elevators are being designed by a consulting and design firm under a previous task order and Atlantic Terminal is being designed in-house by NYCHA staff architects/engineers. The total budget, and the amounts from each source of funds for each project, are outlined in the table below<sup>10</sup> –

Budgets:

Development	No. of Elev.	Original Budget	Additional Costs	Total Budget
		State Funding FY 20	City Agreement Funds FY 21	
Atlantic Terminal	3	\$1,855,000	\$545,000	\$2,400,000
Carey Gardens	9	\$3,498,000	\$3,702,000	\$7,200,000
Coney Island (4&5)	6	\$2,226,000	\$2,574,000	\$4,800,000
Coney Island (1b)	3	\$1,908,000	\$492,000	\$2,400,000
High Bridge Gardens	12	\$12,720,000	-	\$12,720,000
Butler	18	\$14,400,000	-	\$14,400,000
Mitchel	20	\$11,660,000	\$4,340,000	\$16,000,000
Queensbridge North	49	\$21,730,000	\$17,470,000	\$39,200,000
Richmond Terrace	12	\$12,720,000	-	\$12,720,000
Unity Plaza (2 Sites)	16	\$6,996,000	\$5,804,000	\$12,800,000
<b>Total</b>	<b>148</b>	<b>\$89,713,000</b>	<b>\$34,927,000</b>	<b>\$124,640,000</b>

Proposed Schedules:

<sup>10</sup> The total budget excludes the costs associated with NYCHA staff time and the costs associated with paying the Program Manager. All other hard and soft costs are included in these figures.

Development	Design Start Date	Design End Date	Anticipated Procurement End Date	Anticipated Construction Start Date	Anticipated Construction End Date	Anticipated Final Completion Date (Close-Out)
Atlantic Terminal	03/06/2017	3/25/2021	10/10/2021	10/17/2021	9/7/2023	11/18/2023
Carey Gardens	11/23/2019	12/30/2020	8/4/2021	8/11/2021	6/2/2023	11/21/2023
Coney Island 4&5	11/23/2019	12/30/2020	8/30/2021	9/7/2021	7/19/2023	1/7/2024
Coney Island IB	11/23/2019	12/30/2020	8/30/2021	9/7/2021	2/8/2023	7/30/2023
High Bridge Gardens	11/23/2019	12/30/2020	8/29/2021	9/6/2021	1/30/2023	1/4/2024
Butler	11/23/2019	1/4/2021	6/20/2021	6/27/2021	12/28/2022	6/18/2023
Mitchel	11/23/2019	1/2/2021	8/8/2021	8/15/2021	1/19/2024	7/9/2024
Queensbridge North	11/17/2017	12/17/2020	8/12/2021	8/19/2021	8/21/2024	3/12/2025
Richmond Terrace	11/23/2019	12/30/2020	8/15/2021	8/22/2021	10/22/2022	3/28/2023
Unity Plaza	11/23/2019	1/4/2021	8/25/2021	9/1/2021	2/3/2023	7/11/2023

These investments in NYCHA’s elevator pipeline will help ensure NYCHA meets its obligation under Paragraph 34(b) to replace 275 elevators by December 31, 2024.

**e. Waste Management Plan**

NYCHA’s \$563.5 million waste management plan will help NYCHA control pests and will help ensure NYCHA can comply with Paragraph 45, which requires that NYCHA, at least once a day, collect and then either remove or store trash found on the grounds or common areas of each building in a manner that prevents access by pests. NYCHA will upgrade waste management for all waste streams across NYCHA’s portfolio as necessary to comply with this requirement. The scope includes waste yard redesigns and equipment replacement and upgrades, secondary waste stations for trash, recycling, and bulk waste, and interior compactor replacements at approximately 324 sites at 197 developments.

The new waste facilities, identified in **Exhibit B**, improve the aesthetics of the current waste yards, the condition of which constitutes a common complaint received from residents. The structures will be rodent proof, enclosed and partially covered, and they will ensure that all waste streams are addressed. Based on the developments’ needs, the redesign may include drop off zones, exterior auger compactors, cardboard balers and recycling areas. The secondary waste stations will serve as new and convenient waste and recycling collection sites for residents. The interior compactor scope of work will include the installation of new interior compactors and associated building system work, including electrical conduits and wiring, plumbing connections, sprinkler system work, flooring prep work and painting.

In 2019, as part of the Waste Management 2.0 Plan, CPD, in conjunction with NYCHA’s Operations, Maintenance, Repairs and Skilled Trades (“MRST”) and the NYC Department of Sanitation (“DSNY”) performed a needs assessment and prioritization for asset replacement throughout the entirety of NYCHA’s portfolio. The prioritization methodology incorporated the following factors: (i) remaining useful life of the compactors, (ii) volume of service repair requests, (iii) the Department of Mental Health and Hygiene’s rodent burrow score and related complaints and (iv) service needs and rankings reported by Operations and the Department of Sanitation. A priority ranking was assigned based on these items.

Below is the list of waste management projects funded in FY2020. The first seven new waste yards will be completed via Design-Build. Scope for secondary waste stations have also been added to this procurement at a cost of \$3 million and will be added as a part of this work.

Development	Borough	Scope	Start Date	Completion Date	Budget
Jackson	Bronx	New Waste Yard W/ 3 Auger Compactors	2020	2022	\$2,000,000.00
La Guardia	Manhattan	New Waste Yard W/ 3 Auger Compactors	2020	2022	\$2,091,143.93
303 Vernon Avenue	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2020	2022	\$1,870,809.86
Morris II	Bronx	New Waste Yard W/ 3 Auger Compactors	2020	2022	\$2,091,143.93
Marcy	Brooklyn	New Waste Yard W/ 1 Bulk Auger Compactor	2020	2022	\$1,409,943.09
Webster	Bronx	New Waste Yard W/ 3 Auger Compactors	2020	2022	\$2,091,143.93
East 180th Street-Monterey Avenue	Bronx	New Waste Yard W/ 2 Auger Compactors	2020	2022	\$1,870,809.86
Marcy	Brooklyn	Secondary Waste Collection	2020	2022	\$750,000.00

**Completed Activities:**

- NYCHA entered into a contract with Jacobs Project Management (“Jacobs”) in May 2019. Jacobs is a full-service project management firm, which will be used to oversee NYCHA’s capital portfolio of Waste Management projects.
- NYCHA issued a task order to Jacobs for Waste Management Program Management Services to install \$7 million in interior compactors at 24 developments.
- NYCHA published an RFQ/RFP for Design Build services for a Pneumatic Waste Collection System for Polo Grounds in March 2020.
- NYCHA published an RFQ/RFP for Design Build services for seven waste yards in March 2020.
- NYCHA hosted a pre-bid conference meeting for interested applicants of the Design Build services for seven new waste yards RFQ on April 27, 2020.
- NYCHA hosted a pre-bid conference meeting for interested applicants of the Design Build services for a Pneumatic Waste Collection System RFQ on May 4, 2020.
- The submission deadline for Design Build services for a Pneumatic Waste Collection System RFQ was July 13, 2020, NYCHA received 8 proposals.
- The submission deadline for Design Build services for seven new waste yards RFQ was June 15, 2020, NYCHA received 4 proposals.
- Interviews were held for 6 Respondent Teams for the Design Build services for seven new waste yards RFQ the week of August 24, 2020.
- The RFQ shortlist for 3 teams was established on September 14, 2020 for the seven new waste yards and the draft RFP was issued December 10, 2020.
- The RFQ shortlist for 3 teams was established on November 20, 2020 and the draft RFP was issued to the short list on February 4, 2021 for the Pneumatic Waste Collection systems.
- Both Design-Build procurements are in the RFP and scope development stage.

Anticipated Deliverables and Completion: Dates may change due to COVID-19 pandemic.

- The Design Build services for seven new waste yards:
  - Final RFP anticipated May 28, 2021.
  - Proposals due anticipated August 6, 2021.
  - Selection anticipated October 12, 2021.
- The Design Build services for a Pneumatic Waste Collection System:
  - Final RFP anticipated June 18, 2021.
  - Proposals due anticipated August 27, 2021.
  - Selection anticipated November 1, 2021.

NYCHA will use a similar project structure to complete the additional, funded waste management work outlined in Exhibit B below. For the pneumatic system at Polo Grounds, NYCHA has decided to use the Design-Build contracting method because pneumatic systems tend to be proprietary equipment and require the manufacturer to design the systems. In addition, the pneumatic equipment must be installed by “certified installers” so the scope lends itself to Design-Build. For the waste yards, NYCHA has decided to use Design-Build in order to fast-track installation. The Design-Build program allows for purchasing equipment and phased demolition while design of the yards is in progress. Subsequently, NYCHA hopes the design can be replicated with minor adjustments and, in a design-build program, NYCHA will own the design and can replicate its use for future bundles of waste yards as the pipeline progresses.

These investments will help ensure NYCHA can comply with Paragraph 45, which requires that NYCHA, at least once a day, collect and then either remove or store trash found on the grounds or common areas of each building in a manner that prevents access by pests.

#### IV. Exhibit A – Quarterly Reporting

NYCHA shall submit a quarterly report to the Monitor commencing with the quarter ending September 30, 2021. Each report will be due upon the following schedule:

Quarter	Start and End Date	Date Report Due
First Quarter	January 1 to March 31	April 30
Second Quarter	April 1 to June 30	July 31
Third Quarter	July 1 to September 30	October 31
Fourth Quarter	October 1 to December 31	January 31 of following year

#### *Narrative*

Schedule milestones at a development level (where applicable per contract delivery method) should be assembled and included into each quarterly report to accurately track the project and each of the included projects in a report that includes the following:

- Executive Summary
- Progress in Reporting Period (program wide and project level)
- Activities Anticipated in Next Reporting Period (program wide and project level)
- Project Schedule Narrative (Project wide and individual project level)
  - Original substantial/final completion dates,
  - forecast completion (current substantial/final completion dates)
  - delays
  - Percentage complete
  - Latest schedule update narrative
  - milestones completed
  - milestones upcoming
- Budget Summary (Overall program and project level).
  - original budget
  - current budget
  - contract at award
  - approved current contract
  - spent to date (broken down by hard and soft costs)
  - Remaining budget
  - Reimbursement amounts requested from DASNY to date.
  - Reimbursement amount requested from DASNY during this reporting period.
  - Reimbursement amount received from DASNY to date.
  - estimated cost to completion
  - change orders / potential change orders
- Risk Register / Major issues & resolutions (program wide and project level)
- Action Items Log (program wide and project level)

A template is being further developed.

**V. Exhibit B – Waste Management Pipeline**

**1. Waste management plan for New Waste Yard:**

List is subject to change based on future PACT and other programs.

<b>Development</b>	<b>Borough</b>	<b>Scope of Work</b>	<b>Funding Year</b>	<b>Start Year</b>	<b>Completion Year</b>	<b>Grand Total</b>
La Guardia	Manhattan	New Waste Yard W/ 3 Auger Compactors	2020	2021	2022	\$2,091,143.93
303 Vernon Avenue	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2020	2021	2022	\$1,870,809.86
Morrisania Air Rights	Bronx	New Waste Yard W/ 1 Bulk Auger Compactor	2022	2023	2024	\$1,505,301.56
Morris II	Bronx	New Waste Yard W/ 3 Auger Compactors	2020	2021	2022	\$2,091,143.93
Marcy	Brooklyn	New Waste Yard W/ 1 Bulk Auger Compactor	2020	2021	2022	\$1,409,943.09
Webster	Bronx	New Waste Yard W/ 3 Auger Compactors	2020	2021	2022	\$2,091,143.93
East 180th Street-Monterey Avenue	Bronx	New Waste Yard W/ 2 Auger Compactors	2020	2021	2022	\$1,870,809.86
Jackson	Bronx	New Waste Yard W/ 3 Auger Compactors	2020	2021	2022	\$2,000,000.00
Polo Grounds Towers	Manhattan	New Waste Yard W/ 1 Bulk Auger Compactor + Pneumatic System	2021	2022	2023	\$26,394,400.00
Riis	Manhattan	New Waste Yard W/ 1 Bulk Auger Compactor	2021	2022	2023	\$1,457,622.32
White	Manhattan	New Waste Yard W/ 2 Auger Compactors	2021	2022	2023	\$1,934,073.96
South Jamaica I	Queens	New Waste Yard W/ 3 Auger Compactors	2021	2022	2023	\$2,161,858.94
Boynton Avenue Rehab	Bronx	New Waste Yard W/ 2 Auger Compactors	2021	2022	2023	\$1,934,073.96
Farragut	Brooklyn	New Waste Yard W/ 4 Auger Compactors	2021	2022	2023	\$2,513,977.25
Robbins Plaza	Manhattan	New Waste Yard W/ 2 Auger Compactors	2021	2022	2023	\$1,934,073.96
Borinquen Plaza I	Brooklyn	New Waste Yard W/ 3 Auger Compactors	2021	2022	2023	\$2,161,858.94
Monroe	Bronx	New Waste Yard W/ 3 Auger Compactors	2021	2022	2023	\$2,161,858.94
Straus	Manhattan	New Waste Yard W/ 2 Auger Compactors	2021	2022	2023	\$1,934,073.96

<b>Development</b>	<b>Borough</b>	<b>Scope of Work</b>	<b>Funding Year</b>	<b>Start Year</b>	<b>Completion Year</b>	<b>Grand Total</b>
Mitchel	Bronx	New Waste Yard W/ 5 Auger Compactors	2021	2022	2023	\$2,866,095.56
Ravenswood	Queens	New Waste Yard W/ 5 Auger Compactors	2021	2022	2023	\$2,866,095.56
Douglass I	Manhattan	New Waste Yard W/ 1 Bulk Auger Compactor	2021	2022	2023	\$1,457,622.32
Taft	Manhattan	New Waste Yard W/ 1 Bulk Auger Compactor	2021	2022	2023	\$1,457,622.32
Kingsborough	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2021	2022	2023	\$1,934,073.96
Bedford-Stuyvesant Rehab	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2021	2022	2023	\$1,934,073.96
Sotomayor Houses	Bronx	New Waste Yard W/ 5 Auger Compactors	2021	2022	2023	\$2,866,095.56
Elliott	Manhattan	New Waste Yard W/ 2 Auger Compactors	2021	2022	2023	\$1,934,073.96
Glenmore Plaza	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2021	2022	2023	\$1,934,073.96
Brevoort	Brooklyn	New Waste Yard W/ 3 Auger Compactors	2021	2022	2023	\$2,161,858.94
Cooper Park	Brooklyn	New Waste Yard W/ 3 Auger Compactors	2021	2022	2023	\$2,161,858.94
Low Houses	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2022	2023	2024	\$1,997,338.06
Pomonok	Queens	New Waste Yard W/ 6 Auger Compactors	2022	2023	2024	\$3,323,482.55
Rehab Program (College Point)	Queens	New Waste Yard W/ 2 Auger Compactors	2022	2023	2024	\$1,997,338.06
Twin Parks East (Site 9)	Bronx	New Waste Yard W/ 2 Auger Compactors	2022	2023	2024	\$1,997,338.06
Forest	Bronx	New Waste Yard W/ 4 Auger Compactors	2022	2023	2024	\$2,596,210.15
McKinley	Bronx	New Waste Yard W/ 3 Auger Compactors	2022	2023	2024	\$2,232,573.95
Sheepshead Bay	Brooklyn	New Waste Yard W/ 6 Auger Compactors	2022	2023	2024	\$3,323,482.55
Howard	Brooklyn	New Waste Yard W/ 3 Auger Compactors	2022	2023	2024	\$2,232,573.95
Nostrand	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2022	2023	2024	\$1,997,338.06
Bronx River	Bronx	New Waste Yard W/ 4 Auger Compactors	2022	2023	2024	\$2,596,210.15
Bronx River Addition	Bronx	New Waste Yard W/ 2 Auger Compactors	2022	2023	2024	\$1,997,338.06
Morris Park Senior Citizens Home	Manhattan	New Waste Yard W/ 2 Auger Compactors	2022	2023	2024	\$1,997,338.06

<b>Development</b>	<b>Borough</b>	<b>Scope of Work</b>	<b>Funding Year</b>	<b>Start Year</b>	<b>Completion Year</b>	<b>Grand Total</b>
Lafayette	Brooklyn	New Waste Yard W/ 1 Bulk Auger Compactor	2022	2023	2024	\$1,505,301.56
Davidson	Bronx	New Waste Yard W/ 2 Auger Compactors	2022	2023	2024	\$1,997,338.06
154 West 84th Street	Manhattan	New Waste Yard W/ 2 Auger Compactors	2022	2023	2024	\$1,997,338.06
Adams	Bronx	New Waste Yard W/ 3 Auger Compactors	2022	2023	2024	\$2,232,573.95
Berry	Staten Island	New Waste Yard W/ 2 Auger Compactors	2022	2023	2024	\$1,997,338.06
Mill Brook Extension	Bronx	New Waste Yard W/ 2 Auger Compactors	2022	2023	2024	\$1,997,338.06
Rehab Program (Taft Rehabs)	Manhattan	New Waste Yard W/ 2 Auger Compactors	2022	2023	2024	\$1,997,338.06
Wyckoff Gardens	Brooklyn	New Waste Yard W/ 3 Auger Compactors	2022	2023	2024	\$2,232,573.95
De Hostos Apartments	Manhattan	New Waste Yard W/ 2 Auger Compactors	2022	2023	2024	\$1,997,338.06
Amsterdam	Manhattan	New Waste Yard W/ 4 Auger Compactors	2023	2024	2025	\$2,678,443.05
Eagle Avenue-East 163rd Street	Bronx	New Waste Yard W/ 2 Auger Compactors	2023	2024	2025	\$2,060,602.16
South Jamaica II	Queens	New Waste Yard W/ 3 Auger Compactors	2023	2024	2025	\$2,303,288.96
Lincoln	Manhattan	New Waste Yard W/ 3 Auger Compactors	2023	2024	2025	\$2,303,288.96
Borinquen Plaza II	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2023	2024	2025	\$2,060,602.16
Johnson	Manhattan	New Waste Yard W/ 3 Auger Compactors	2023	2024	2025	\$2,303,288.96
King Towers	Manhattan	New Waste Yard W/ 1 Bulk Auger Compactor	2023	2024	2025	\$1,552,980.79
Hernandez	Manhattan	New Waste Yard W/ 2 Auger Compactors	2023	2024	2025	\$2,060,602.16
Jefferson	Manhattan	New Waste Yard W/ 5 Auger Compactors	2023	2024	2025	\$3,053,597.14
Lower East Side I Infill	Manhattan	New Waste Yard W/ 2 Auger Compactors	2023	2024	2025	\$2,060,602.16
Moore	Bronx	New Waste Yard W/ 2 Auger Compactors	2023	2024	2025	\$2,060,602.16
Smith	Manhattan	New Waste Yard W/ 1 Bulk Auger Compactor	2023	2024	2025	\$1,552,980.79
Gompers	Manhattan	New Waste Yard W/ 1 Bulk Auger Compactor	2023	2024	2025	\$1,552,980.79



<b>Development</b>	<b>Borough</b>	<b>Scope of Work</b>	<b>Funding Year</b>	<b>Start Year</b>	<b>Completion Year</b>	<b>Grand Total</b>
Wilson	Manhattan	New Waste Yard W/ 3 Auger Compactors	2023	2024	2025	\$2,303,288.96
Queensbridge North	Queens	New Waste Yard W/ 1 Bulk Auger Compactor	2023	2024	2025	\$1,552,980.79
Sumner	Brooklyn	New Waste Yard W/ 1 Bulk Auger Compactor	2023	2024	2025	\$1,552,980.79
Queensbridge South	Queens	New Waste Yard W/ 1 Bulk Auger Compactor	2023	2024	2025	\$1,552,980.79
Coney Island	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2023	2024	2025	\$2,060,602.16
East 165th Street-Bryant Avenue	Bronx	New Waste Yard W/ 2 Auger Compactors	2023	2024	2025	\$2,060,602.16
Pink	Brooklyn	New Waste Yard W/ 1 Bulk Auger Compactor	2023	2024	2025	\$1,552,980.79
Glebe Avenue-Westchester Avenue	Bronx	New Waste Yard W/ 2 Auger Compactors	2023	2024	2025	\$2,060,602.16
Saratoga Village	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2023	2024	2025	\$2,060,602.16
South Beach	Staten Island	New Waste Yard W/ 2 Auger Compactors	2023	2024	2025	\$2,060,602.16
Stuyvesant Gardens I	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2023	2024	2025	\$2,060,602.16
Bailey Avenue-West 193rd Street	Bronx	New Waste Yard W/ 2 Auger Compactors	2024	2025	2026	\$2,123,866.26
Mill Brook	Bronx	New Waste Yard W/ 1 Bulk Auger Compactor	2024	2025	2026	\$1,600,660.03
Woodside	Queens	New Waste Yard W/ 4 Auger Compactors	2024	2025	2026	\$2,760,675.95
Claremont Parkway-Franklin Avenue	Bronx	New Waste Yard W/ 2 Auger Compactors	2024	2025	2026	\$2,123,866.26
Hylan	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2024	2025	2026	\$2,123,866.26
Lower East Side III	Manhattan	New Waste Yard W/ 2 Auger Compactors	2024	2025	2026	\$2,123,866.26
Upaca (Site 6)	Manhattan	New Waste Yard W/ 3 Auger Compactors	2024	2025	2026	\$2,374,003.98
1471 Watson Avenue	Bronx	New Waste Yard W/ 2 Auger Compactors	2024	2025	2026	\$2,123,866.26
Bland	Queens	New Waste Yard W/ 2 Auger Compactors	2024	2025	2026	\$2,123,866.26
Chelsea Addition	Manhattan	New Waste Yard W/ 2 Auger Compactors	2024	2025	2026	\$2,123,866.26

<b>Development</b>	<b>Borough</b>	<b>Scope of Work</b>	<b>Funding Year</b>	<b>Start Year</b>	<b>Completion Year</b>	<b>Grand Total</b>
Coney Island I (Site 8)	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2024	2025	2026	\$2,123,866.26
Dyckman	Manhattan	New Waste Yard W/ 1 Bulk Auger Compactor	2024	2025	2026	\$1,600,660.03
Hammel	Queens	New Waste Yard W/ 3 Auger Compactors	2024	2025	2026	\$2,374,003.98
Rehab Program (Douglass Rehabs)	Manhattan	New Waste Yard W/ 2 Auger Compactors	2024	2025	2026	\$2,123,866.26
Stuyvesant Gardens II	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2024	2025	2026	\$2,123,866.26
Tilden	Brooklyn	New Waste Yard W/ 3 Auger Compactors	2024	2025	2026	\$2,374,003.98
Fort Independence Street-Heath Avenue	Bronx	New Waste Yard W/ 2 Auger Compactors	2024	2025	2026	\$2,123,866.26
Harborview Terrace	Manhattan	New Waste Yard W/ 2 Auger Compactors	2024	2025	2026	\$2,123,866.26
Morrisania	Bronx	New Waste Yard W/ 2 Auger Compactors	2024	2025	2026	\$2,123,866.26
45 Allen Street	Manhattan	New Waste Yard W/ 2 Auger Compactors	2024	2025	2026	\$2,123,866.26
Fulton	Manhattan	New Waste Yard W/ 3 Auger Compactors	2024	2025	2026	\$2,374,003.98
Rangel	Manhattan	New Waste Yard W/ 4 Auger Compactors	2024	2025	2026	\$2,760,675.95
West Farms Square Conventional	Bronx	New Waste Yard W/ 2 Auger Compactors	2024	2025	2026	\$2,123,866.26
West Farms Road Rehab	Bronx	New Waste Yard W/ 2 Auger Compactors	2024	2025	2026	\$2,123,866.26
Clinton	Manhattan	New Waste Yard W/ 1 Bulk Auger Compactor	2025	2026	2027	\$1,648,339.26
Hoe Avenue-East 173rd Street	Bronx	New Waste Yard W/ 2 Auger Compactors	2025	2026	2027	\$2,187,130.36
Hunts Point Avenue Rehab	Bronx	New Waste Yard W/ 2 Auger Compactors	2025	2026	2027	\$2,187,130.36
Lehman Village	Manhattan	New Waste Yard W/ 1 Bulk Auger Compactor	2025	2026	2027	\$1,648,339.26
Longfellow Avenue Rehab	Bronx	New Waste Yard W/ 2 Auger Compactors	2025	2026	2027	\$2,187,130.36
Todt Hill	Staten Island	New Waste Yard W/ 2 Auger Compactors	2025	2026	2027	\$2,187,130.36
Carver	Manhattan	New Waste Yard W/ 4 Auger Compactors	2025	2026	2027	\$2,842,908.85
Bryant Avenue-East 174th Street	Bronx	New Waste Yard W/ 2 Auger Compactors	2025	2026	2027	\$2,187,130.36

<b>Development</b>	<b>Borough</b>	<b>Scope of Work</b>	<b>Funding Year</b>	<b>Start Year</b>	<b>Completion Year</b>	<b>Grand Total</b>
Grant	Manhattan	New Waste Yard W/ 5 Auger Compactors	2025	2026	2027	\$3,241,098.72
South Bronx Area (Site 402)	Bronx	New Waste Yard W/ 2 Auger Compactors	2025	2026	2027	\$2,187,130.36
Roosevelt I	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2025	2026	2027	\$2,187,130.36
Union Avenue-East 163rd Street	Bronx	New Waste Yard W/ 2 Auger Compactors	2025	2026	2027	\$2,187,130.36
Baruch Houses Addition	Manhattan	New Waste Yard W/ 2 Auger Compactors	2025	2026	2027	\$2,187,130.36
Douglass Addition	Manhattan	New Waste Yard W/ 2 Auger Compactors	2025	2026	2027	\$2,187,130.36
Metro North Plaza	Manhattan	New Waste Yard W/ 2 Auger Compactors	2025	2026	2027	\$2,187,130.36
Saint Nicholas	Manhattan	New Waste Yard W/ 1 Bulk Auger Compactor	2025	2026	2027	\$1,648,339.26
830 Amsterdam Avenue	Manhattan	New Waste Yard W/ 2 Auger Compactors	2025	2026	2027	\$2,187,130.36
Coney Island I (Site 1b)	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2025	2026	2027	\$2,187,130.36
Glenwood	Brooklyn	New Waste Yard W/ 1 Bulk Auger Compactor	2025	2026	2027	\$1,648,339.26
Gravesend	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2025	2026	2027	\$2,187,130.36
Haber	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2025	2026	2027	\$2,187,130.36
Hughes Apartments	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2025	2026	2027	\$2,187,130.36
International Tower	Queens	New Waste Yard W/ 2 Auger Compactors	2025	2026	2027	\$2,187,130.36
Pennsylvania Avenue-Wortman Avenue	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2026	2027	2028	\$2,250,394.46
Shelton House	Queens	New Waste Yard W/ 2 Auger Compactors	2026	2027	2028	\$2,250,394.46
West Brighton I	Staten Island	New Waste Yard W/ 3 Auger Compactors	2026	2027	2028	\$2,515,434.00
West Brighton II	Staten Island	New Waste Yard W/ 2 Auger Compactors	2026	2027	2028	\$2,250,394.46
WSUR (Site B) 74 West 92nd Street	Manhattan	New Waste Yard W/ 2 Auger Compactors	2026	2027	2028	\$2,250,394.46
WSUR (Site C) 589 Amsterdam Avenue	Manhattan	New Waste Yard W/ 2 Auger Compactors	2026	2027	2028	\$2,250,394.46
Douglass II	Manhattan	New Waste Yard W/ 2 Auger Compactors	2026	2027	2028	\$2,250,394.46
Stebbins Avenue-Hewitt Place	Bronx	New Waste Yard W/ 2 Auger Compactors	2026	2027	2028	\$2,250,394.46

<b>Development</b>	<b>Borough</b>	<b>Scope of Work</b>	<b>Funding Year</b>	<b>Start Year</b>	<b>Completion Year</b>	<b>Grand Total</b>
Morris I	Bronx	New Waste Yard W/ 1 Bulk Auger Compactor	2026	2027	2028	\$1,696,018.50
Robinson	Manhattan	New Waste Yard W/ 2 Auger Compactors	2026	2027	2028	\$2,250,394.46
Upaca (Site 5)	Manhattan	New Waste Yard W/ 2 Auger Compactors	2026	2027	2028	\$2,250,394.46
Corsi Houses	Manhattan	New Waste Yard W/ 2 Auger Compactors	2026	2027	2028	\$2,250,394.46
Roosevelt II	Brooklyn	New Waste Yard W/ 3 Auger Compactors	2026	2027	2028	\$2,515,434.00
Tompkins	Brooklyn	New Waste Yard W/ 1 Bulk Auger Compactor	2026	2027	2028	\$1,696,018.50
Union Avenue-East 166th Street	Bronx	New Waste Yard W/ 2 Auger Compactors	2026	2027	2028	\$2,250,394.46
Conlon Lihfe Tower	Queens	New Waste Yard W/ 2 Auger Compactors	2026	2027	2028	\$2,250,394.46
Holmes Towers	Manhattan	New Waste Yard W/ 2 Auger Compactors	2026	2027	2028	\$2,250,394.46
Isaacs	Manhattan	New Waste Yard W/ 1 Bulk Auger Compactor	2026	2027	2028	\$1,696,018.50
Middletown Plaza	Bronx	New Waste Yard W/ 2 Auger Compactors	2026	2027	2028	\$2,250,394.46
Ocean Bay Apartments (Oceanside)	Queens	New Waste Yard W/ 2 Auger Compactors	2026	2027	2028	\$2,250,394.46
Stanton Street	Manhattan	New Waste Yard W/ 2 Auger Compactors	2027	2028	2029	\$2,313,658.57
Surfside Gardens	Brooklyn	New Waste Yard W/ 3 Auger Compactors	2027	2028	2029	\$2,586,149.01
Taylor Street-Wythe Avenue	Brooklyn	New Waste Yard W/ 3 Auger Compactors	2027	2028	2029	\$2,586,149.01
Woodson	Brooklyn	New Waste Yard W/ 1 Bulk Auger Compactor	2027	2028	2029	\$1,743,697.73
Atlantic Terminal Site 4b	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2027	2028	2029	\$2,313,658.57
Coney Island I (Sites 4 & 5)	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2027	2028	2029	\$2,313,658.57
Eastchester Gardens	Bronx	New Waste Yard W/ 3 Auger Compactors	2027	2028	2029	\$2,586,149.01
New Lane Area	Staten Island	New Waste Yard W/ 2 Auger Compactors	2027	2028	2029	\$2,313,658.57
Parkside	Bronx	New Waste Yard W/ 3 Auger Compactors	2027	2028	2029	\$2,586,149.01
University Avenue Rehab	Bronx	New Waste Yard W/ 2 Auger Compactors	2027	2028	2029	\$2,313,658.57

<b>Development</b>	<b>Borough</b>	<b>Scope of Work</b>	<b>Funding Year</b>	<b>Start Year</b>	<b>Completion Year</b>	<b>Grand Total</b>
Vandalia Avenue	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2027	2028	2029	\$2,313,658.57
131 Saint Nicholas Avenue	Manhattan	New Waste Yard W/ 2 Auger Compactors	2027	2028	2029	\$2,313,658.57
Boston Secor	Bronx	New Waste Yard W/ 3 Auger Compactors	2027	2028	2029	\$2,586,149.01
Garvey (Group A)	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2027	2028	2029	\$2,313,658.57
Harrison Avenue Rehab (Group A)	Bronx	New Waste Yard W/ 2 Auger Compactors	2027	2028	2029	\$2,313,658.57
Latimer Gardens	Queens	New Waste Yard W/ 2 Auger Compactors	2027	2028	2029	\$2,313,658.57
Mariner's Harbor	Staten Island	New Waste Yard W/ 1 Bulk Auger Compactor	2027	2028	2029	\$1,743,697.73
O'Dwyer Gardens	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2027	2028	2029	\$2,313,658.57
Sedgwick	Bronx	New Waste Yard W/ 3 Auger Compactors	2027	2028	2029	\$2,586,149.01
Washington Heights Rehab Phase III (Fort Washington)	Manhattan	New Waste Yard W/ 2 Auger Compactors	2027	2028	2029	\$2,313,658.57
1010 East 178th Street	Bronx	New Waste Yard W/ 2 Auger Compactors	2027	2028	2029	\$2,313,658.57
Gowanus	Brooklyn	New Waste Yard W/ 4 Auger Compactors	2027	2028	2029	\$3,007,374.65
Ocean Hill Apartments	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2027	2028	2029	\$2,313,658.57
Van Dyke II	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2028	2029	2030	\$2,376,922.67
Highbridge Gardens	Bronx	New Waste Yard W/ 3 Auger Compactors	2028	2029	2030	\$2,656,864.03
Seward Park Extension	Manhattan	New Waste Yard W/ 2 Auger Compactors	2028	2029	2030	\$2,376,922.67
Beach 41st Street-Beach Channel Drive	Queens	New Waste Yard W/ 1 Bulk Auger Compactor	2028	2029	2030	\$1,791,376.96
Brown	Brooklyn	New Waste Yard W/ 2 Auger Compactors	2028	2029	2030	\$2,376,922.67
Brownsville	Brooklyn	New Waste Yard W/ 4 Auger Compactors	2028	2029	2030	\$3,089,607.56
Carey Gardens	Brooklyn	New Waste Yard W/ 3 Auger Compactors	2028	2029	2030	\$2,656,864.03
Carleton Manor	Queens	New Waste Yard W/ 2 Auger Compactors	2028	2029	2030	\$2,376,922.67
Cassidy-Lafayette	Staten Island	New Waste Yard W/ 2 Auger Compactors	2028	2029	2030	\$2,376,922.67

<b>Development</b>	<b>Borough</b>	<b>Scope of Work</b>	<b>Funding Year</b>	<b>Start Year</b>	<b>Completion Year</b>	<b>Grand Total</b>
Gun Hill	Bronx	New Waste Yard W/ 1 Bulk Auger Compactor	2028	2029	2030	\$1,791,376.96
Harrison Avenue Rehab (Group B)	Bronx	New Waste Yard W/ 2 Auger Compactors	2028	2029	2030	\$2,376,922.67
Leavitt Street-34th Avenue	Queens	New Waste Yard W/ 2 Auger Compactors	2028	2029	2030	\$2,376,922.67
Mott Haven	Bronx	New Waste Yard W/ 3 Auger Compactors	2028	2029	2030	\$2,656,864.03
Richmond Terrace	Staten Island	New Waste Yard W/ 1 Bulk Auger Compactor	2028	2029	2030	\$1,791,376.96
Washington Heights Rehab Phase Iii (Harlem River)	Manhattan	New Waste Yard W/ 2 Auger Compactors	2028	2029	2030	\$2,376,922.67
Whitman	Brooklyn	New Waste Yard W/ 4 Auger Compactors	2028	2029	2030	\$3,089,607.56
Marlboro	Brooklyn	New Waste Yard W/ 5 Auger Compactors	2021	2022	2023	\$2,866,095.56
Castle Hill	Bronx	New Waste Yard W/ 1 Bulk Auger Compactor	2022	2023	2024	\$1,505,301.56
Bay View	Brooklyn	New Waste Yard W/ 5 Auger Compactors	2024	2025	2026	\$3,147,347.93
Drew-Hamilton	Manhattan	New Waste Yard W/ 3 Auger Compactors	2024	2025	2026	\$2,374,003.98
Manhattanville	Manhattan	New Waste Yard W/ 4 Auger Compactors	2024	2025	2026	\$2,760,675.95
Amsterdam Addition	Manhattan	New Waste Yard W/ 2 Auger Compactors	2024	2025	2026	\$2,123,866.26
Saint Mary's Park	Bronx	New Waste Yard W/ 3 Auger Compactors	2024	2025	2026	\$2,374,003.98
Stapleton	Staten Island	New Waste Yard W/ 3 Auger Compactors	2026	2027	2028	\$2,515,434.00
Rutgers	Manhattan	New Waste Yard W/ 2 Auger Compactors	2026	2027	2028	\$2,250,394.46
Chelsea	Manhattan	New Waste Yard W/ 1 Bulk Auger Compactor	2026	2027	2028	\$1,696,018.50
Marble Hill	Bronx	New Waste Yard W/ 4 Auger Compactors	2026	2027	2028	\$2,925,141.75
<b>Total</b>						<b>\$443,231,894.90</b>

**2. Waste Management Plan for Secondary Waste Stations:**

List is subject to change based on future PACT and other programs.

Development	Borough	Scope of Work	Funding Year	Start Year	Completion Year	Grand Total
Marcy	Brooklyn	Secondary Waste Stations	2020	2021	2022	\$750,000.00
Various	Various	Secondary Waste Stations	2022	2022	2022	\$3,000,000.00
<b>Total</b>						<b>\$3,750,000.00</b>

### 3. Waste Management Plan for Interior Compactors:

List is subject to change based on future PACT and other programs.

Development	Borough	Scope of Work	Funding Year	Start Year	Completion Year	Grand Total
South Jamaica I	Queens	Interior Compactors	2021	2022	2023	\$2,154,753.56
Morris Park Senior Citizens Home	Manhattan	Interior Compactors	2021	2022	2023	\$65,295.56
Borinquen Plaza I	Brooklyn	Interior Compactors	2021	2022	2023	\$522,364.50
Rangel	Manhattan	Interior Compactors	2021	2022	2023	\$587,660.06
Monroe	Bronx	Interior Compactors	2021	2022	2023	\$1,175,320.13
Metro North Plaza	Manhattan	Interior Compactors	2021	2022	2023	\$195,886.69
Saint Nicholas	Manhattan	Interior Compactors	2021	2022	2023	\$914,137.88
Fulton	Manhattan	Interior Compactors	2021	2022	2023	\$1,240,615.69
Baruch	Manhattan	Interior Compactors	2021	2022	2023	\$1,110,024.56
Baruch Houses Addition	Manhattan	Interior Compactors	2021	2022	2023	\$65,295.56
Pennsylvania Avenue-Wortman Avenue	Brooklyn	Interior Compactors	2021	2022	2023	\$195,886.69
830 Amsterdam Avenue	Manhattan	Interior Compactors	2021	2022	2023	\$65,295.56
De Hostos Apartments	Manhattan	Interior Compactors	2021	2022	2023	\$65,295.56
WSUR(Site A) 120 West 94th Street	Manhattan	Interior Compactors	2021	2022	2023	\$65,295.56
WSUR (Site B) 74 West 92nd Street	Manhattan	Interior Compactors	2021	2022	2023	\$65,295.56
WSUR (Site C) 589 Amsterdam Avenue	Manhattan	Interior Compactors	2021	2022	2023	\$65,295.56
Eagle Avenue-East 163rd Street	Bronx	Interior Compactors	2021	2022	2023	\$65,295.56
International Tower	Queens	Interior Compactors	2021	2022	2023	\$65,295.56
West Brighton I	Staten Island	Interior Compactors	2021	2022	2023	\$522,364.50
Wyckoff Gardens	Brooklyn	Interior Compactors	2021	2022	2023	\$195,886.69
Ravenswood	Queens	Interior Compactors	2021	2022	2023	\$2,938,300.31
Amsterdam	Manhattan	Interior Compactors	2022	2023	2024	\$1,620,087.00
Mitchel	Bronx	Interior Compactors	2022	2023	2024	\$675,036.25
Adams	Bronx	Interior Compactors	2022	2023	2024	\$472,525.38
Hughes Apartments	Brooklyn	Interior Compactors	2022	2023	2024	\$202,510.88
South Jamaica II	Queens	Interior Compactors	2022	2023	2024	\$1,822,597.88
Glenwood	Brooklyn	Interior Compactors	2022	2023	2024	\$2,700,145.00
Gravesend	Brooklyn	Interior Compactors	2022	2023	2024	\$1,012,554.38

<b>Development</b>	<b>Borough</b>	<b>Scope of Work</b>	<b>Funding Year</b>	<b>Start Year</b>	<b>Completion Year</b>	<b>Grand Total</b>
Haber	Brooklyn	Interior Compactors	2022	2023	2024	\$202,510.88
Mill Brook Extension	Bronx	Interior Compactors	2022	2023	2024	\$67,503.63
Berry	Staten Island	Interior Compactors	2022	2023	2024	\$1,080,058.00
Shelton House	Queens	Interior Compactors	2022	2023	2024	\$67,503.63
Straus	Manhattan	Interior Compactors	2022	2023	2024	\$135,007.25
Baisley Park	Queens	Interior Compactors	2022	2023	2024	\$337,518.13
Lincoln	Manhattan	Interior Compactors	2022	2023	2024	\$1,350,072.50
Taft	Manhattan	Interior Compactors	2023	2024	2025	\$1,254,810.38
Douglass I	Manhattan	Interior Compactors	2023	2024	2025	\$766,828.56
Douglass II	Manhattan	Interior Compactors	2023	2024	2025	\$418,270.13
Borinquen Plaza II	Brooklyn	Interior Compactors	2023	2024	2025	\$487,981.81
Jefferson	Manhattan	Interior Compactors	2023	2024	2025	\$2,370,197.38
Moore	Bronx	Interior Compactors	2023	2024	2025	\$278,846.75
Marcy	Brooklyn	Interior Compactors	2023	2024	2025	\$4,879,818.13
Corsi Houses	Manhattan	Interior Compactors	2023	2024	2025	\$69,711.69
Kingsborough	Brooklyn	Interior Compactors	2023	2024	2025	\$2,439,909.06
Wagner	Manhattan	Interior Compactors	2024	2025	2026	\$1,582,234.50
Queensbridge North	Queens	Interior Compactors	2024	2025	2026	\$3,380,228.25
Queensbridge South	Queens	Interior Compactors	2024	2025	2026	\$3,524,067.75
Wilson	Manhattan	Interior Compactors	2024	2025	2026	\$215,759.25
Jackson	Bronx	Interior Compactors	2024	2025	2026	\$503,438.25
Upaca (Site 5)	Manhattan	Interior Compactors	2024	2025	2026	\$71,919.75
Stuyvesant Gardens I	Brooklyn	Interior Compactors	2024	2025	2026	\$791,117.25
Brevoort	Brooklyn	Interior Compactors	2024	2025	2026	\$1,869,913.50
Parkside	Bronx	Interior Compactors	2024	2025	2026	\$1,438,395.00
Glebe Avenue- Westchester Avenue	Bronx	Interior Compactors	2024	2025	2026	\$71,919.75
Sotomayor Houses	Bronx	Interior Compactors	2025	2026	2027	\$2,075,578.75
New Lane Area	Staten Island	Interior Compactors	2025	2026	2027	\$74,127.81
Cooper Park	Brooklyn	Interior Compactors	2025	2026	2027	\$963,661.56
Ingersoll	Brooklyn	Interior Compactors	2025	2026	2027	\$3,335,751.56
Eastchester Gardens	Bronx	Interior Compactors	2025	2026	2027	\$1,111,917.19
Taylor Street-Wythe Avenue	Brooklyn	Interior Compactors	2025	2026	2027	\$370,639.06
Vandalia Avenue	Brooklyn	Interior Compactors	2025	2026	2027	\$148,255.63
Pomonok	Queens	Interior Compactors	2025	2026	2027	\$8,969,465.31
Elliott	Manhattan	Interior Compactors	2026	2027	2028	\$610,687.00
Ocean Bay Apartments (Oceanside)	Queens	Interior Compactors	2026	2027	2028	\$1,068,702.25
Holmes Towers	Manhattan	Interior Compactors	2026	2027	2028	\$152,671.75
Isaacs	Manhattan	Interior Compactors	2026	2027	2028	\$229,007.63
Low Houses	Brooklyn	Interior Compactors	2026	2027	2028	\$305,343.50
Woodside	Queens	Interior Compactors	2026	2027	2028	\$4,198,473.13
Woodson	Brooklyn	Interior Compactors	2026	2027	2028	\$229,007.63

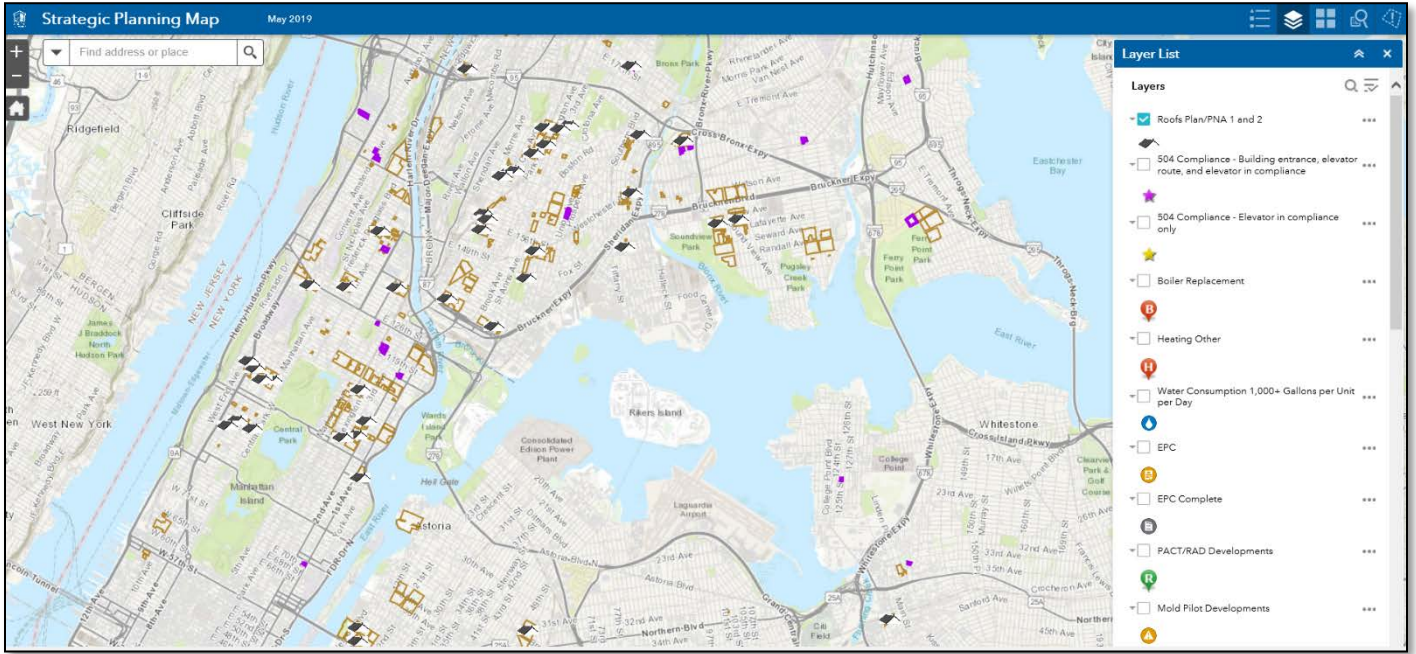


<b>Development</b>	<b>Borough</b>	<b>Scope of Work</b>	<b>Funding Year</b>	<b>Start Year</b>	<b>Completion Year</b>	<b>Grand Total</b>
Bailey Avenue-West 193rd Street	Bronx	Interior Compactors	2026	2027	2028	\$76,335.88
Kingsborough Extension	Brooklyn	Interior Compactors	2026	2027	2028	\$76,335.88
Atlantic Terminal Site 4b	Brooklyn	Interior Compactors	2026	2027	2028	\$76,335.88
Glenmore Plaza	Brooklyn	Interior Compactors	2026	2027	2028	\$381,679.38
Mill Brook	Bronx	Interior Compactors	2026	2027	2028	\$916,030.50
South Beach	Staten Island	Interior Compactors	2026	2027	2028	\$1,145,038.13
Conlon Lihfe Tower	Queens	Interior Compactors	2026	2027	2028	\$76,335.88
Saratoga Village	Brooklyn	Interior Compactors	2026	2027	2028	\$76,335.88
Lehman Village	Manhattan	Interior Compactors	2026	2027	2028	\$305,343.50
Coney Island	Brooklyn	Interior Compactors	2026	2027	2028	\$381,679.38
Surfside Gardens	Brooklyn	Interior Compactors	2026	2027	2028	\$381,679.38
131 Saint Nicholas Avenue	Manhattan	Interior Compactors	2026	2027	2028	\$76,335.88
Claremont Parkway-Franklin Avenue	Bronx	Interior Compactors	2026	2027	2028	\$229,007.63
Upaca (Site 6)	Manhattan	Interior Compactors	2026	2027	2028	\$76,335.88
Hammel	Queens	Interior Compactors	2027	2028	2029	\$1,099,615.13
1471 Watson Avenue	Bronx	Interior Compactors	2027	2028	2029	\$157,087.88
Coney Island I (Site 8)	Brooklyn	Interior Compactors	2027	2028	2029	\$78,543.94
1010 East 178th Street	Bronx	Interior Compactors	2027	2028	2029	\$78,543.94
Garvey (Group A)	Brooklyn	Interior Compactors	2027	2028	2029	\$392,719.69
Howard	Brooklyn	Interior Compactors	2027	2028	2029	\$1,256,703.00
Ocean Hill Apartments	Brooklyn	Interior Compactors	2027	2028	2029	\$235,631.81
Dyckman	Manhattan	Interior Compactors	2027	2028	2029	\$549,807.56
Todt Hill	Staten Island	Interior Compactors	2027	2028	2029	\$1,099,615.13
Chelsea Addition	Manhattan	Interior Compactors	2027	2028	2029	\$78,543.94
Mariner's Harbor	Staten Island	Interior Compactors	2027	2028	2029	\$2,513,406.00
Sedgwick	Bronx	Interior Compactors	2027	2028	2029	\$549,807.56
Van Dyke II	Brooklyn	Interior Compactors	2027	2028	2029	\$78,543.94
Boston Secor	Bronx	Interior Compactors	2027	2028	2029	\$314,175.75
Nostrand	Brooklyn	Interior Compactors	2027	2028	2029	\$2,513,406.00
Sheepshead Bay	Brooklyn	Interior Compactors	2027	2028	2029	\$2,827,581.75
Tilden	Brooklyn	Interior Compactors	2027	2028	2029	\$628,351.50
Gowanus	Brooklyn	Interior Compactors	2028	2029	2030	\$1,938,048.00
Forest	Bronx	Interior Compactors	2028	2029	2030	\$1,211,280.00
Latimer Gardens	Queens	Interior Compactors	2028	2029	2030	\$323,008.00
Fort Independence Street-Heath Avenue	Bronx	Interior Compactors	2028	2029	2030	\$161,504.00
McKinley	Bronx	Interior Compactors	2028	2029	2030	\$403,760.00
O'Dwyer Gardens	Brooklyn	Interior Compactors	2028	2029	2030	\$484,512.00
Morrisania	Bronx	Interior Compactors	2028	2029	2030	\$161,504.00

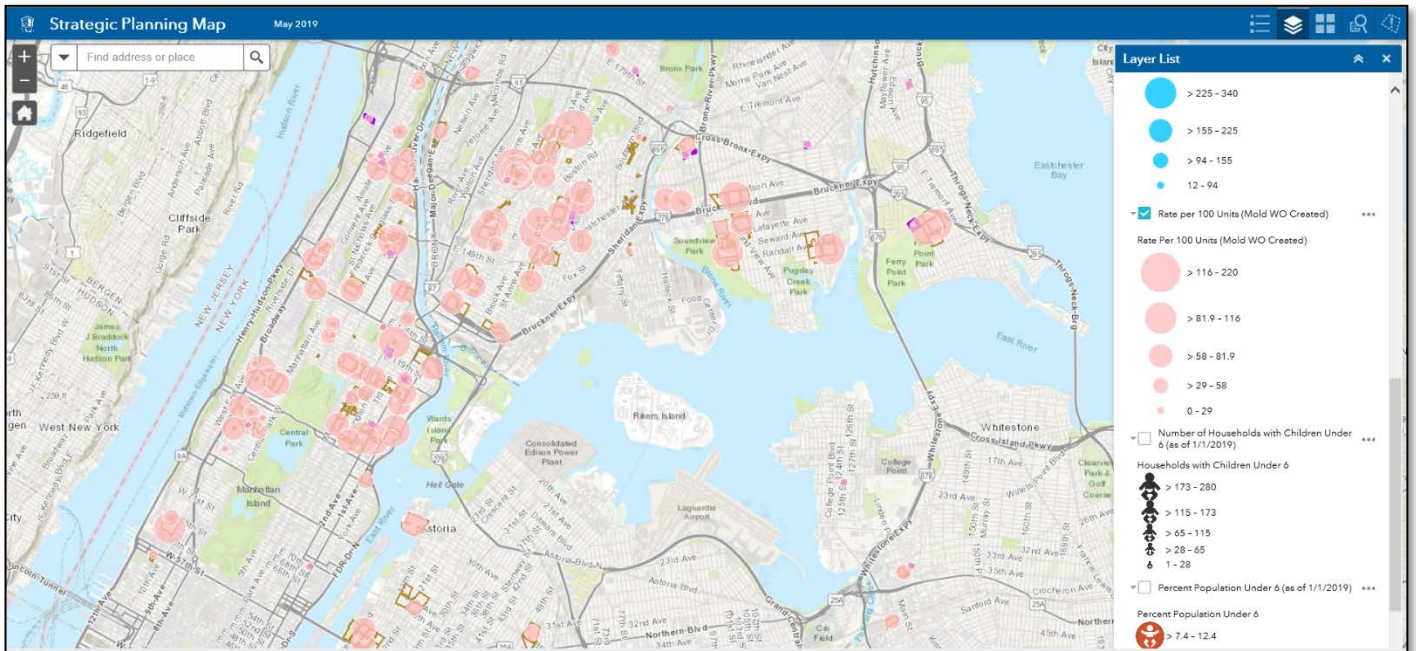
<b>Development</b>	<b>Borough</b>	<b>Scope of Work</b>	<b>Funding Year</b>	<b>Start Year</b>	<b>Completion Year</b>	<b>Grand Total</b>
Carver	Manhattan	Interior Compactors	2028	2029	2030	\$1,049,776.00
Bronx River	Bronx	Interior Compactors	2028	2029	2030	\$726,768.00
Carleton Manor	Queens	Interior Compactors	2028	2029	2030	\$80,752.00
Whitman	Brooklyn	Interior Compactors	2028	2029	2030	\$2,584,064.00
Mott Haven	Bronx	Interior Compactors	2028	2029	2030	\$646,016.00
Gun Hill	Bronx	Interior Compactors	2028	2029	2030	\$484,512.00
Brownsville	Brooklyn	Interior Compactors	2028	2029	2030	\$3,714,592.00
Carey Gardens	Brooklyn	Interior Compactors	2028	2029	2030	\$242,256.00
Beach 41st Street- Beach Channel Drive	Queens	Interior Compactors	2028	2029	2030	\$484,512.00
Bronx River Addition	Bronx	Interior Compactors	2028	2029	2030	\$161,504.00
Richmond Terrace	Staten Island	Interior Compactors	2028	2029	2030	\$484,512.00
Leavitt Street-34th Avenue	Queens	Interior Compactors	2028	2029	2030	\$80,752.00
Cassidy-Lafayette	Staten Island	Interior Compactors	2028	2029	2030	\$323,008.00
Manhattanville	Manhattan	Interior Compactors	2022	2023	2024	\$405,021.75
Marble Hill	Bronx	Interior Compactors	2022	2023	2024	\$742,539.88
Bay View	Brooklyn	Interior Compactors	2023	2024	2025	\$1,603,368.81
Castle Hill	Bronx	Interior Compactors	2023	2024	2025	\$975,963.63
Amsterdam Addition	Manhattan	Interior Compactors	2023	2024	2025	\$69,711.69
Marlboro	Brooklyn	Interior Compactors	2023	2024	2025	\$1,951,927.25
Stapleton	Staten Island	Interior Compactors	2024	2025	2026	\$863,037.00
Chelsea	Manhattan	Interior Compactors	2024	2025	2026	\$287,679.00
Saint Mary's Park	Bronx	Interior Compactors	2024	2025	2026	\$431,518.50
Drew-Hamilton	Manhattan	Interior Compactors	2024	2025	2026	\$359,598.75
<b>Total</b>						<b>\$116,509,048.69</b>

## VI. Exhibit C – Strategic Planning Map Tool

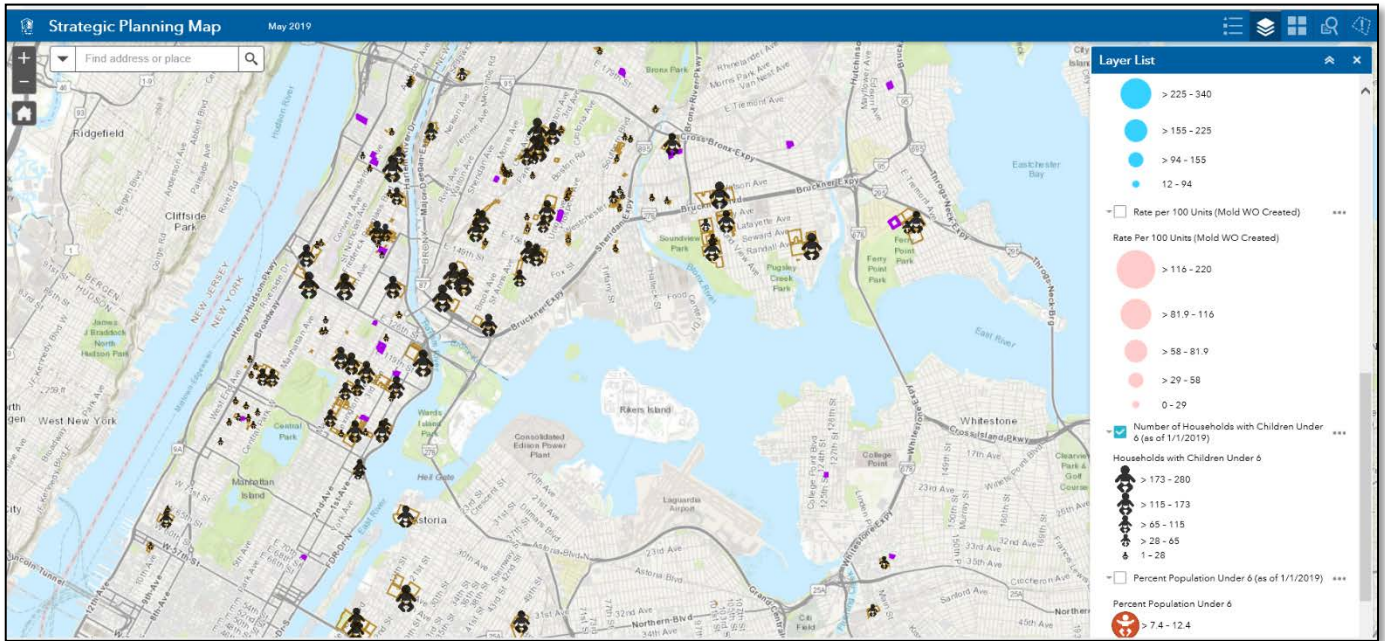
Strategic Planning Tool – Planned roof work and good condition roofs



Strategic Planning Tool – Mold work order tickets (rate per 100 units)



# Strategic Planning Tool – Number of households with children under 6



**VII. Exhibit D – Heat Plant Prioritization**

Development	Equipment Year	Boiler Count	Condition Rating	Condition Rating
	(PNA)		(OP) 2018	(PNA) 2017
830 Amsterdam	1996	2	3	3
Berry	1950	3	5	5
Marlboro	1993	6	5	4
Marble Hill	1986	6	4	3
Brownsville	1996	4	3	3
Saratoga Village	1990	2	5	3

The condition ratings provided by both Operations (OP) and under the Physical Needs Assessment (PNA) ask for responses on a scale of 1 to 5, with “1” being the best possible condition and “5” being the worst possible condition.

**VIII. Exhibit E – Elevator Prioritization**<sup>11</sup>

Development	Equipment Year	Elevator Count	Condition Rating (OP) 08/2019	Condition Rating (PNA) 2017	# of Senior (62+) Or Residents With Mobility Or Vision Issue at Dev.	% of Senior (62+) Or Residents With Mobility Or Vision Issue at Dev.	# of Buildings with single-car elevators	Elevator Outages/ Car/ Month (OP)	Roof Rating	Funding for Roof Replacement
Atlantic Terminal	2001	3	4	3	192	33.92%	0	0.92	5	Tranche 6
Carey Gardens	1992	9	5	4	461	28.51%	0	1.22	4.53	In Construction
Coney Island (4&5)	1994	6	5	3	146	29.14%	0	2	4.4	In Construction
Coney Island (1B)	1996	3	5	3	198	19.86%	0	0.58	4.6	In Construction
High Bridge Gardens	2001	12	3	3	390	24.21%	0	1.06	2.43	Completed
Butler	2000	18	3	3	661	15.44%	0	1.09	4.07	Tranche 4
Mitchell	1994	20	5	3	896	22.74%	0	3.06	4.35	In-Construction
Queensbridge North	1994	49	5	3	795	25.76%	13	0.52	1.24	Completed
Richmond Terrace	1995	12	5	3	175	14.00%	0	0.72	2	Completed
Unity Plaza	1992	16	5	3	266	16.60%	8	0.77	3	Completed
<b>TOTAL</b>		<b>148</b>								

The condition ratings provided by both Operations (OP) and under the Physical Needs Assessment (PNA) ask for responses on a scale of 1 to 5, with “1” being the best possible condition and “5” being the worst possible condition.

<sup>11</sup> CPD considers whether a development has had roofs replaced before replacing an elevator because NYCHA utilizes a logical building sequence of component replacement as part of its planning process. If a development has (or, based on the development being funded using a subsequent “tranche” of funds, will have) received investments in a replacement of the roofs then NYCHA can be confident the development is water tight, which will help protect subsequent investments in expensive building systems, like elevators.