



# **Capital Plan**

## **Calendar Years 2023-2027**

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December 22, 2022

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**Overview**

NYCHA’s 2023 – 2027 Capital Plan provides approximately \$8.6 billion in planned commitments for infrastructure improvements, major modernization, other systemic upgrades and repair, resiliency, and fortification of developments damaged or impacted by Superstorm Sandy. The Plan is based on the current federal capital funding outlook, funding from local elected officials and the City of New York, as well as remaining funding allocated for disaster recovery due to damage from Superstorm Sandy.

The Plan includes \$7.8 billion in Federal and City funds to address physical improvements to the Authority’s buildings. The City funding includes \$2.1 billion of the total \$2.8 billion allocated to address lead, mold, heating, elevators and pests. The Federal funding includes \$922 million to address structural and exterior work, including brick and roof projects, \$925 million to address heating and plumbing work and \$118 million for elevator replacements. The State funding includes \$211 million for boilers and \$326 million for elevator replacements. Overall, of the \$8.612 billion dollars included in this Plan, 49.6% is from Annual Federal Capital Grants, 41.0% is from the City of New York, 6.4 % comes from the State of New York, and 3.0% comes from other sources (Community Development Block Grant, Disaster Recovery, and Other).

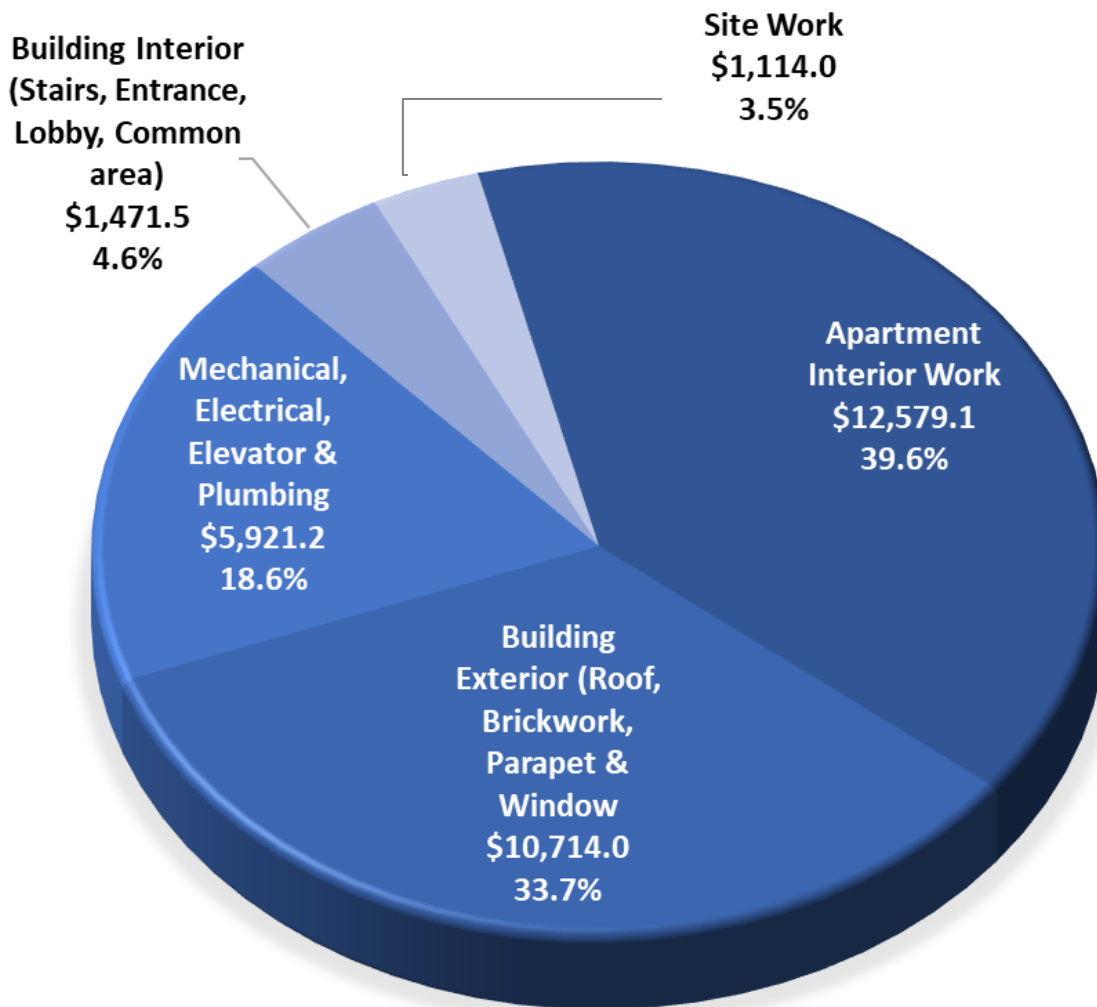
**Table 1**  
**Capital by Funding Source**  
(\$ In Thousands)

Funding Sources	2022 Carry Forward Balance	2023 New Funds Available	Total Available for 2023	2024	2025	2026	2027	2023 - 2027 Plan Totals
Federal	\$ 730,619	\$ 708,753	\$ 1,439,372	\$ 708,753	\$ 708,753	\$ 708,753	\$ 708,753	\$ 4,274,384
City	\$ 1,030,999	\$ 397,151	\$ 1,428,150	\$ 818,934	\$ 623,601	\$ 294,286	\$ 365,439	\$ 3,530,410
State	\$ 553,152	\$ -	\$ 553,152	\$ -	\$ -	\$ -	\$ -	\$ 553,152
Community Development Block Grant	\$ 23,143	\$ -	\$ 23,143	\$ -	\$ -	\$ -	\$ -	\$ 23,143
Disaster Recovery	\$ 71,883	\$ 118,600	\$ 190,483	\$ -	\$ -	\$ -	\$ -	\$ 190,483
Other	\$ 20,717	\$ 20,000	\$ 40,717	\$ -	\$ -	\$ -	\$ -	\$ 40,717
<b>Grand Total</b>	<b>\$ 2,430,513</b>	<b>\$ 1,244,504</b>	<b>\$ 3,675,017</b>	<b>\$ 1,527,687</b>	<b>\$ 1,332,354</b>	<b>\$ 1,003,039</b>	<b>\$ 1,074,192</b>	<b>\$ 8,612,289</b>

## NYCHA’s Chronic Funding Gap

NYCHA’s aging housing stock requires far more capital investment than has been available from Federal, State, and City grants. The 2017 Physical Needs Assessment (PNA) estimates over \$31.8 billion dollars in capital needs in the first five years. The capital needs are projected to grow anywhere from \$42.7 billion to \$68.6 billion over the next ten years depending on the estimated rate of deterioration. Of NYCHA’s 2,351 residential buildings, 77% are more than 40 years old.

Chart 1  
**Five Year PNA – NYCHA’s Capital Needs**  
(\$ In Millions)



**\$31.8 Billion**

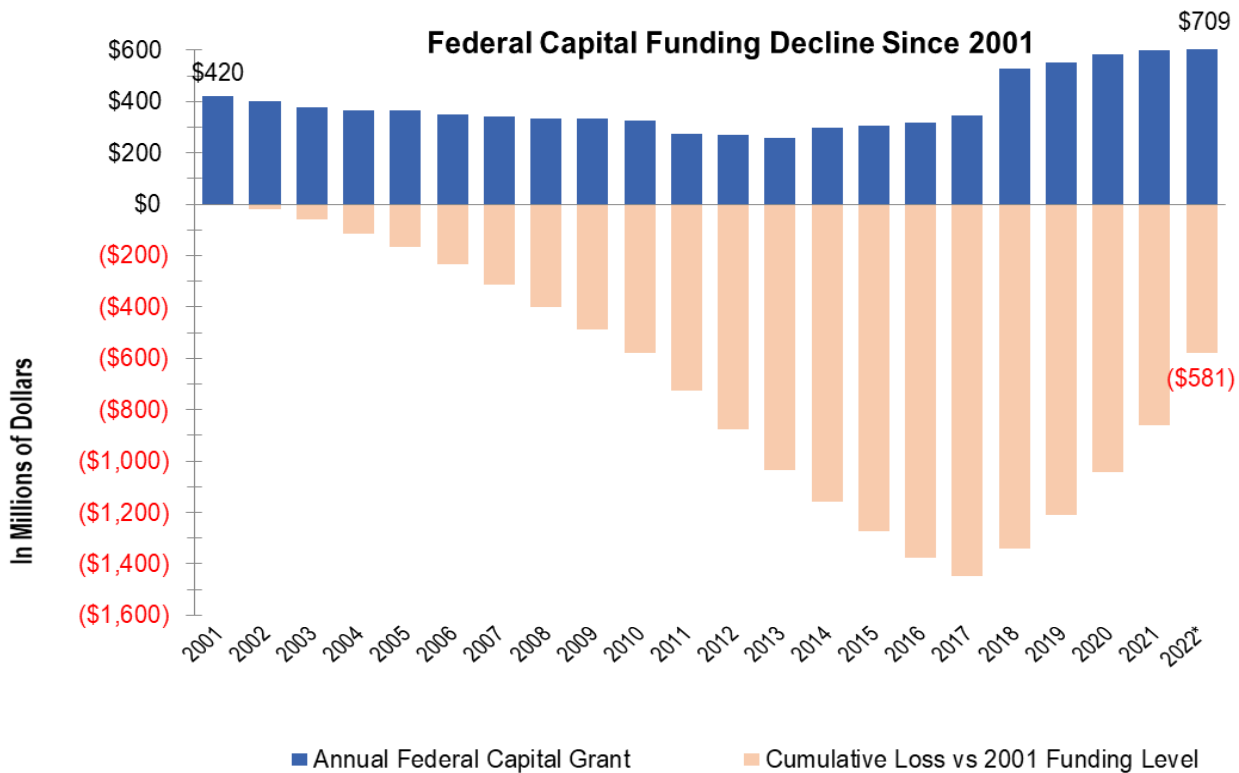
**New York City Housing Authority**

Funding available to NYCHA for capital improvements has failed to keep pace with growing needs and has historically declined. From 2001 to 2017, annual federal capital grants have declined by \$74 million, or 18%, from \$420 million to \$346 million. Beginning in 2018 and continuing through 2022, Federal capital funding has increased substantially. NYCHA was awarded \$601 million in 2021 and \$709 million in 2022. Despite the increase in appropriations to the Capital Fund program over the years, rising costs continues to result in very real cuts to the program. This chronic funding gap has severely constrained NYCHA’s ability to make necessary repairs and upgrades to brickwork, roofs, elevators, building systems (such as heating and plumbing systems), and apartment interiors.

**Federal Capital Funding Since 2001**

NYCHA has experienced a cumulative federal capital grant funding loss of \$581 million since 2001. Funding shortfalls have meant that only \$2.975 billion has been invested in capital improvements during the last five years (2018-2022). Over the last four years, there has been an increase to federal capital fund allocation. Continuous funding at the 2022 level of \$709 million would reduce the overall funding shortfall.

Chart 2



(\$ In Millions)

## NYCHA’s Capital Funding Sources

### Federal Funding:

NYCHA is using an optimistic approach in allocating the Federal Capital Funds by estimating a capital fund grant amount of \$709 million. Despite this assumption, the funding allocation for 2023 remains unclear. Below is a chart summarizing funding allocation by administering areas/departments

Table 2  
All Funds (\$ In Thousands)

Administrating Areas	2022 Carry Forward Balance	2023 New Funds Available	Total Available for 2023	2024	2025	2026	2027	2023 - 2027 Plan Totals
Administration	\$ 500	\$ -	\$ 500	\$ -	\$ -	\$ -	\$ -	\$ 500
Chair	\$ 200	\$ -	\$ 200	\$ 27,661	\$ 48,717	\$ 60,221	\$ 60,219	\$ 197,018
Asset & Capital Management	\$ 2,153,737	\$ 778,949	\$ 2,932,685	\$ 1,001,357	\$ 724,574	\$ 483,454	\$ 533,629	\$ 5,675,699
Healthy Homes	\$ 89,687	\$ 56,329	\$ 146,016	\$ 120,473	\$ 204,208	\$ 104,513	\$ 117,731	\$ 692,941
It	\$ 42,375	\$ 18,698	\$ 61,073	\$ 14,404	\$ 14,404	\$ 14,528	\$ 14,528	\$ 118,938
Law	\$ 1	\$ -	\$ 1	\$ -	\$ -	\$ -	\$ -	\$ 1
Operations	\$ 75,841	\$ 68,154	\$ 143,994	\$ 50,883	\$ 50,883	\$ 50,883	\$ 58,643	\$ 355,286
Resident Serv Partner & Init	\$ 967	\$ 3,000	\$ 3,967	\$ 1,750	\$ 1,000	\$ 1,000	\$ 1,000	\$ 8,717
Supply Management	\$ 1,032	\$ -	\$ 1,032	\$ -	\$ -	\$ -	\$ -	\$ 1,032
Finance	\$ 66,174	\$ 319,375	\$ 385,550	\$ 311,159	\$ 288,568	\$ 288,440	\$ 288,442	\$ 1,562,159
<b>Grand Total</b>	<b>\$ 2,430,513</b>	<b>\$ 1,244,504</b>	<b>\$ 3,675,017</b>	<b>\$ 1,527,687</b>	<b>\$ 1,332,354</b>	<b>\$ 1,003,039</b>	<b>\$ 1,074,192</b>	<b>\$ 8,612,289</b>

### Federal Deadlines

Federal capital grant awards require NYCHA to meet deadlines for establishing contracts to perform work (obligation deadline) and completing work (expenditure deadline). Accordingly, NYCHA prioritizes its capital projects to meet and exceed the federal obligation and expenditure deadlines. The U.S. Department of Housing and Urban Development (HUD) requires housing authorities to obligate 90% of capital grant in 24 months and to expend 100% of capital grant in 48 months. Due to the COVID-19 pandemic, deadlines were extended for one – year for grants received prior to 2021. If these deadlines are not met, housing authorities may incur penalties, such as the forfeiture of funds. In 2021, NYCHA met HUD mandated deadlines ahead of schedule.

Table 3  
(\$ In Thousands)

Grant/Award Name	90% Obligation Deadline	Expenditure Deadline	Crrent Modified Budget	Obligation	Expenditures	Funds Available	Obligation %	Expenditure %
CAPITAL FUND 2018	5/28/2021	5/28/2023	528,246	528,246	528,246	-	100%	100%
CAPITAL FUND 2019	4/15/2022	4/15/2024	551,749	539,795	438,876	11,954	98%	80%
CAPITAL FUND 2020	3/25/2023	3/25/2025	585,012	508,889	264,528	76,123	87%	45%
CAPITAL FUND 2021	2/23/2023	2/23/2025	601,271	441,405	263,657	159,866	73%	44%
CAPITAL FUND 2022	5/12/2024	5/12/2026	708,752	358,028	248,064	350,724	51%	35%
<b>Grand Total</b>			<b>2,975,030</b>	<b>2,376,363</b>	<b>1,743,371</b>	<b>598,667</b>	<b>80%</b>	<b>59%</b>

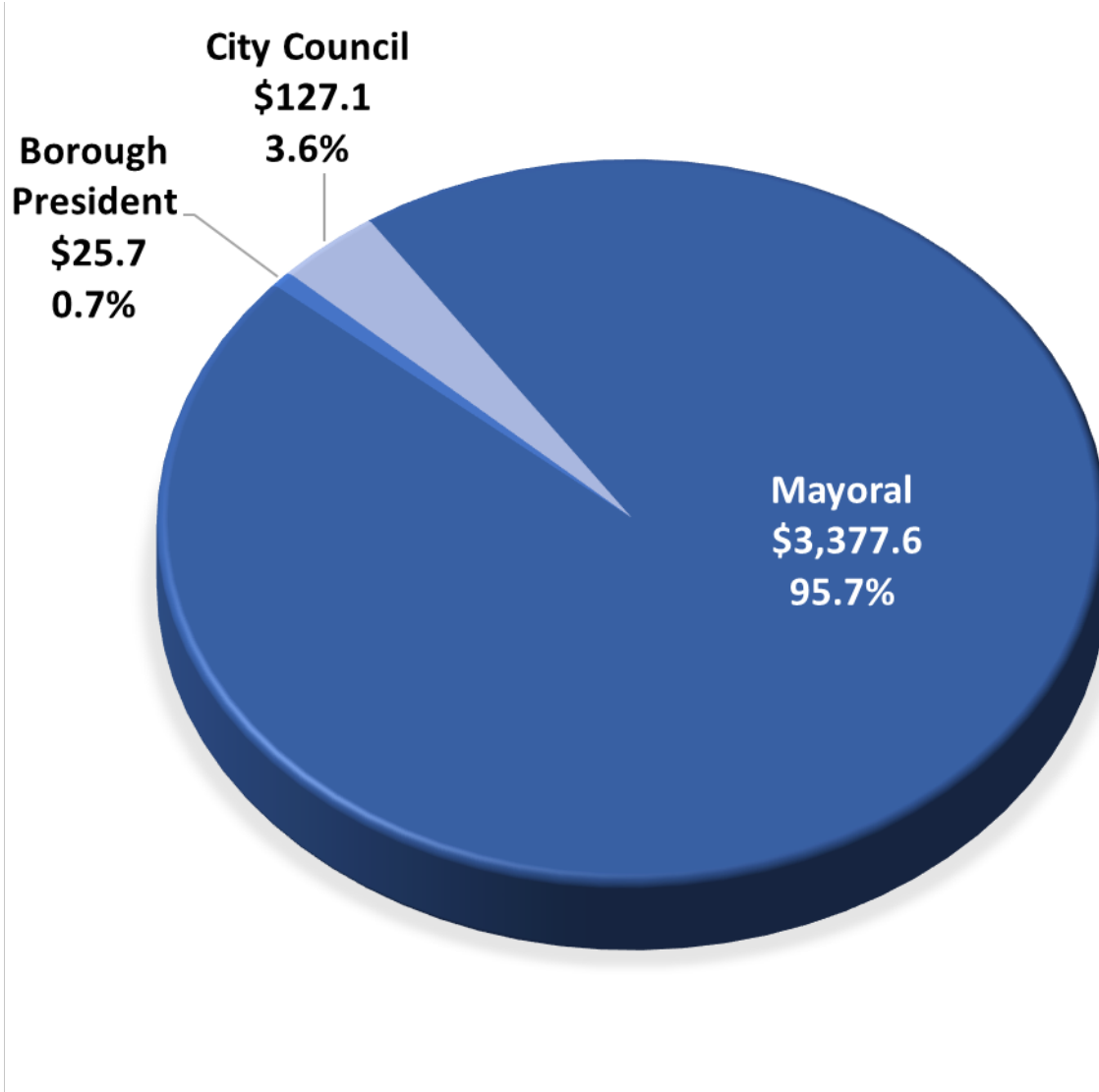
### City Capital Funding:

The former mayor Bill de Blasio has provided funding to NYCHA to address the needs of the aging public housing infrastructure. The funding in this Plan is based on the City of New York’s FY 2023 September Capital Plan and includes Mayoral initiatives as well as funding allocated by elected officials (i.e., Council Members and Borough Presidents).

Chart 3

*FY 2023-2027 City Capital by Funding*

(\$ In Millions)



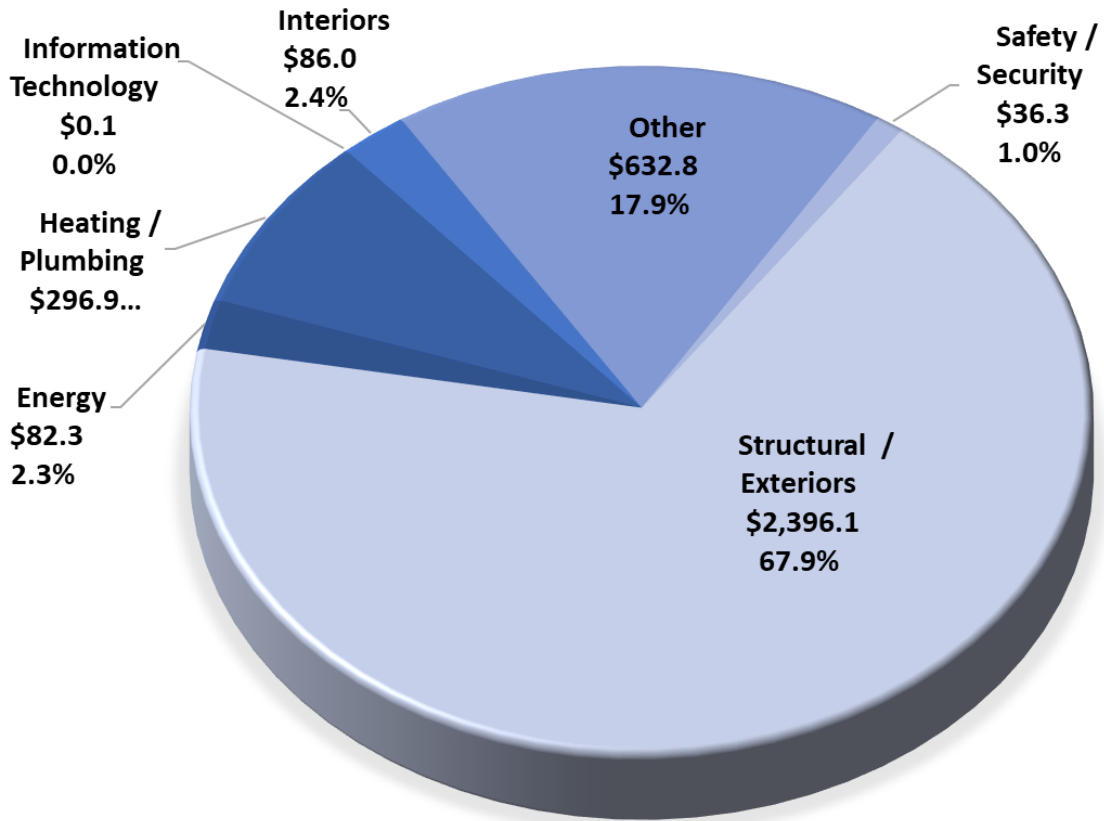
**\$3.3 Billion**



Chart 4

*FY 2023-2027 City Capital by Work Type*

(\$ In Millions)



**Total: \$3.3 Billion**

## 2022 Accomplishments

### Asset & Capital Management Division

#### Completed Projects:

In 2022, NYCHA’s Asset and Capital Management (A&CM) Division (which incorporates the former Capital Projects Division) succeeded in completing capital work at 99 developments, valued at \$423 million across 97 capital projects, impacting more than 76,000 households. These projects include roof replacements, building exteriors, heating, improvements to playgrounds, security enhancements, waste management, apartment renovations, among other improvements. As of the end of December 2022, there was ongoing construction at 206 projects impacting over 115,000 households, and reflecting a total investment of \$1.8 billion, of which approximately 50 percent is projected to be completed by the end of 2023. The projects in the A&CM portfolio include jobs funded primarily by Federal, State, and City partners. A&CM also leveraged Energy Performance Contract (EPC) funding of approximately \$310 million of which 70 percent of work has been completed for lighting, energy and water efficiency work, heating controls, and in some developments, boiler replacements. Remaining work includes condensing domestic hot water installations at Soundview and completion of heating controls at 9 developments.

In compliance with HUD’s mandated deadlines, NYCHA places priority on achieving its Capital Plan obligation and expenditure targets ahead of schedule. NYCHA’s goal is to obligate 90 percent of its capital funds within 16 to 18 months, ahead of HUD’s 24-month obligation deadline.

To date, the grants under the Capital Fund Programs have been obligated and expended as follows:

HUD Obligation and Expenditure: Capital Fund Grant						
Year	Budget (M)	Obligation (M)	% Obl.	Expenditure (M)	% Exp.	Remarks
2018	\$373	\$373	100%	\$373	100%	90% of the funds were obligated by March 2020, 14 months ahead of schedule and was fully obligated by September 2021  100% of the grant was fully expended by September 2021, 8 months ahead of schedule
2019	\$372	\$363	99%	\$264	71%	Grant to be fully expended by April 2024
2020	\$301	\$242	80%	\$0		
2021	\$295	\$168	57%	\$0		
2022	\$295	\$108	37%	\$0		

City Capital projects also comprise a large share of the portfolio managed by NYCHA’s Asset and Capital Management (A&CM) Division. Approximately 89 percent of the funds in the City Plan are attached to the HUD Agreement. The funding is allocated for addressing lead, mold, heating plants, elevators, and waste management. Other City-funded projects include roof replacement, façade repairs, security enhancements, grounds improvement, and energy conservation measures.

Below are NYCHA’s selected capital projects accomplishments for 2022 and goals for 2023:

### **Capital Accomplishments on HUD Agreement Pillars**

#### **Heating & Plumbing**

- Approximately \$200 million has been provided through the Mayor’s Heating initiative to address issues at 20 developments, impacting approximately 45,000 residents. This initiative includes boiler replacement, domestic hot water system, and heating controls. It is expected that this system of repairs as well as new system replacement will result in approximately \$5 million in energy savings.
- The separation of Domestic Hot Water (DHW) from the heating systems will permit the heating system to be turned off in summer months, enabling better preventive maintenance of the boilers as well as reducing wear on the boilers, thereby extending their useful life.
- Gas riser replacements and underground fire and water line projects totaling over \$53 million are at various stages of the construction cycle. Developments impacted are Smith, Castle Hill, and Wagner.

#### **Elevators**

- In 2022, 20 elevator projects were in the design phase. Seven (7) projects went into procurement phase and 9 went into construction phase during the year.

#### **Lead Abatement through Comprehensive Modernization**

- A&CM partners with Healthy Homes on several key priorities for NYCHA and supports the mission of providing lead safe/free living conditions for all NYCHA residents. One way to address this key pillar of the HUD Agreement, involves allocating Capital Funds to implement large-scale improvement projects as part of A&CM’s Comprehensive Modernization (“Comp Mod”) program.
- A&CM selected two sites (St. Nicholas Houses in Harlem and Todt Hill Houses on Staten Island) for comprehensive modernization. These sites were selected due to high rates of lead-based paint, high numbers of children under the age of 6, and high numbers of leak and mold work tickets. Comprehensive modernization projects will include complete lead abatement – of units, common areas, residential buildings, and building sites, including exterior areas and community centers.
- The Comprehensive Modernization program will invest a total of \$814 million into these properties, which are comprised of 20 buildings housing over 4,000 residents. NYCHA is electing to use the Design-Build project delivery method to focus on selecting the highest quality vendors that provide the most value to NYCHA and its residents. The selected Design-Build teams will also manage resident temporary moves, resident

engagement, design, construction, and the abatement of hazardous materials under one large contract for a more cohesive and aligned project.

- As part of the Gowanus Neighborhood Rezoning, in 2022 the City of New York has allocated \$200 million for repairs and renovations at Wyckoff Gardens and Gowanus Houses. A&CM will use these funds for comprehensive in-unit renovations at all apartments at Gowanus Houses (1,134 units) and Wyckoff Gardens (528 units). This work will include all interior apartment component replacements as identified during the scoping process, which may include but is not limited to walls, plumbing (including riser work), fixtures in bathrooms and kitchens, flooring, interior doors, electrical wiring, and lighting fixtures.

**Additional Capital Accomplishments**

<b>Mayoral Roofing Initiative</b>					
Replacing the roofs will make buildings cooler and consume less energy, while also protecting apartments from water leakage. Upon completion, NYCHA will be out of deferred maintenance and into life-cycle costs on roofing.					
<b>Roofs Status</b>					
<b>Tranche</b>	<b>Total # of Roofs To be Completed</b>	<b>Total # of Developments To be Completed</b>	<b>Total # of Roofs Completed</b>	<b>Total # of Developments Completed</b>	<b>Remarks</b>
I	65	6	65	6	Completed in 2018
II	78	7	54	6	Legal issues at Breukelen delayed the completion of 25 roofs. Legal issues were resolved and 1 roof was completed in 2022 and 24 more roof to be completed
III	94	10	94	10	Construction has been completed at all developments
IV	133	12	94	5	Construction has started in 11 developments. One development is in the design process
V	100	8	12	0	These projects are in varying stages of design and procurement
VI	175	32	0	0	These roofing projects are in planning phase
<b>Total</b>	<b>645</b>	<b>75</b>	<b>319</b>	<b>27</b>	

**Waste Management (A&CM)**

A&CM supports NYCHA’s work on Waste Management and Pest Control by managing and advancing several initiatives with capital funds.

NYCHA has completed the following installations through the Neighborhood Rat Reduction (NRR) funding as shown below. The initiative is projected to be completed by October 2023.

- In 2022, A&CM awarded two Design-Build procurements for the redesign of waste and recycling facilities (waste yards) at 7 sites, and for installation of a pneumatic waste collection system at Polo Grounds Towers. In each case, construction will commence in 2023.

<b>Work Details</b>	<b># of Developments</b>	<b>Quantity Completed</b>	<b>Cost</b>
Interior compactors	27	133/157	\$5 million
Exterior compactors	17	43/43	\$450,000
Bulk Crushers	5	5/5	\$3.15 million
Rat Slabs	11	33/50	\$12.5 million

- In 2022, NYCHA initiated the planning and procurement for additional CCAP waste management work. Architecture and Engineering services were procured for the redesign of waste yards at 16 developments. Design services for the \$37.7 million construction budget began in September 2022
- Job Order Contract (JOC) work orders were issued for the replacement in kind of interior compactors at 23 developments. The \$14.1 million work includes new, improved flooring, LED lighting, ensuring functional hose bibs, and other upgrades that make the interior compactor rooms more functional for staff.
- Cardboard balers: Through 2022, NYCHA had 39 cardboard balers in operation, providing a convenient means of handling cardboard boxes at 38 developments and 1 NYCHA vehicle repair shop. In addition to the balers, NYCHA had two dedicated cardboard compactors at Morris I and Marcy Houses. In 2022 an additional compactor was converted to be cardboard-only at Queensbridge Houses, and DSNY has approved an additional 4 cardboard compactor locations to be built in the new waste yard designs. Dedicated cardboard equipment is key to increasing recycling and keeping waste yards tidy.
- Mattress Recycling Program: In 2022, 44 sites continued to participate in NYCHA’s Mattress Recycling Program. This program is extremely beneficial to the cleanliness of the properties in that it keeps mattresses from overwhelming bulk waste management. The program has transitioned to Operations’ Waste Management Department.
- Waste Management Behavioral Change Campaign: The Campaign for a Clean NYCHA was created and tested through 2021. In 2022 the team finalized recommended implementation plans based on feedback from key departments within the Authority. The objective of the campaign is to apply public awareness and behavioral change techniques, including updating outdated waste management and recycling signage and replacing it with standard up-to-date signage.

**Other NYC Portfolio Items**

Security Enhancements

- In 2022, one final layered access point installation was completed at Patterson Houses, as part of the former Mayor’s Action Plan for Neighborhood Safety.
- CCTV projects were completed at 6 developments in 2022

Quality of Life		
Work Details	Developments	Cost
Basketball court renovations and playground upgrades	<ul style="list-style-type: none"> <li>• Patterson</li> <li>• Albany</li> <li>• Astoria</li> <li>• Atlantic Terminal Site 4B</li> <li>• Bay View</li> <li>• Beach 41<sup>st</sup> St – Beach Channel Drive</li> <li>• Elliott</li> <li>• Nostrand</li> <li>• Ocean Hill Apartments</li> <li>• Sheepshead Bay</li> <li>• Todt Hill</li> <li>• Vladeck II</li> <li>• Wagner</li> </ul>	\$6.72 Million
Grounds Renovation	<ul style="list-style-type: none"> <li>• Throggs Neck</li> <li>• Chelsea</li> </ul>	\$1.75 Million
Community center upgrades	<ul style="list-style-type: none"> <li>• Borinquen Plaza II</li> <li>• White</li> </ul>	\$5 Million

**Ventilation Modernization**

In 2022, A&CM continued work to modernize ventilation systems at 4 developments (5 sites) located in East Harlem as part of the East Harlem Rezoning portfolio.

<b>Development</b>	<b>Apts.</b>	<b>Fans</b>	<b>% Completed</b>	<b>Contractors</b>	<b>Funding Source</b>	<b>Stage</b>
Jefferson	1,524	72	72%	Maric Mechanical	City	Construction
Carver	732	56	70%	P&K Contracting	City	Construction
Wagner-I	1,088	68	84%	Consolidated	City	Construction
Wagner-II	1,152	36	23%	Maric Mechanical	City	Construction
Washington	1,515	84	22%	P&K Contracting	City	Construction

***Energy Efficiency and Decarbonization***

- Construction for four active EPCs is substantially complete. Scope of work included Whitman and Patterson boiler replacements, new Building Management System (BMS) and heating controls including apartment temperature sensors at 58 developments; LED lighting upgrades (apartment & public space) at 70 developments; and Soundview domestic hot water (DHW) decoupling from central boiler plants.
- Executed 4 task orders with 4 ESCO's. Closed on a new EPC for \$51 million at 3 developments. Scope of work includes lighting upgrades, BMS heating controls and electric DHW installations at Adams.
- Coordinated with New York Power Authority (NYPA) and NYSEERDA for manufactures to develop a cold climate window heat pump to provide heating and cooling. Two manufactures were awarded in 2022 to develop these window units. Test units will be installed in 24 apartments in June 2023 and operate throughout the 2023-2024 heating season. NYCHA will then purchase 30,000 window units for full role out.
- Entered into \$4 million in Weatherization Assistance Program Agreements at 7 developments.
- NYCHA partnered with the Fund for Public Housing to secure funding to establish a Clean Energy Academy and train at least 100 NYCHA residents preparing them for the Clean Energy Transition job opportunities. Curriculum is being developed with LaGuardia college for classes beginning in 2023.
- In 2022 NYCHA completed an induction stove pilot at 1471 Watson Avenue. 15 apartments had apartment stoves installed. NYCHA will begin design for complete electrification of Watson Avenue in 2023.

***Extreme Weather and Stormwater Management***

- NYCHA continued its successful partnership with New York City's Department of Environmental Protection (DEP) to reduce neighborhood flooding and improve local waterways through the installation of Green Infrastructure (GI) at NYCHA developments. This program began with four demonstration sites installed beginning in 2011; maintenance at those sites is ongoing. Replanting has taken place at Edenwald and Bronx River Houses. A second phase of GI construction, consisting of 18 sites, reached substantial completion or close-out across all sites in 2022. A third phase, consisting of an additional 18 sites, reached 100 percent design in 2022 and are currently in construction procurement. Construction kick off is expected in the fall of 2023. A project intended to mitigate more severe rainstorms, known as "cloudburst" flooding, is planned for South Jamaica Houses. Designs for the cloudburst project at South Jamaica Houses were completed in 2022 and construction procurement is now in progress. Construction kickoff is expected in August of 2023. Councilwoman Adams has provided \$305,000 in funding for lighting and benches to be included in the project.
- The NYC Extreme Weather Task Force incorporated information from NYCHA's climate adaptation plan into its strategies and funded \$84 million of additional stormwater mitigation work at 7 NYCHA campuses. A feasibility study identifying the most effective landscape-based stormwater mitigation pathways at 5 sites was completed in Q2 2022. Design for



one site, Jefferson, was procured via mini solicitation and completed in February 2023, with construction to be procured early in 2023; one site, Moore, will be designed and constructed by DEP; and a multi-site solicitation for full design for the remaining five was released in January of 2023, with design expected to kick off in Q3 of 2023.

- NYCHA has aggressively pursued federal funding through FEMA’s Building Resilient Infrastructure and Communities (BRIC) program to scope and implement hazard mitigation projects.
- A previously funded study for a cloudburst mitigation project at Clinton Houses was completed in December 2021. The report was used to apply for construction funding through the Building Resilient Infrastructure and Communities (BRIC) program. That application was selected and the project was granted an \$8.5 million award. DEP will be overseeing design of this project and NYCHA will manage construction. Designing services are currently ongoing and construction completion is expected in 2025. Councilwoman Ayala has provided \$263,000 for additional resident amenities.
- A stormwater hazard mitigation project was also proposed for Breukelen Houses, and was selected for award by FEMA, with \$18 million in FEMA funding and \$14 million of local match derived from Breukelen’s allocation of the Extreme Weather Task Force funds.
- Two scoping applications NYCHA applied for were selected for funding: one project will identify protections that will cost-effectively mitigate coastal flooding hazards at four vulnerable properties, and one will scope a network of resilience hubs that can help NYCHA residents withstand and recover from a range of climate-induced events. Both studies will increase NYCHA’s ability to secure full implementation funding for the construction of future mitigation projects.

### ***Storage, Solar and Electric Mobility***

- Construction has completed on NYCHA’s first two solar leases, one for 1.8 MW at Queensbridge North and South and one for 1.2 MW of solar power across 40 roofs across Kingsborough, Glenwood, and Carver. In addition to the 3 MW of installed solar power, an additional 8 MW are in development. Over two dozen NYCHA residents have been trained and hired to install the solar projects that have completed construction. NYCHA plans to issue an additional solar lease solicitation later this year.
- Sustainability Department, in partnership with Con Edison, have identified four pilot sites in Brooklyn, Manhattan, and Queens for NYCHA’s first electric micromobility charging and storage stations. These stations will provide residents with safe outdoor charging and storage options for their devices. The RFP is in development and expected release is Summer 2023.

### ***Local Law 11***

Pursuant to the NYC Department of Buildings regulations, NYCHA repairs unsafe conditions found at the exterior walls of NYCHA-owned buildings. Buildings greater than six (6) stories are required to be inspected once every five years. Upon filing an “UNSAFE” report, the owner, or

person in charge, shall immediately commence such repairs or reinforcements as required in the provisions of the administrative code (RCNY §103-04).

A total of 16 buildings were completed at a cost of \$22 million in 2022:

- Completed Cycle 9 inspections at 289 LL11 buildings.
- Completed Cycle 9 filings of 289 buildings with DOB
- Increased the number of safe buildings in Cycle 8 from 607 to 653.
- Received authorization for approximately \$48.5 million.
- Expended approximately \$18.5 million for repair work and approximately \$22.6 million on sidewalk sheds. In 2022, 29,093 linear feet of sheds were installed.
- Removed approximately 31,345 linear feet of sidewalk sheds in 2022.

### **Information Technology Solutions**

NYCHA's Information Technology (IT) Department continues to make significant service improvements for both internal and external customers through the implementation of advanced technologies and upgrades that support NYCHA's transformation business strategy. NYCHA IT's mission is to enable NYCHA to provide quality housing by delivering meaningful, innovative, high-performing, cost-effective technology solutions.

#### ***2022 Accomplishments***

In 2022, NYCHA IT conducted an organizational redesign to streamline its IT service delivery and operations.

#### **Enterprise Systems Management (ESM)**

NYCHA IT completed over 460 Enhancements across all NYCHA systems and delivered over 70 projects, upgrades and replacements. Highlights include:

- Projects, upgrades and replacements:
  - Resident & Stakeholder Projects
    - Completed an online Capital Projects Tracker, a public facing site that publishes important information to residents and other stakeholders about NYCHA capital investments
    - Created a searchable Work Order Database, which allows stakeholders who are assisting residents to easily obtain information on work order status
    - Made enhancements to Siebel to ensure that NYCHA complies with legal and regulatory requirements such as the Fields and Roberge-Arcelay Settlements
  - Key Upgrades and Replacements
    - Upgraded the Kronos Timekeeping System to version 8.1
    - Commenced Microsoft Windows 20H2 Desktop Image Roll Out
    - Replaced Bluecoat Web Filtering of on-premises desktops with Zscaler
  - Central Office Systems

- Completed the LegalStratus implementation to support NYCHA’s Law Department with a modern, Salesforce-based case management system
- Implemented eComply for use with compliance around prevailing wages for Capital Projects
- Completed the Application Portfolio Optimization project, which will provide guidance for NYCHA’s technology planning for the next five-to-ten years
- Key enhancements were made to the Maximo Asset Management system in support of critical business needs, including:
  - NYCHA’s Lead-based Paint Initiatives
    - Updated Maximo to support an XRF-testing threshold change from 1.0 to 0.5 mg/cm<sup>2</sup>
    - This created a single source for child-under-six data that can be used, not only for lead-based paint management, but for other work order types in Maximo
    - This allowed NYCHA’s Asset and Capital Management group to track Lead Abatement related work in Maximo for the first time
  - Work Order Reform
    - NYCHA completed enhancements to the MyNYCHA App to allow residents to upload photos to their work orders to help with identifying and resolving issues
    - Completed additional enhancements allow Maintenance Workers and Skilled Trades more visibility while addressing an assigned Work Order and they can now close associated open Work Orders
  - Other Work Order Areas
    - Created a facility in Maximo to allow certain users to close old Work Orders for administrative reasons (after review)
    - Enhanced Maximo capabilities to handle new Elevator mechanic certification requirements to meet compliance with a new local law

### ***Infrastructure Management and Network***

In 2022, NYCHA IT began efforts to substantially upgrade NYCHA’s technology debt to improve stability, security and reliability. Highlights include:

- Consolidated VMware computer environment, allowing IT to deprecate End of Life systems, consolidate support under a single team, and improve overall system performance
- Completed initial data center resiliency efforts to protect key NYCHA applications and provide continuity in the event of an unplanned interruption of services. Those applications most critical to supporting NYCHA residents will seamlessly move to the secondary data center with all data protected in a cloud environment
- Worked with an industry leader to perform a detailed assessment of the current NYCHA networking architecture and processes. This review resulted in detailed recommendations to improve overall network stability, reliability, and security.

- Implementation of the recommendations began in 2022 and continues into 2023
- Upgraded critical environmental components in the 90 Church data center (power and cooling) and identified and remediated issues related to emergency shut down capabilities
- Migrated over 500 virtual systems used to support critical NYCHA applications and services from end-of-life technology to a consolidated, state-of-the-art, highly available and redundant platform. This included retiring over 250 servers that were no longer needed, reducing complexity and cost of supporting the environments
- Completed Oracle Application upgrades in response to end of support for Microsoft Internet Explorer
- Deprecation of Internet Explorer across the organization
- Completed Upgrade of NYCHA “Tier2” Radio System including rooftop antenna/repeater upgrades and supporting systems
- Assisted NYCHA Cyber in enhancing NYCHA security posture by transitioning Internet access from legacy based Firewalls to new state of the art Palo Alto Firewalls
- Assisted NYCHA Cyber in transitioning Internet Content Filtering from legacy based BlueCoat to Cloud based zScaler services
- Migrated all user Internet traffic from Legacy 1gb circuit to 10gb services, providing faster and more reliable internet service
- Completed installation and turn up of NYCHA Neighborhood Planner offices for Manhattan and Brooklyn
- Transitioned Voice services from legacy Dell services to new Virtual environment within the Hitachi infrastructure

### ***IT Service Management (ITSM)***

Service delivery improvements in 2022 focused on updates to the IT operating model, improving internal processes, and improving business alignment for technology investments. Highlights include:

- Issued a revised Change Management policy, standardizing processes for documenting and implementing changes to IT hardware and software
- Implemented scorecards for IT Service Desk performance measurement
- IT Service Desk answered 42,764 phone calls and IT staff resolved 86,604 tickets in support of end users with technology issues
- Transitioned after-hours standby support to IT service desk to provide more reliable 24x7 support to emergency response and maintenance staff working nights and weekends
- IT staff conducted multiple development site visits to survey end users and identify common technology issues experienced by property management staff in preparation to setup neighborhood technician model
- Established NYCHA Tech Community – a group of individuals representing all NYCHA business units to collaborate on technology use and innovation

- Introduced regular Helpful Tips from the IT Service Desk series to address commonly reported user issues
- Began refresh of end-of-life printers for property management offices in December
- Added T-Mobile as alternate mobile carrier to provide expanded coverage for maintenance staff in areas with weak Verizon signal
- Implemented Service Desk customer satisfaction QA with callbacks to users with unsatisfied survey results

### ***Cyber Security***

Due to the increasing Cyber threats, NYCHA has taken measures to further protect its data and systems. IT continues to build a mature cybersecurity program to protect NYCHA data and employees from cyber threats and has onboarded a Deputy Chief Information Security Officer. Additional measures include:

- Reduced vulnerabilities by 50% while doubling vulnerability assessment coverage
- Upgraded web content filtering solution to a cloud-based product capable of protecting off premise NYCHA assets
- Expanded endpoint detection and response capability to over 95% of NYCHA
- Expanded security event visibility with Citywide Security Operations Command
- Conducted penetration testing in coordination with Cyber Command
- Enrolled in Department of Homeland Security CISA Cyber Hygiene program for regular assessment of public facing assets
- Tested Incident Response plan with tabletop exercises

### ***Performance and Resource Management (ITPR)***

In 2022, NYCHA IT completed several initiatives that benefit the operational and administrative efficiencies of the department, including:

- Established new enterprise purchasing contracts that will expedite and streamline the procurement of goods and services. IT partnered with Procurement and Law to enter into contracts that leverage existing government contracts with pre-established rate savings and advantageous terms. In addition, these contracts extended NYCHA's MWBE commitments through the vendor partners.
- Published NYCHA IT's 2022-2024 Strategic Direction, outlining the department's strategic initiatives in support of NYCHA's Transformation Plan and NYCHA stakeholders

## 2023 Capital Plan Highlights

### *Asset & Capital Management Division*

In 2023, NYCHA will continue delivering capital improvements with funding from Federal, State, and City sources. The Asset and Capital Management (A&CM) Division will receive \$1.436 billion in new Federal Funding over the period from 2023 to 2027 for investment in NYCHA’s building portfolio. The projections over the upcoming years are summarized below:

PROJECT DESCRIPTION	CF2023 - CF2027					TOTAL CF2023 - CF2027
	2023	2024	2025	2026	2027	
1. BRICK/ROOF/LOCAL LAW 11	\$40,296,560	\$77,602,006	\$87,816,533	\$68,060,000	\$24,796,051	\$298,571,149
2. ELEVATORS	\$0	\$0	\$19,200,000	\$10,742,072	\$35,239,500	\$65,181,572
3. M.E.P. BOILERS	\$113,449,370	\$73,907,274	\$86,602,474	\$107,836,170	\$58,476,090	\$440,271,379
4. M.E.P. STATE PHASE II HEATING PIPELINE	\$31,917,255	\$12,023,549	\$0	\$0	\$0	\$43,940,804
5. M.E.P. PLUMBING & UNDERGROUND LINES	\$3,300,000	\$2,450,000	\$16,200,000	\$0	\$0	\$21,950,000
6. M.E.P. RISER / BATHROOMS	\$0	\$0	\$13,600,000	\$34,303,307	\$10,000,000	\$57,903,307
7. SAFETY & SECURITY	\$706,217	\$12,620,856	\$14,654,081	\$37,539,092	\$6,169,000	\$71,689,246
8. GENERAL RENOVATIONS	\$50,049	\$1,310,117	\$0	\$1,000,000	\$0	\$2,360,166
9. ENERGY	\$8,207,103	\$6,089,883	\$3,500,000	\$1,200,000	\$1,000,000	\$19,996,986
10. COMPREHINSIVE MODERNIZATION	\$10,000,000	\$10,000,000	\$11,500,000	\$0	\$125,000,000	\$156,500,000
11. LL11 \$111M SWAP	\$40,000,000	\$51,892,447	\$19,107,553	\$0	\$0	\$111,000,000
12. NON-PHYSICAL IMPROVEMENTS (NPI)	\$30,600,000	\$29,000,000	\$29,000,000	\$29,000,000	\$29,000,000	\$146,600,000
<b>ANNUAL ALLOCATION</b>	<b>\$278,526,555</b>	<b>\$276,896,131</b>	<b>\$301,180,641</b>	<b>\$289,680,641</b>	<b>\$289,680,641</b>	<b>\$1,435,964,608</b>

### *Heating & Plumbing*

- Approximately \$200 million is being provided through the Mayor’s Heating initiative to address heating issues at 20 developments, impacting approximately 45,000 residents.
- Approximately \$148 million over the next five years is allocated for Heating and Heat related projects at five developments. The scope of work expands beyond heating system replacement to include domestic hot water decoupling and temperature controls.
- Gas riser replacements, underground steam line, fire and water line projects in excess of \$98 million are at various stages of the construction cycle. Developments impacted are Bronx River, Justice Sotomayor, and Farragut.
- Heating plant replacements are planned for 9 developments. Additionally, there are 2 developments that are being federally funded as a supplement to State funding. These projects will fully replace heating plants and ancillary equipment to optimize the total lifecycle investment, and to reduce fuel consumption.
- Underground steam distribution replacements are planned for 3 developments. Federal funding will be used for these 3 developments to supplement City funding to cover non-capitally eligible work and other professional services fees. The underground steam lines at these 3 locations will complement the recently completed heating plant replacements to help ensure reliable and efficient heat delivery.

- In addition, this allocation will be used for Heat Pump installations at 7 developments (including Woodside and Soundview), roof tanks at 3 developments (including Butler), and underground fire/water lines at 2 developments, including Whitman.

***Elevators***

- In 2023, Phase I planning for critical capital work will advance to replace 335 elevators at 20 NYCHA developments, as part of a \$300 million funding agreement with the Dormitory Authority of the State of New York (DASNY) that was signed in April 2022. The financing was made possible through close collaboration between NYCHA, the New York State Legislature, and Governor Hochul - who all worked together to develop a framework for modernizing NYCHA's elevator infrastructure, as outlined in the 2019 U.S. Department of Housing and Urban Development agreement.

***Lead and Comprehensive Modernization***

- Procurement activities will accelerate for the Comp Mod projects at Saint Nicholas Houses and Todt Hill Houses due to the two Requests for Proposals released in late 2022. Proposals are estimated to be received in May 2023 for potential award and signing of a Design-Build Agreement by the end of the year

***Brick & Roof Projects***

- For the FY 2023-2027 Capital Plan, \$299 million, or approximately 21 percent of the allocation of the Federal Plan, is targeted at building exteriors, including brick and roof projects.
- This work will ensure that building exteriors are watertight by replacing aging, deficient roofs and repairing brick façades.
- A significant portion of this funding will be allocated for Local Law 11 brickwork replacement projects at 6 developments.
- An additional \$149 million is allocated for emergency sheds and inspections.
- The remaining portion of this funding will support major exterior roof work at 3 developments. These sites have been prioritized based upon the Physical Needs Assessment (PNA) level of deficiencies and roof ratings, as well as an analysis of the volume of work order tickets

***Waste Management (A&CM)***

NYCHA has the following capital work projected through 2028 and funded through the City Capital Action Plan:

<b>Measure</b>	<b>Total Funding</b>	<b>Funded Units</b>	<b>Funded Developments</b>
Interior compactor replacements	\$116.5 million	1600	130
Waste yard redesigns and installations	\$443.2 million	244*	192

\*Includes the number of exterior compactors and bulk crushers that have been funded for up to 192 waste yards.



- The Design Build contract began on 10/29/2022 for 7 waste yards. The team is working through the designs and construction will start in Spring 2023.
- The Design Build contract for a pneumatic waste collection system at Polo Grounds Towers began on 6/30/2022. The team will mobilize for construction in Winter 2023 and start groundbreaking Spring 2023.
- Interior Compactor Batch 1: This project will provide the installation of 187 units across 23 developments. Work is scheduled to begin in January 2023.
- Interior Compactor Batch 2: This project will provide the installation of 191 units across 15 developments. Work is scheduled to begin by Summer 2023.
- Waste Yards Batch 1: This project is currently in the design phase. Designs for 16 developments will be completed by Summer 2023 with a target of getting a construction bid out by end of calendar year.
- Mattress Recycling Program: NYCHA is applying to EPA grants to secure multiyear funding for the Mattress Recycling Program due to NYCHA budget cuts.
- Waste Management Behavioral Change Campaign: NYCHA is applying to an EPA grant to hire additional Resident Participation and Civic Engagement staff to roll out the campaign. NYCHA's Sustainability Team will serve as technical advisors on the rollout and tweak messaging as programs change.
- On-site processing of organics: NYCHA will continue to work with GCF and Compost Power through the NYS DEC grant to provide food scrap diversion and onsite processing at Polo Grounds Towers and Patterson Houses. NYCHA will also explore additional onsite processing technologies like micro-anaerobic digestion through existing AE contracts.

As part of the Mayor's Neighborhood Rat Reduction (NRR) Initiative, NYCHA received over \$30 million in funds to replace or install exterior and interior compactors, excavate and clean basement crawl spaces and install bulk crushers. These measures will assist in reducing resident exposure to rodents, which studies have shown can trigger asthma attacks and spread communicable diseases. The remaining installations will be completed by Quarter 3, 2023

### ***Security***

- From the Federal Plan, \$72 million, or about 5 percent, will be allocated for fire alarm and security systems. Of this amount, \$65 million is slated for inclusive security upgrade to install new main entrances, intercom and CCTV at 6 sites, including Kingsborough, O'Dwyer, and Roosevelt I and II.

### ***Energy Efficiency and Decarbonization***

- NYCHA closed on new \$51 million EPC for 3 developments in January 2023. NYCHA plans to submit 3 additional packages to HUD for approval in 2023.



- NYCHA plans to enter into \$250,000 Weatherization Assistance Program Agreements for the April 2023 to March 2024 program year. In 2016 NYCHA set a goal of securing \$30 million in Weatherization Assistance Program (WAP) by 2025. To date, NYCHA WAP contracts total \$20 million. WAP is a program of the US Department of Energy, administered by NYS Homes and Community Renewal. WAP provides grants of up to 80 percent of the cost of repairs and capital improvements that improve the energy efficiency of housing serving low-income residents.
- A&CM is working with an architecture and engineering firm to design a net-zero solution at Ravenswood building 12. The construction RFP will be released in March 2023 and is a key part of NYCHA's participation in RetrofitNY, a deep energy retrofit competition of the New York State Energy Research and Development Authority (NYSERDA). The net-zero solution also reflects NYCHA's commitment to testing new technology to inform future capital investments toward meeting the City's goal of reducing Greenhouse Gases by 80 percent by 2050.
- NYCHA will be installing and piloting an energy efficient packaged window heat pump units in 24 apartments starting June 2023. The units will operate and be monitored for 2023-2024 heating season as a part of the new and innovative Clean Heat For All challenge. The goal is to test the cold climate heat pump technology with the efficiency of a split system that can be easily installed through an existing window opening.

### ***2023 Plan Highlights***

IT has a host of initiatives to be implemented to in 2023, planned work includes:

#### ***ESM***

In 2023, NYCHA IT will work with other departments in the Authority including Operations, Leased Housing, and Administration, to kick-off the following major, long-term initiatives:

- Resident Case Management System (RCMS) – replacement of NYCHA's Siebel CRM, AS400 and related systems with a more modern, user-friendly solution
- Human Capital Management (HCM) – implementing NYCHA's first Human Resource management system with a strong, industry leader (Workday)
- Maximo Re-platform – cloud- based implementation of New Maximo Application Suite to support asset and work order management with a more maintainable system than is currently implemented
- Movaris Replacement – sunset and replacement of current legacy form-based request and workflow application with ServiceNow application

In addition to these major initiatives, NYCHA will continue to update its existing systems as needed to ensure compliance with applicable laws, regulations, and legal settlements, for example:

- Changes to the current CRM system to comply with the final rule implementing the Housing Opportunity through Modernization Act of 2016 (HOTMA)
- Changes to the current Maximo Asset Management system to comply with any changes resulting from the National Standards for The Physical Inspection of Real Estate (NSPIRE).

Other initiatives will strengthen the foundation of NYCHA’s Solution Life Cycle Management processes, including:

- Establish solution lifecycle management frameworks, processes, & standards, including relevant templates, and support documents
- Establish an enterprise technology solutions library
- Establish Solution Life Cycle Evaluation Program that will provide metrics and reporting to IT Executives and Stakeholders
- Implement testing tools, including automated testing
- Establish an enterprise architecture framework

### ***Infrastructure Management and Network***

In 2023, multiple enhancements are planned to IT related infrastructure in support of increased reliability of NYCHA-wide systems, including:

- Completion of Java vulnerability mitigation (Shared with Security)
- Microsoft Exchange 2019 Upgrade
- Basic Authentication Depreciation
- Tape library deprecation
- Implement OneDrive for Business
- Implement CMDB and increase visibility of business services

NYCHA IT will continue to deliver a transparent, proactive and highly automated infrastructure environment through the following work:

- Complete the transition of NYCHA’s Customer Contact Center (CCC) systems to Genesys Cloud based services
- Complete implementation of Cisco network recommendations
- Complete the transition of NYCHA’s non-agent based population from Cisco Telephony and Voice mail to MS Teams and LTE/Mobile services

- Multiple enhancements planned to IT related infrastructure in support of increased reliability of NYCHA-wide systems
- Complete extension of 4g service into Pest Control Storage Rooms
- Replace General Storeroom Meraki with 4g / LTE extenders

### ***ITSM***

In 2023, IT will continue to expand its delivery of support to field and development staff through the following initiatives:

- Complete refresh of end-of-life printers across all borough management offices
- Reduce central office printers by consolidating and eliminating devices with low usage – targeting 50% reduction in central office printer maintenance costs
- Update IT self-service portal to include request options for business and IT services formerly requested via Movaris system
- Begin population of Configuration Management Database (CMDB) to inventory IT assets for critical business services

Continued focus will be on improving service delivery and support of areas critical to NYCHA’s mission, including:

- Assigning dedicated field support technicians to each borough in alignment with neighborhood model
- Upgrading NYCHA’s Resident Watch Lines

### ***Cyber Security***

In 2023, IT will continue to deliver measurable and effective security controls for NYCHA through the following initiatives:

- Improve network visibility through internal Intrusion Detection System capabilities
- Reduce vulnerabilities by another 50%
- Expand penetration testing with third-party entities
- Develop and track KPIs for technical security controls

### ***ITPR***

In 2023, IT will work on establishing a performance-driven culture and proactively manage limited resources through the following initiatives:

**New York City Housing Authority**

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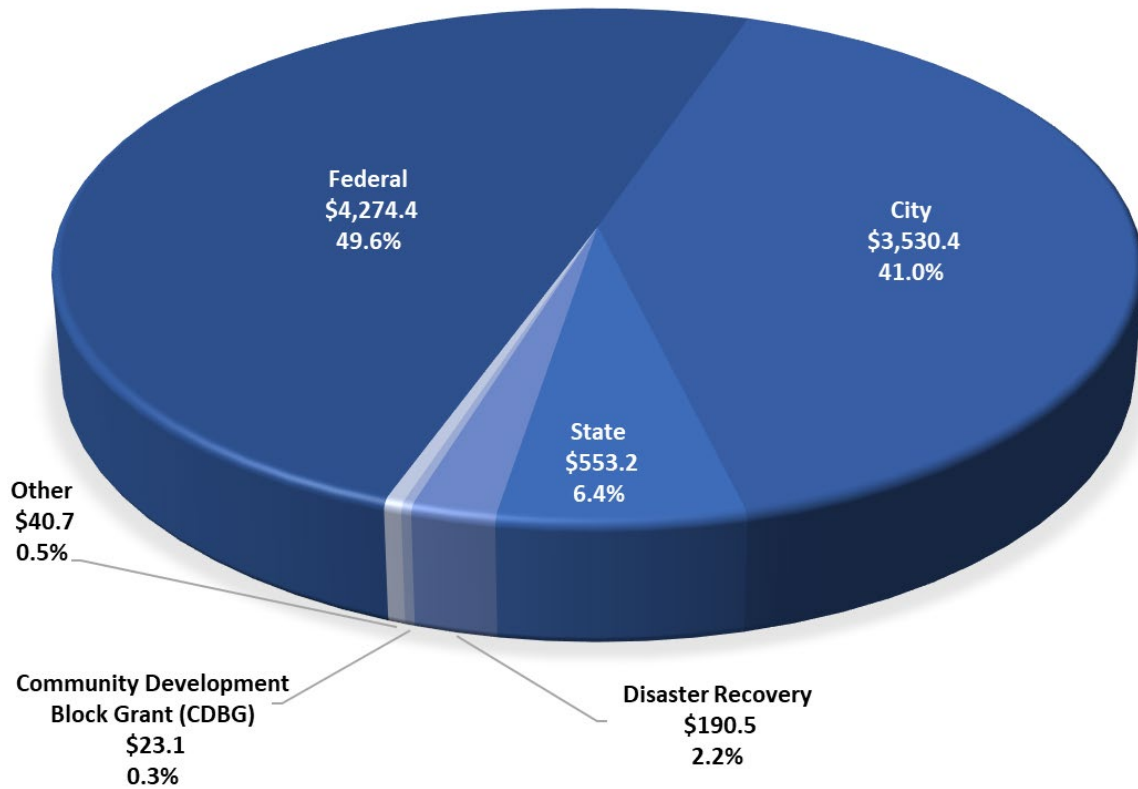
- Establish an IT Vendor Management program to deepen our relationship with key vendor partners and enhance vendor performance management
- Launch a new IT Performance Management Reporting structure, developing new KPIs to measure performance and optimize operations
- Kick off an Employee Recognition program to celebrate staff achievements, highlight staff milestones reached, and promote employee engagement

Chart 5

### Capital Funding Summary

#### *FY 2023 – 2027 Capital Funding by Funding Source*

(\$ In Millions)



**Total: \$8.6 Billion**

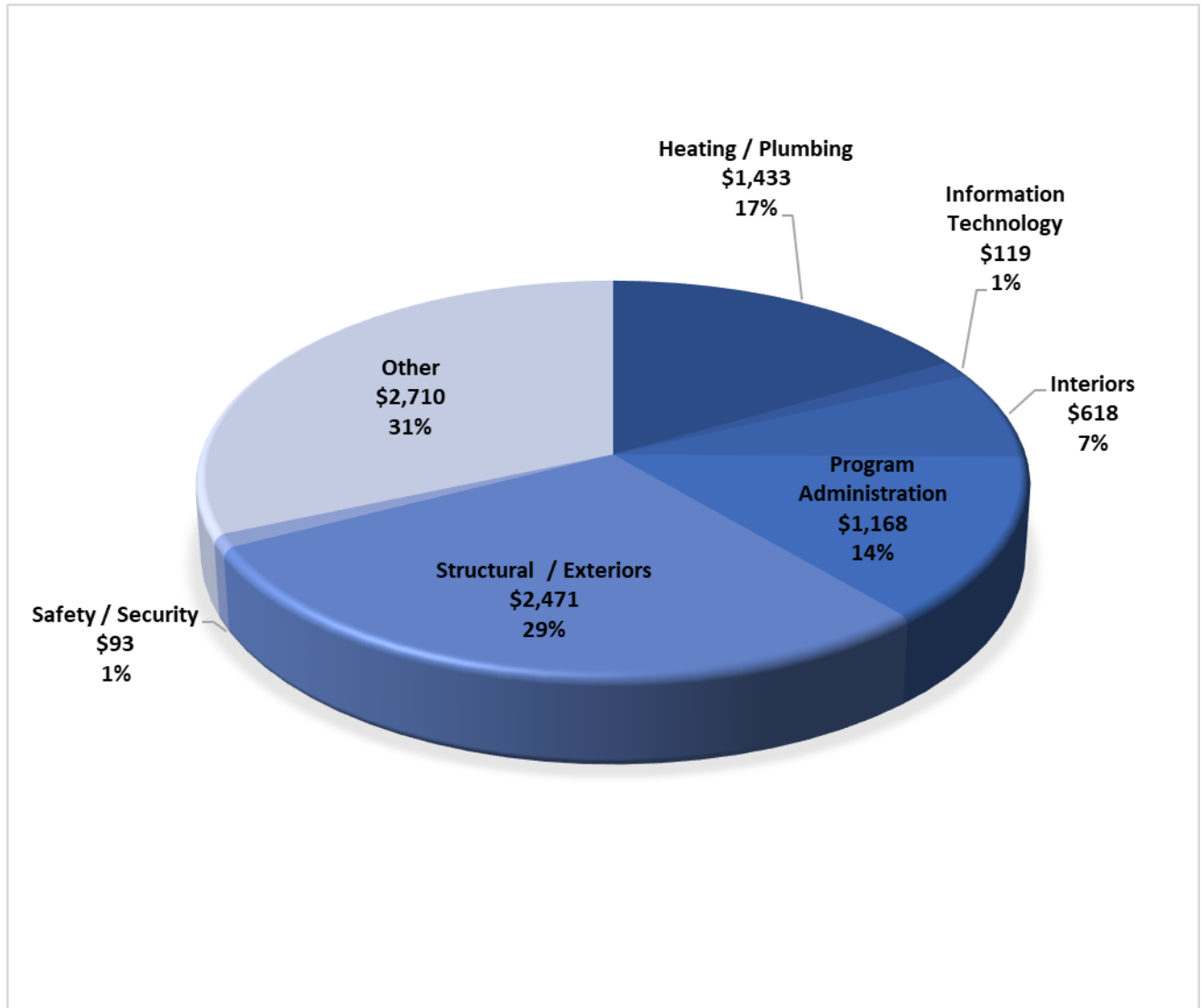
Other includes Safety & Security Grants, Insurance for Capital and Dormitory Authority of the State of New York (DASNY) grants.

Chart 6

### Capital Funding Summary

#### *FY 2022 – 2026 Capital Plan by Work Type*

(\$ in Millions)



**Total: \$8.6 Billion**

Other includes Fire Safety, Garbage Disposal, Energy projects and Architectural & Engineering / Construction Management (CM) Fees.