



Capital Plan

Calendar Years 2022-2026

December 30, 2021

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Overview

NYCHA’s 2022 – 2026 Capital Plan provides approximately \$8.06 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 \$7.4 billion in Federal and City funds to address physical improvements to the Authority’s buildings. The City funding includes \$1.7 billion of the total \$2.2 billion allocated to address lead, mold, heating, elevators and pests. The Federal funding includes \$610 million to address structural and exterior work, including brick and roof projects, \$1.0 billion to address heating and plumbing work and \$128 million for elevator replacements. The State funding includes \$282 million for boilers and \$81 million for elevator replacements. Overall, of the \$8.056 billion dollars included in this Plan, 50.3% is from Annual Federal Capital Grants, 42.0% is from the City of New York, 4.6 % comes from the State of New York, and 3.1% comes from other sources (Community Development Block Grant, Disaster Recovery, and Other).

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

Funding Sources	2021 Carry Forward Balance	2022 New Funds Available	Total Available for 2022	2023	2024	2025	2026	2022 - 2026 Plan Totals
Federal	\$ 550,175	\$ 700,000	\$ 1,250,175	\$ 700,000	\$ 700,000	\$ 700,000	\$ 700,000	\$ 4,050,175
City	\$ 622,640	\$ 409,603	\$ 1,032,243	\$ 587,479	\$ 596,661	\$ 657,035	\$ 424,341	\$ 3,297,759
State	\$ 363,244	\$ -	\$ 363,244	\$ -	\$ -	\$ -	\$ -	\$ 363,244
Community Development Block Grant	\$ 88,474	\$ -	\$ 88,474	\$ -	\$ -	\$ -	\$ -	\$ 88,474
Disaster Recovery	\$ 122,377	\$ -	\$ 122,377	\$ -	\$ -	\$ -	\$ -	\$ 122,377
Other	\$ 133,623	\$ -	\$ 133,623	\$ -	\$ -	\$ -	\$ -	\$ 133,623
Grand Total	\$ 1,880,533	\$ 1,109,603	\$ 2,990,136	\$1,287,479	\$1,296,661	\$1,357,035	\$1,124,341	\$ 8,055,652

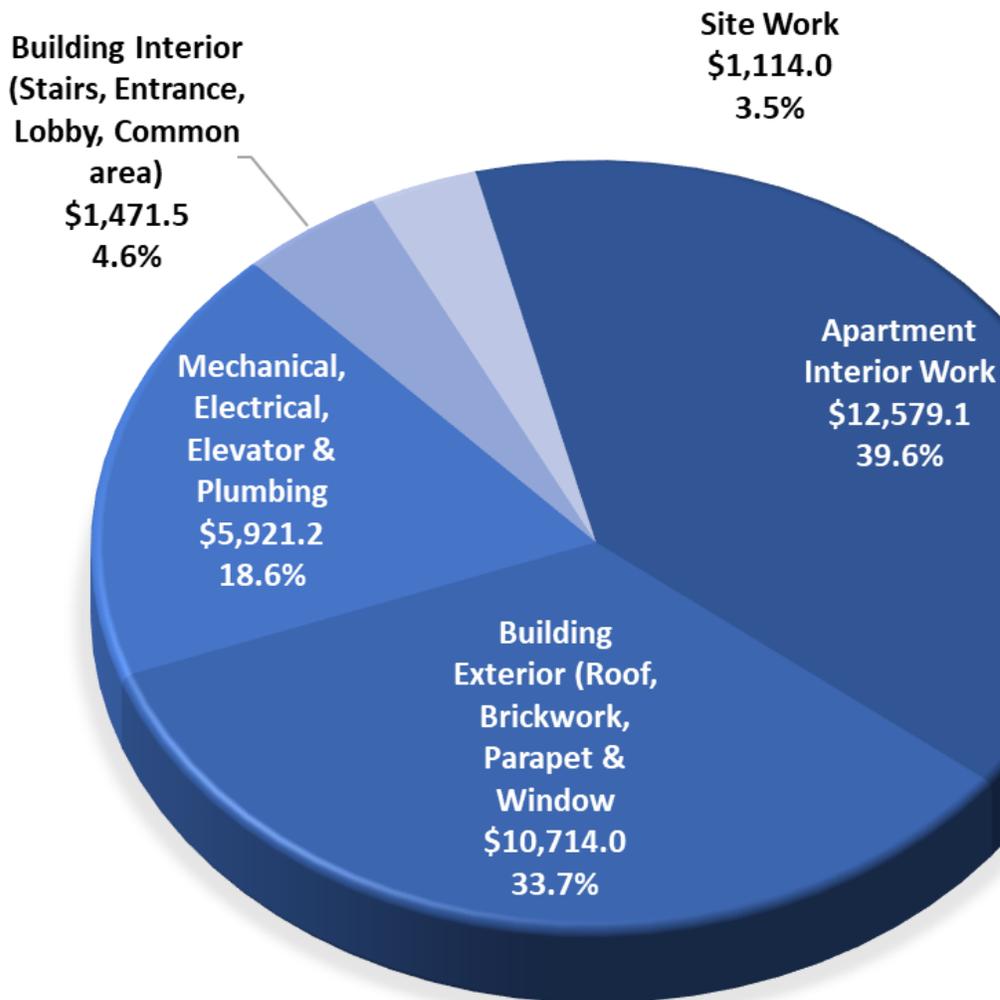
NYCHA's Chronic Funding Gap

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

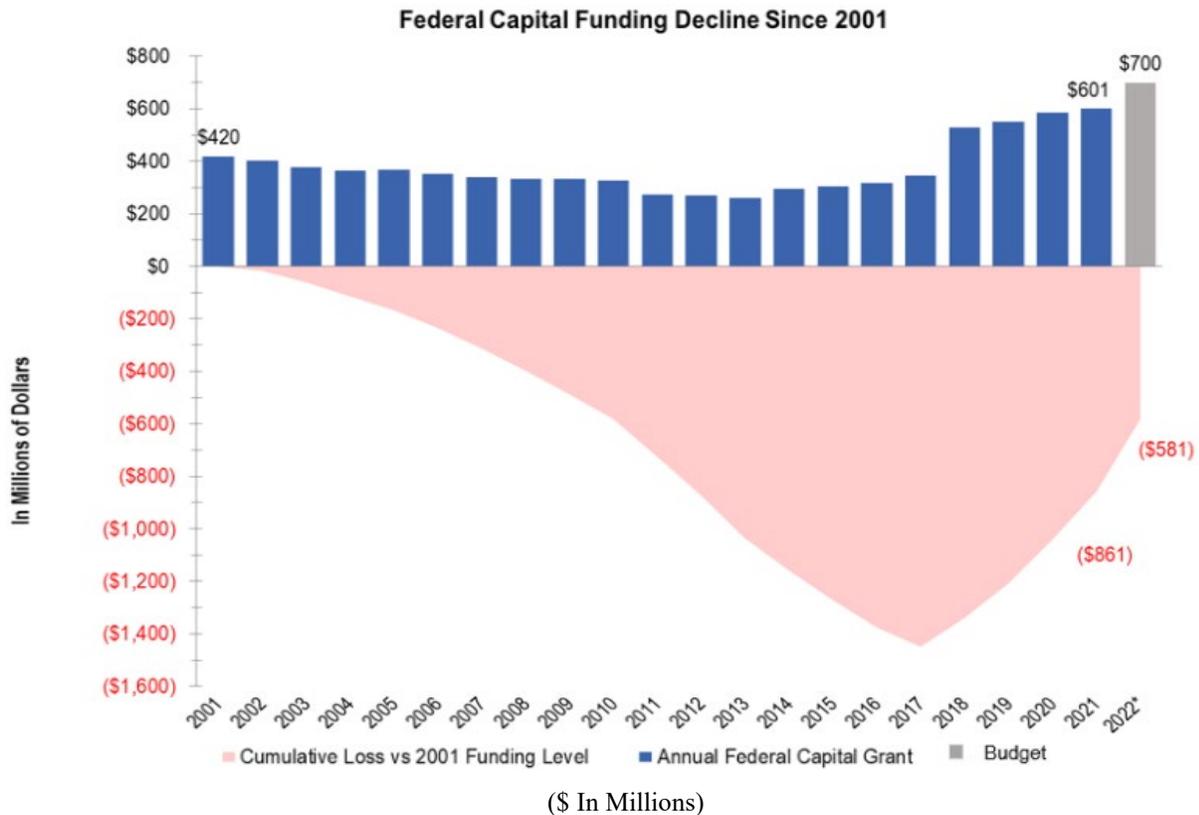
New York City Housing Authority

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 \$585 million in 2020 and \$601 million in 2021. 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 \$861 million since 2001. Funding shortfalls have meant that only \$2.613 billion has been invested in capital improvements during the last five years (2017-2021). Over the last four years, there has been an increase to federal capital fund allocation. Continuous funding at the 2021 level of \$601 million would reduce the overall funding shortfall.

Chart 2



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 \$700 million. Despite this assumption, the funding allocation for 2022 remains unclear. Below is a chart summarizing funding allocation by administering areas/departments

Table 2
All Funds (\$ In Thousands)

Administering Areas	2021 Carry	2022 New Funds	Total Available	2023	2024	2025	2026	2022 - 2026 Plan
	Forward Balance	Available	for 2022					Totals
Administration	\$ 1,724	\$ -	\$ 1,724	\$ -	\$ -	\$ -	\$ -	\$ 1,724
Chair	\$ -	\$ 64,174	\$ 64,174	\$ 64,174	\$ 64,174	\$ 64,174	\$ 64,174	\$ 320,871
Community Engagement & Partnerships	\$ -	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 5,000
Healthy Homes	\$ 15,685	\$ 20,700	\$ 36,385	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 52,385
IT	\$ 15,824	\$ 25,716	\$ 41,540	\$ 15,697	\$ 14,404	\$ 14,404	\$ 14,528	\$ 100,574
Operations	\$ 77,063	\$ 34,183	\$ 111,246	\$ 50,883	\$ 50,883	\$ 50,883	\$ 50,883	\$ 314,778
Safety & Security	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Projects	\$ 379,163	\$ 248,729	\$ 627,892	\$ 258,527	\$ 256,896	\$ 279,681	\$ 279,681	\$ 1,702,675
Finance	\$ 60,716	\$ 305,498	\$ 366,215	\$ 305,719	\$ 308,643	\$ 285,858	\$ 285,734	\$ 1,552,168
Grand Total	\$ 550,175	\$ 700,000	\$ 1,250,175	\$ 700,000	\$ 700,000	\$ 700,000	\$ 700,000	\$ 4,050,175

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	Current Modified Budget	Obligation	Expenditures	Funds Available	Obligation %	Expenditure %
CAPITAL FUND 2017	8/15/2020	8/15/2022	346,326	346,326	346,326	-	100%	100%
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	517,255	196,268	34,494	94%	36%
CAPITAL FUND 2020	3/25/2023	3/25/2025	585,012	455,415	264,528	129,597	78%	45%
CAPITAL FUND 2021	2/23/2023	2/23/2025	601,271	267,644	220,915	333,627	45%	37%
Grand Total			2,612,604	2,114,886	1,556,282	497,718	81%	60%

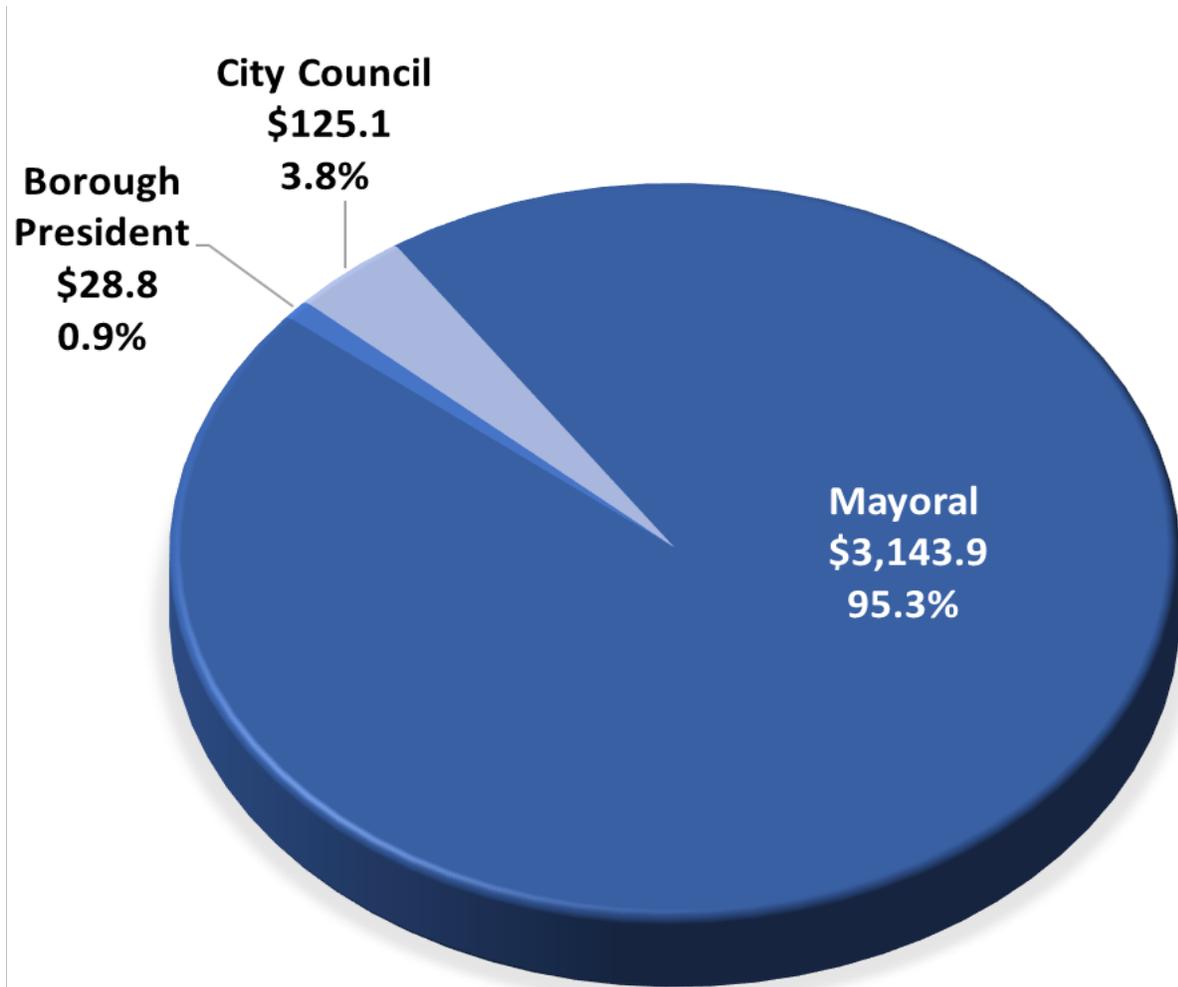
City Capital Funding:

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 2022 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 2022-2026 City Capital by Funding

(\$ In Millions)

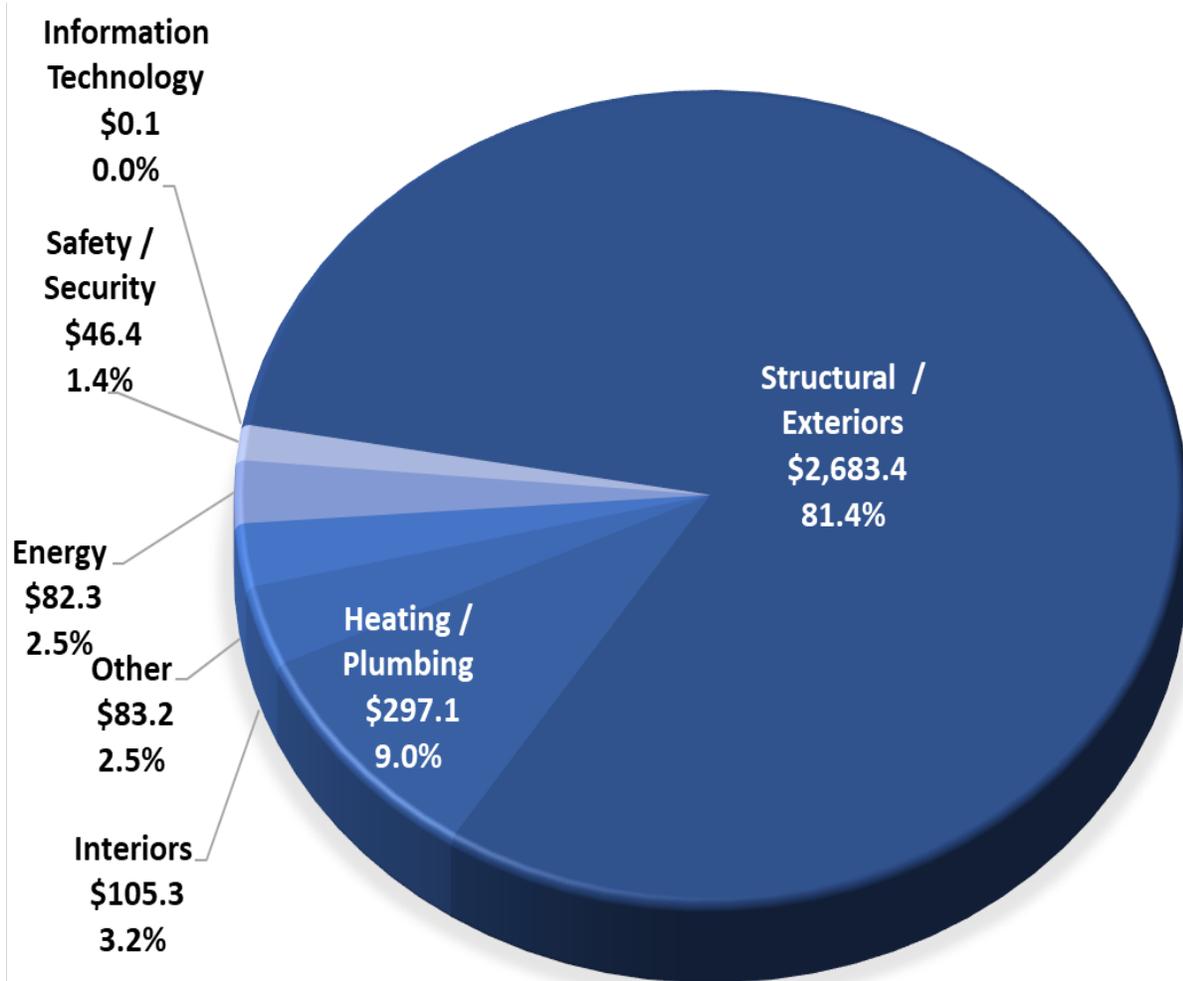


\$3.3 Billion

Chart 4

FY 2022-2026 City Capital by Work Type

(\$ In Millions)



Total: \$3.3 Billion

2021 Accomplishments

Capital Projects Division

Completed Projects:

In 2021, Capital Projects Division (CPD) succeeded in completing capital work at 103 developments, valued at \$470 million, impacting more than 85,000 households. As of the end of December 2021, there was ongoing construction at 196 developments, totaling \$4.24 billion, impacting over 139,000 households. The projects in the CPD portfolio include jobs funded primarily by Federal, State, and City partners. CPD is also leveraging Energy Performance Contract (EPC) self-financed funding of approximately \$310 million primarily for lighting, energy and water efficiency work, heating controls, and in some developments, boiler replacements. This work is concluding while NYCHA is working with HUD and 4 Energy Service Companies (ESCOs) to set up the next set of EPCs equivalent in value. Other projects completed in 2021 and ongoing work includes improvements to playgrounds, security enhancements, interior and exterior compactors, apartment renovations, boiler replacements, elevator replacements, and fortifying NYCHA's building envelopes (including exterior brick and roofs).

Below are NYCHA's selected capital projects highlights and accomplishments for 2021.

City Capital Accomplishments

Mayoral Roofing Initiative

The Mayoral Roofing Initiative, originally consisting of thirteen phases, was consolidated by the Office of Management and Budget to be completed in 7 tranches due to the successes of the program. It provides a total of \$1.3 billion to replace aging roofs and to improve the lives of approximately 150,000 NYCHA residents in 749 buildings. Replacing the roofs will make buildings cooler and consume less energy as well as protect from water leakage to apartments. Upon completion, NYCHA will be out of deferred maintenance and into life-cycle costs on roofing.

Status:

Tranche I:

- Completed in 2018 roof installations at 65 buildings at six developments.

Tranche II:

- Construction has been completed at 48 buildings at 7 developments.
- Legal issues at Breukelen delayed the completion of 25 roofs. Legal issues have been resolved and construction has resumed. 8 roofs have been completed.

Tranche III:

- Tranche III consists of 10 developments, comprising of 94 roofs.
- Construction has been fully completed at nine developments, which consist of 90 roofs.
- Construction is ongoing at one development, of which 3 roofs have been completed and 4 roofs remaining to be completed.

Tranche IV:

- This Tranche comprises 133 roof replacements at 12 developments.
- Construction has started in eleven developments.
- One development is in the design process.

Tranche V:

- There are eight developments with a total of 100 roofs to be replaced. These projects are in varying stages of design and procurement.

Security Enhancements

- One development from the Mayor's Action Plan (MAP) CCTV/Layered Access Control (LAC) program is remaining and will be completed in November, 2022.
- One lighting project completed.
- Two non-MAP CCTV projects completed.
- Work at 16 Non-MAP CCTV/LAC developments will be completed in 2022, with predominantly City funding of approximately \$26.1 million.

Quality of Life

- Completed basketball court renovations and playground upgrades in 2021, at Astoria, Carver, Washington, Hernandez, Fiorentino Plaza, Vladeck and Mariner's Harbor, costing about \$5 million.
- Renovation of grounds that involves sitting area for seniors at Corsi Houses was completed in 2021, costing about \$450,000.
- Completed Community center upgrades at Astoria and Davidson in 2021, costing about \$3.15 million.

Waste Management

- NYCHA has completed the following installations through Neighborhood Rat Reduction (NRR) funding: 94% of 157 interior compactor replacements at 27 developments, 100% of 43 exterior compactor replacements at 17 developments, 100% of 5 bulk crusher installations at 5 developments, and 51% of 50 rat slabs at 11 developments. In 2021, 15 projects were completed, impacting 12 developments.
- The initiative will be completed in December 2022.
- In March 2020, NYCHA released requests for qualifications for two Design-Build (DB) 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. Both DB procurements were shortlisted to 3 teams, each to move on to the Request for Proposal (RFP) stage in the fall of 2020.
- For the DB waste yards, in May 2021, the final RFP was issued to 2 proposers. In September 2021, 2 proposals were submitted. In December 2021, interviews were held. In January 2022, the committee submitted a recommendation to award memo.

- For DB pneumatics, in June 2021, the Final RFP was issued to 3 proposers. In October 2021, 2 proposals were submitted. In December 2021, interviews were held. In February 2022, NYCHA recommended a proposal for award.

Federal Capital Accomplishments

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% of its capital funds within 16 – 18 months, ahead of HUD’s 24-month obligation deadline.

Due to COVID-19, HUD extended the obligation and expenditure deadlines by one year. An important mention is that CPD was still able to obligate CF2017 and CF2018 Grants ahead of schedule within its original deadline.

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

HUD Obligations

- 2017 Capital Fund Grant - to date, CPD has obligated \$222 million, or 100%. 90% of the funds were obligated within 15 months of receipt of funds, 9 months ahead of deadline. The grant was fully obligated by May 2020.
- 2018 Capital Fund Grant – to date, CPD obligated \$373 million, or 100% of the \$373 million budget. 90% of the funds were obligated by March 2020, 14 months ahead of schedule and was fully obligated by September 2021.
- 2019 Capital Fund Grant – to date, CPD obligated \$381 million, or 93% of the \$411 million budget.
- 2020 Capital Fund Grant – to date, CPD obligated \$183 million, or 62% of the \$293 million budget.
- 2021 Capital Fund Grant – to date, CPD obligated \$40 million, or 17% of the \$239 million budget.

HUD Expenditures

- 2017 Capital Fund Grant – CPD fully expended \$222 million by May 2020; 15 months ahead of schedule.
- 2018 Capital Fund Grant – CPD has expended \$373 million, which is 100% of the grant of \$373 million was fully expended by September 2021, 8 months ahead of schedule.
- 2019 Capital Fund Grant – CPD has expended \$66 million, which is 16% of the grant of \$411 million, to be fully expended by April 2024.

Energy & Sustainability

Energy

- Continued construction for four active energy performance contracts totaling \$310 million. Scope of work includes Whitman and Patterson boiler replacements, new the 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.
- All lighting work is complete, 48 heating control sites are online with the BMS and Whitman and Patterson boiler room plant are operating on the new boilers.
- Executed 4 task orders with 4 ESCO's. Energy Audits are complete for all four. ESCO's are presenting packages to NYCHA for HUD submission.
- Released Clean Heat for All challenge with New York Power Authority (NYPA) and New York State Energy Research & Development Authority (NYSERDA) for manufactures to develop a cold climate window heat pump which will provide heating and cooling. Guaranteed purchase of 24,000 cold climate window heat pumps if the HVAC manufacturers are able to meet NYCHA's desired specifications.
- Entered into \$1.4 million in Weatherization Assistance Program Agreements at 6 developments.
- Completed design of design a net-zero solution at Ravenswood building 12.
- Started work with the New York Power Authority on a pilot battery storage project to provide resilience for critical loads at senior buildings
- NYCHA partnered with the Fund for Public Housing to secure funding to establish a Clean Energy Academy and train at least 250 NYCHA residents preparing them for the Clean Energy Transition job opportunities.

Sustainability

Waste Management

- NRR funding for additional food waste disposal (FWD) installations was cut due to COVID-19 budget cuts. Sustainability assessed the potential decrease in food waste from the waste stream at sites where FWDs were installed. The reports did not conclude any significant reduction in food waste and with high retrofit costs, NYCHA is only pursuing additional food waste disposal installations as a component of comprehensive modernizations.
- Enlarged ground-floor trash chute doors were installed at 10 additional developments, bringing the NYCHA total to 60 completed developments. The intent of these enlarged doors is to make it more convenient to dispose of larger trash bags for compaction in existing interior compactors rather than dumping trash bags outside. With the last round of installations, NYCHA evaluated the installations for increased ease of use and staff operational impacts. The results concluded that it did not create a significant decrease in the pile-up of bags outside and created additional burdens on staff. NYCHA is

considering alternative door configurations (e.g. doors with back pans) for additional installations.

- In 2021 Sustainability completed the installation of 175 interior compactors at 27 developments with federal funds.
- As part of a new indefinite delivery/indefinite quantity (IDIQ) contract awarded in July 2020, NYCHA installed cardboard balers at 37 developments and 1 NYCHA vehicle repair shop to prepare cardboard for recycling by The City of New York Department of Sanitation (DSNY) and remove it from bulk waste streams sent to landfills. NYCHA started demonstration projects at Morris I and Marcy Houses to convert a hydraulic trash compactor into a cardboard-only compactor. They also receive cardboard from at least 3 surrounding developments. NYCHA is in discussions with DSNY on expanding this work.
- In September 2020, NYCHA issued an RFP for qualified firms to participate in a long-term Mattress Recycling Program. The Program will provide the collection infrastructure and services to keep NYCHA campuses free of improperly disposed mattresses and box springs. An added benefit of this program is that it will keep mattresses from overwhelming bulk waste management.
 - In 2021, NYCHA awarded 2 contracts to 2 vendors. Service began in August 2021 at 27 sites, and as of January 2022, over 3100 mattresses have been collected from those developments.
- In late 2019, NYCHA issued an RFP for the development of a behavioral change campaign to promote a positive waste management culture among NYCHA residents. The campaign will apply public awareness and behavioral change techniques, including updating outdated waste management and recycling signage and replacing it with standard up-to-date signage.
 - The campaign was tested at 5 sites (Marcy, Morris, Drew Hamilton, Wald, and Butler), and evaluation results are being drafted.
- In Fall 2020, Sustainability awarded contracts to 4 separate vendors to support waste management and other sustainability programs through resident engagement, outreach, and graphic design. The firms (Green City Force, Hester Street, Pratt, and Grain Collective) will help inform residents of sustainability work that is going on in their developments, how they can participate, and how they can shape current and future programming.
 - Since the contract award, the four firms have provided engagement support on a variety of Energy & Sustainability programs.

Green Infrastructure

- Federal Emergency Management Agency (FEMA) and New York City Department of Environmental Protection (DEP) funded Cloudburst Project in East Harlem: Dewberry Engineering was contracted to lead a scoping study for a water square at Clinton Houses Conceptual designs and a cost benefit analysis are complete. The final report has been submitted to FEMA for possible construction funding and will continue to receive DEP funding to implement.

Climate & Solar

- Recovery +Resiliency released NYCHA’s first Climate Adaptation Plan in 2021 with goals to address a variety of climate hazards, such as extreme heat, extreme rain, and storm surge. NYCHA is working to implement the strategies it contains, including building resilient practices into capital work across the portfolio.
- R+R released two additional reports in support of the plan: a supplemental study focused on NYCHA’s urban forest that looks to leverage this asset and a document memorializing many of the lessons learned from the Superstorm Sandy program.
- The NYC Extreme Water Task Force incorporated information from NYCHA’s plan into its strategies and funded \$84 million of stormwater mitigation work on NYCHA campuses.
- 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 currently in construction. NYCHA plans to issue an additional solar lease solicitation later this year.
- Sustainability has identified pilot sites for NYCHA’s first public-facing electric vehicle chargers and is working with ConEd to determine the electrical upgrades that will be necessary for installation.

Local Law 11

Pursuant to the NYC Department of Buildings regulations (DOB), NYCHA proposes to repair the unsafe buildings and comply with NYC Local Law 11 (LL11) requirements to repair all unsafe conditions found at the exterior walls of all NYCHA owned buildings citywide. All buildings higher 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 to secure the safety of the public and make the facades conform to the provisions of the administrative code (RCNY §103-04). All unsafe conditions shall be corrected within ninety (90) days from the submission of the report (RCNY §103-04). Property owners must repair dangerous conditions within 90 days of filing a technical report (NYC DOB FISP).

A total of 16 buildings were completed at a cost of \$22 million in 2021.

- Completed inspection and filings at 72 buildings of Cycle 9 of LL11 buildings.
- Increased the number of safe buildings in Cycle 8 from 607 to 653.
- Cycle 9 started on February 21, 2020, and 100 buildings have been filed with DOB.
- Received authorization for approximately \$107.6 million.
- Expended approximately \$22 million for repair work and approximately \$15 million on sidewalk sheds. In 2021, 12,337 linear feet of sheds were installed.
- Removed approximately 19,848 linear feet of sidewalk sheds in 2021.

2022 Capital Plan Highlights

Capital Projects Division

City Plan

The City's capital projects portfolio being managed by CPD through 2026 is approximately \$3.4 billion. Approximately 89% of the funds received by the City are attached to the HUD Agreement. The funding allocated for the HUD Agreement is addressing lead, mold, heating plants, elevators and waste management. In addition, other city funded projects include roof replacement, façade repairs, boiler replacement and related repairs, security enhancements, grounds improvement, and energy conservation measures.

The City agreement is for \$2.2 billion over the next 10 years for capital projects improvements. Approximately 60% of the City Capital Action Plan (CCAP) is allocated toward lead abatement projects. An additional 10% is allocated toward building systems, including heating and elevators. The balance is allocated toward waste management.

In 2018, a commitment was made to NYCHA to provide \$200 million under the Mayoral Heating Initiative program for the installation of boilers, domestic hot water systems, and temperature controls. These upgrades include separation of domestic hot water from the heating system and installation of heat monitoring systems

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 purchase bulk crushers. These measures will assist in reducing resident exposure to rodents, which studies have shown can trigger asthma attacks and spread communicable diseases.

In FY2022 the Mayor allocated \$111 million for LL11 façade work at 45 buildings in 15 developments. This initiative is to remove long-standing sidewalk sheds.

Roofs

Roofing and rooftop structure renovation program is funded under the Mayor's \$1.3 billion roofing initiative. In 2023, the allocation is for \$245.5 million (18.88% of the Mayor's initiative roofing budget). CPD has expedited the roofing replacement initiative through a more aggressive schedule from thirteen tranches down to seven. The objective is to shorten the delivery time for these replacements. Over the next 3 years, there will be an allocation of approximately \$206 million for each of the years to replace the roofs at the designated developments.

The schedule for 2022 is to continue to complete the remaining roofs in Tranche 3. Tranche 4 is in progress: construction has started at eleven of twelve developments. Three out of the eight projects in Tranche 5 are in Design phase and the other 5 projects are in the Procurement phase. Two out of the 36 projects in Tranche 6 are in the Procurement phase and the remaining 34 projects are in various stages of the Design phase.

Security Enhancement

The remaining MAP CCTV/LAC project at Patterson is expected to be fully completed by November 2022. The CCTV portion was already completed. MAP CCTV and lighting work at Red Hook East and Red Hook West is incorporated into the work currently being done under the Recovery and Resilience program.

The 2022-2026 City Plan has allocated approximately \$57 million (2%) of the funding to security enhancements, which include installation of CCTV/LAC and lighting across the City. Of these funds, over \$ 4.2 million funded by the Borough Presidents and City Council Members are planned for lighting.

Quality of Life

In 2022, approximately \$129 million (8%) is being allocated to enhance the quality of life for NYCHA residents by improving the community facilities, recreational centers and repair or replacement of playgrounds.

At Parkside, \$1.869 million in City funding (\$1.7 million Mayoral and \$169K allocated by City Council member) has been allocated for the community center to address the HVAC upgrade, kitchen renovation, window placement, and new mirrors in the multi-purpose room. The project is currently in the design phase.

Ongoing senior center projects include a kitchen renovation at Bronx River, with an allocation of \$1 million projected to be completed by July 2023

Approximately \$38 million was allocated in 2021, for elevator repair and replacement which are at various stages of the project implementation cycle

As mentioned previously, the Mayor's Neighborhood Rat Reduction Initiative has an impact on the quality of life of the residents since it will provide additional funding for garbage disposal systems that will reduce the exposure to the infestation of rodents.

Major Renovation

The projects under the Mayoral Homelessness Initiative are ongoing. The current budget of \$20.6 million will contribute towards the ongoing repairs to apartments at several developments putting them back on the rent roll so that more apartments are available for residents. Repairs at several developments have been completed. Repairs at 3 developments are under construction, and project work at several developments are at pre award approval stages. Repairs at 6 apartments at Taft are expected to be completed by 3rd quarter of 2022.

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. 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.

Under this Plan, 39 boilers will be installed at 10 developments to alleviate the chronic outages previously experienced by residents. Heat and hot water systems will be modernized at twelve developments (ten developments receiving both boilers and domestic hot water (DHW) decoupling and two developments getting only DHW decoupling) where the hot water system will be separated from the boiler system. In addition, there are 7 developments that will be receiving only the heating controls component. The separation of 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 in excess of \$53 million are at various stages of the construction cycle. Developments impacted are Smith, Castle Hill, and Wagner.

Ventilation Modernization

In 2017, the City committed \$20 million to modernize ventilation systems in 17 developments located in East Harlem as part of the East Harlem Rezoning portfolio. Due to capital eligibility requirement, the number of developments the scope of work will cover has been reduced to the four (4) largest developments, representing 50% of the originally proposed units. Two (2) additional developments were completed by CPD under energy performance contracts (EPCs) and the remaining fifteen (15) developments are getting ventilation upgrades through Healthy Homes. With regard to the four City Cap funded sites, NYCHA awarded contracts to three qualified ventilation vendors and has issued a notice to proceed to two of the awarded vendors at this time. The vendors are in the process of surveying the sites with work expected to begin in the second quarter of 2022. The third vendor will be issued a notice to proceed with work upon completion of the ‘vendor name check’ process (VNC).

Lead Abatement

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. 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 capital improvement projects pertaining to:

- Lead Abatement & Comprehensive Approach to Mold (2 developments) \$450,884,475
- Lead Abatement (Phased Program) \$771,817,611

The Lead Abatement Program has been allocated \$771,817,611 in City Capital Funds. In September of 2021, the Vice President of Environmental Programs was hired. The RFP for Program Management Services was issued, and the vendor selected. The contract was executed by the vendor on March 1, 2022, and it is expected that \$55 million will be allocated to Program Management Services. CPD will also use the existing Construction Management (CM) Services requirements contracts in CPD as well as the JOCs for lead abatement. The funds will come from the Citywide Mayoral funds from OMB.

Comprehensive Lead and 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 that funds are available .

The Lead Abatement & Comprehensive Approach to Mold program has 2 active projects, both of which are in the planning phase, focused on coordinating with Tenant Associations and seeking input from residents, property management and other stakeholders on scoping the projects at each location. The work will be performed at St. Nicholas, budgeted at \$339.1m and Todt Hill budgeted at \$111.8m for a total of \$501m.

Waste Management

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

Measure	Total Funding	Funded Units	Funded Developments
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 192 waste yards.

- 7 waste yards will start design and construction through a Design-Build contract mid-2022.
- The pneumatic waste collection system at Polo Grounds Towers will begin design and construction through a Design-Build contract mid-2022.
- Interior Compactor Batch 1 – 23 developments for 187 units – CP package sent to OMB in March, work to begin in Summer 2022.
- Interior Compactor Batch 2 – 191 units for 15 developments – CP package being prepped for submission as soon as possible, work to begin in Fall 2022.
- Waste Yards Batch 1 – 21 developments – design work to begin by Summer 2022, construction bid out by end of calendar year.

Federal Plan

The Capital Projects Division will receive \$1.324 billion in new Federal Funding over the period from 2022 to 2026 for investment in NYCHA's building portfolio. The projections over the upcoming years are summarized below.

Brick and Roof Projects

For the FY 2022-2026 Capital Plan, \$330 million, or approximately 25% 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 LL11 brickwork replacement projects at 6 developments. An additional \$208 million is allocated for emergency sheds and inspections. The remaining portion of this funding will support major exterior roof work at Polo Grounds, Harborview Terrace, and Patterson 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.

Elevators

The funding for the elevator portfolio is \$55 million which is 4% of the Federal Plan. This allocation will be used to replace 78 elevators at 6 developments, including Grant, Lafayette, and Smith. Sites are prioritized based on conditions assessments.

One of the largest projects in the elevator portfolio is a comprehensive replacement of the 24 cars at Smith development.

Heating and Plumbing

Over \$757 million, or about 57% of the Federal Plan will be allocated to heating and plumbing projects.

Heating plant replacements are planned for 13 developments including: Butler, Grant, Mitchel, and Monroe. Additionally, there are 13 developments that are being federally funded as a supplement to State funding. These projects will fully replace heating plants and all ancillary equipment to optimize the total life-cycle investment, and to reduce fuel consumption.

Underground steam distribution replacements are planned for 2 developments to ensure reliable and efficient heat delivery. The prioritization of these selected sites is based upon the assessment of conditions with regards to boiler equipment and underground piping age, volume of work tickets, NYCHA's Operations requests, and availability of replacement parts. In addition, this allocation will be used for Heat Pump installations at Woodside and Soundview, roof tanks at 5 developments (including Butler), and underground fire/water lines at 2 developments, including Whitman.

Safety and Security

From the Federal Plan, \$72 million, or about 5%, 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.

Apartment Bathrooms

The Federal Plan allocates approximately 4% of funding, \$52 million, for the renovation of bathrooms at Jefferson, Highbridge, and Mitchel developments. Each of these developments has a high number of work order tickets. Having completed building envelope work at these sites, allows NYCHA to invest wisely in the interior of the buildings.

Energy & Sustainability Programs

Energy

Energy Performance Contracts (EPC)

- NYCHA set a goal of securing \$300 million in energy performance contracts funding by 2025. NYCHA has exceeded this goal and has received HUD approval of \$310 million for five energy performance contracts serving 93 developments.
- Executed 4 task orders with 4 ESCO's. Energy Audits are complete for all four. NYCHA plans on submitting 3 packages for HUD approval this year. The 4 executed task orders by the 4 ESCOs have been completed and the energy audits have been completed. NYCHA plans to submit 3 packages to HUD for approval in 2022.

Weatherization Assistance Program

In 2016, NYCHA set a goal of securing \$30 million in Weatherization Assistance Program (WAP) by 2025. To date, NYCHA WAP contracts total \$17 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% of the cost of repairs and capital improvements that improve the energy efficiency of housing serving low-income residents. NYCHA plans to enter into \$3 million Weatherization Assistance Program Agreements for the April 2022 – March 2023 program year.

80x50 and Demonstrations Programs

- NYCHA is engaged in testing new technology to inform future capital investments toward meeting the City's goal of reducing Greenhouse Gases by 80% by 2050. In 2018, NYCHA began its participation in RetrofitNY, a deep-energy retrofit competition of the New York State Energy Research and Development Authority (NYSERDA). NYCHA has procured an architecture and engineering firm to design a net-zero solution at Ravenswood building 12. The construction RFP will be released in March 2022.
- NYCHA also developed a demonstration program to provide energy-efficient, smart AC units. Over 200 air conditioners were installed at Meltzer Tower. In response to the COVID-19 crisis, NYCHA partnered with the City to install approximately 12,000 new window ACs in apartments to provide in-unit cooling in response to the closing of cooling centers. Through a partnership with the Mayor's Office of Sustainability and with

funding from NYSERDA, NYCHA installed a demonstration installation of a Variable Refrigerant Flow (VRF) air-source heat pump for 7 top-floor apartments.

- NYCHA has released a Clean Heat for All challenge with NYPA and NYSERDA to develop an efficient packaged window heat pump. The goal is to invite manufacturers to create a cold climate heat pump with the efficiency of a split system that can be easily installed through an existing window opening. This would help reduce the costs of electrification for NYCHA as well as other affordable buildings seeking to convert to cleaner sources of heat. The proposal will be submitted in 2022 and awarded to the winning manufacturer.

Sustainability Programs

Waste Management

- In September 2020, NYCHA issued an RFP for qualified firms to participate in a long-term Mattress Recycling Program. The Program will provide the collection infrastructure and services to keep NYCHA campuses free of improperly disposed mattresses and box springs. An added benefit of this program is that it will keep mattresses from overwhelming bulk waste management.
- In 2021, NYCHA awarded 2 contracts to 2 vendors. Service began in August 2021 at 27 sites, and as of January 2022, over 3100 mattresses have been collected from those developments.
- Starting in 2022, the program expanded to an additional 12 developments, with a total of 39 developments receiving this service. Forthcoming baler installations are pending 2022 funding. NYCHA plans to install at least 4 more at Queens sites to support recycling-focused procedure changes.
- In late 2019, NYCHA issued an RFP for the development of a behavioral change campaign to promote a positive waste management culture among NYCHA residents. The campaign will apply public awareness and behavioral change techniques, including updating outdated waste management and recycling signage and replacing it with standard up-to-date signage.
 - An evaluation of the test findings is being drafted. A rollout and report of findings are expected spring 2022.
- In the Fall of 2020, Sustainability awarded contracts to 4 separate vendors to support waste management and other sustainability programs through resident engagement, outreach, and graphic design. The firms (Green City Force, Hester Street, Pratt, and Grain Collective) will help inform residents of sustainability work that is going on in their developments, how they can participate, and how they can shape current and future programming.
- Grain Collective's contract will be increased to enable continued support from their team.

Green Infrastructure

- Green Infrastructure Stewardship Program: NYCHA is developing a volunteer Green Infrastructure (GI) education and stewardship program that promotes care of vegetative GI through clean up as well as planting days and programming at Bronx River Houses.

- Maintenance at the 4 GI demonstration sites is ongoing. Replanting has taken place at Edenwald and Bronx River Houses and is scheduled for late April at Hope Gardens. Construction at 15 of 18 phase II green infrastructure sites has reached substantial completion and are currently in close out. Construction kick-off is scheduled for March 21st at Roosevelt Houses. Construction at Brevoort Houses is planned for 2022. Construction of green infrastructure projects kicked off in the Fall of 2021 at Pink Houses and is still ongoing. Pre-planning work and geotechnical analysis for the 18 phase III GI sites is has been completed. Design contractors have completed or are working on the 100% designs for all sites. These projects will be bid by NYCHA and expect construction to kick off in approximately 2 years. Designs for the cloudburst project at South Jamaica Houses are being completed. Construction contracts will be bid with phase III GI and managed by NYCHA. Councilwoman Adams has provided \$305,000 in funding for lighting and benches to be included in the project.
- A FEMA funded study for a possible cloudburst project at Clinton Houses was completed in December 2021. The report was used to apply for \$10 million in construction funding through the Building Resilient Infrastructure and Communities (BRIC) program. The Mayor’s office has guaranteed the \$10 million if BRIC funding does not come through. DEP will be managing design and construction of this project.

Climate & Solar

- NYCHA will work to implement the Climate Adaptation Plan released in 2021, including participating in the Local Law 41 pilot program. Local Law 41 of 2021 will eventually require the application of Climate Resiliency Design Guidelines to all city-funded projects, and NYCHA’s participation will allow identification of any obstacles this requirement may pose to NYCHA construction projects.
- In 2016, NYCHA set a goal of hosting 25 MW of renewable energy on its property by 2025, which was raised to 30 MW by 2026 in the 2021 Sustainability Agenda. NYCHA has signed two solar leases, both of which began construction in 2020 and recently completed installation. 3 MW of solar power have been installed across 5 developments and an additional 8 MW are in development. Over two dozen NYCHA residents have been trained and hired to install the solar projects currently in construction.

Recovery & Resilience

In December 2015, NYCHA gained access to \$3 billion, the largest grant in Federal Emergency Management Agency (FEMA) history. Since then, NYCHA has been moving full steam ahead to get shovels in the ground on all critical Recovery and Resilience projects. Through December 2021, 7 developments have had major Sandy Recovery Projects substantially completed, covering 35 residential buildings. As of the end of December 2021, NYCHA awarded over \$3.176 billion in contracts related to Sandy Recovery and spent over \$2.47 billion. NYCHA continues to make tremendous strides to ensure its developments are protected in the face of climate change and that projects are progressing as quickly as possible. As of the end of 2021, NYCHA has either delivered or is currently performing services at 35 developments, benefitting 246 buildings.

Status of Construction

- 7 developments complete.
- 28 developments with major progress (211 buildings benefiting).
- 94% of construction anticipated to be complete by end of 2022.

Construction Milestones

- 185 roofs completed.
- 1,989 exterior lights installed.
- 1,187 CCTV cameras installed.
- 84 layered access control (LAC) systems at doors installed.
- 72 new annexes in progress.
- 105 new annexes completed.
- 181 hot water heaters installed.
- 59 boilers in place.
- 173 generators installed.
- 32 generators turned over and operational.

Status of Funds

- \$3.26 billion total funding from HUD and FEMA
- \$3.176 billion in contracts awarded
- \$2.47 billion in work completed
- \$317 million Community Development Block Grant Disaster Recovery (CDBG-DR) Award
- \$272.94 million spent, \$44.06 million remaining to be spent
- By March 2022, the CDBG-DR will spend in excess of \$285 million [90%]
- Final 10% of CDBG-DR Award expected to be spent by Dec 2022 (\$32 million)

Status of Jobs

- 1,036 new Section 3 positions created
- 16 classes with 226 pre-apprenticeship training graduates (100% CDBG-DR funded)

The department is also coordinating applications and implementation of additional resilience grant funding via the City, State, and Federal government. Recovery & Resilience (R&R) collaborates closely with the Mayor's Office of Climate Resiliency and NYC Emergency Management to submit applications for additional FEMA grant funding (via BRIC or Hazard Mitigation Grant Program/HMGP). There are currently four NYCHA applications under consideration for FEMA funding. Two are project applications: the first would fund the design and construction of campus-wide stormwater flooding protection at Breukelen Houses, and the second would fund the design and construction of a heat pump-based HVAC system and landscape enhancements at St. Nicholas Houses to protect residents from the impacts of extreme heat. Two applications are scoping applications: the first of those would fund a feasibility study for storm surge protections at the properties most vulnerable to storm surge that were not protected by post-Sandy investments, and the second would fund a feasibility study for retrofitting NYCHA community centers as resiliency hubs.

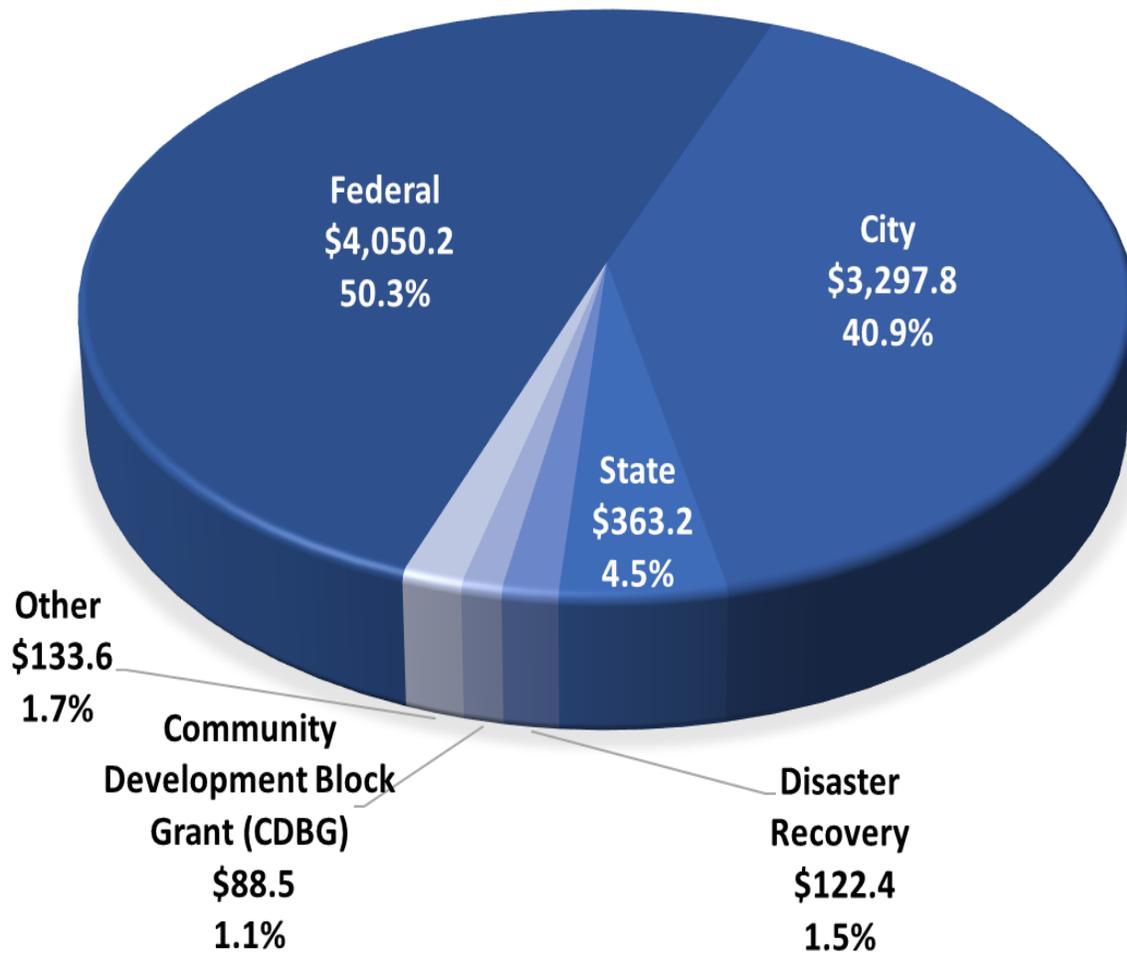
After Ida, R&R crafted the proposal that resulted in NYCHA receiving \$84 million of City Capital funding for stormwater mitigation at 7 sites. A feasibility study identifying the most effective landscape-based stormwater mitigation pathways at 5 sites will be completed in Q2 2022. Design for one site, Jefferson, has been procured via mini-solicitation; one site, Moore, will be designed and constructed by DEP; and a multi-site solicitation for design for the remaining five will be released in the Spring of 2022.

Recovery & Resilience is also working to secure funding for capital work to restore the functionality of building systems that were damaged by Ida, including four developments where boiler systems sustained lasting damage.

Capital Funding Summary

FY 2022 – 2026 Capital Funding by Funding Source

(\$ In Millions)



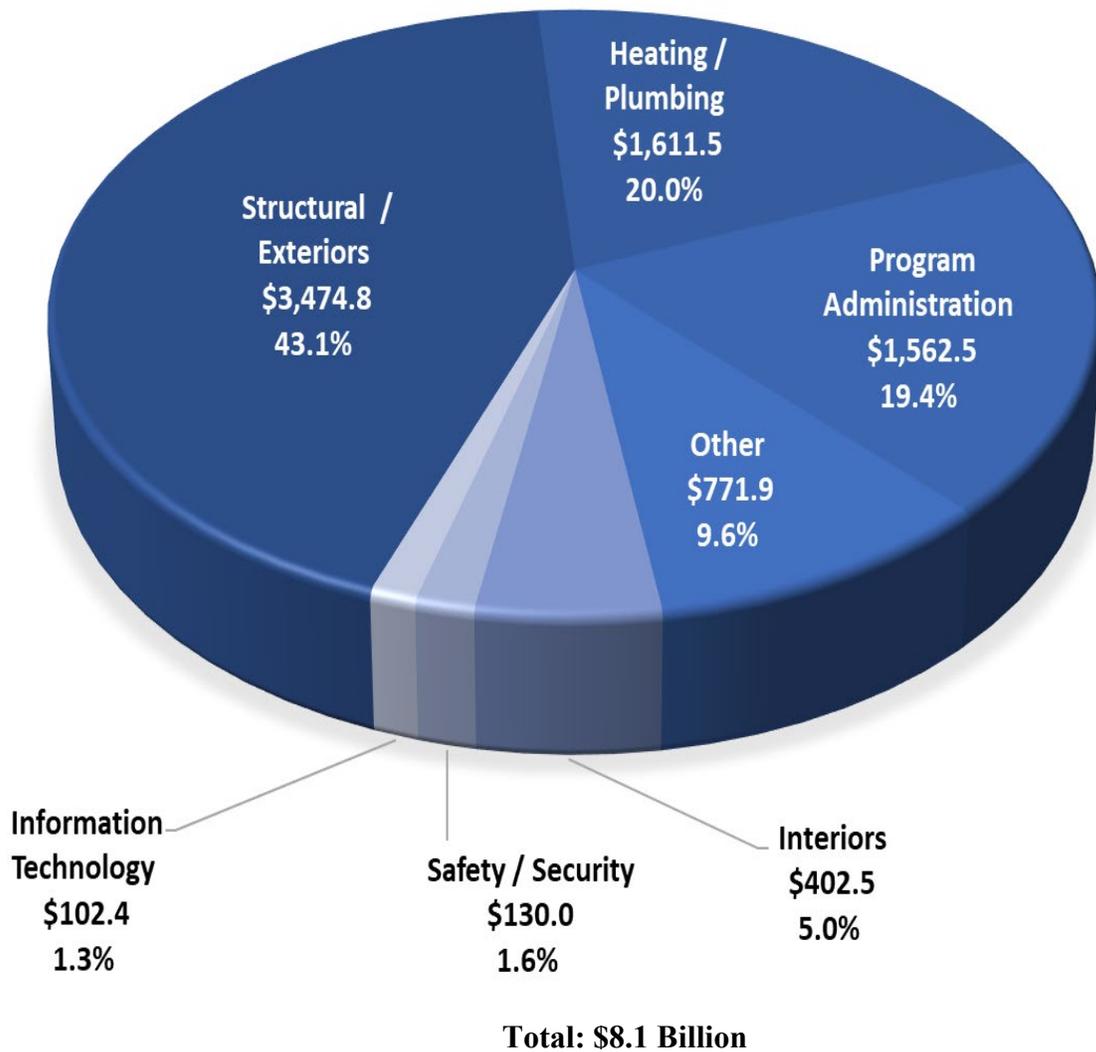
Total: \$8.1 Billion

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

Capital Funding Summary

FY 2022 – 2026 Capital Plan by Work Type

(\$ in Millions)



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