## City of New York



# Design-Build Program 2022 Progress Report to the New York State Legislature

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## I. Executive Summary

The New York City Public Works Investment Act (PWIA), signed into law in December 2019, authorized seven agencies — New York City's Department of Design and Construction, Department of Transportation, Department of Parks and Recreation, Department of Environmental Protection, School Construction Authority, Housing Authority, and Health and Hospitals Corporation — to use a two-step qualifications-based procurement process to select a single team of designers and builders to work on public works projects from start to finish. This process is called "design-build."

Prior to the PWIA's passage, these agencies were only permitted to deliver capital projects using the "design-bid-build" approach, which requires a project be fully designed as a first step. Once design is completed, the agency must then procure a contractor, a process that typically takes up to nine months. The contract must also be awarded on a lowest-qualified-bid basis, regardless of any other factors, including the bidder's suitability for a project or experience with the type of work they are bidding on. The design-bid-build process extends project schedules, increases cost, and impacts project quality because it encourages time-consuming and expensive change orders, claims by the contractors against the City, and litigation between the City and the City's contractors and designers.

In comparison, the PWIA allows an agency to select a project team to perform both design and construction services for a project based on the team's actual qualifications using clearly defined selection criteria applicable to the project. Design-build streamlines and combines design and construction into one point of responsibility, in a single contract, on the basis of which the design and construction team can deliver the best project at the best value. Moreover, design-build creates a true partnership, unlike the design-bid-build project delivery method, which discourages design firms and construction firms from collaborating with each other. For these reasons, design-build is a widely used best practice in cities and states across the nation.

The PWIA requires the City to provide an annual report on design-build projects, short lists and proposers, cost savings, time savings, and projected M/WBE utilization. This report includes the New York City Housing Authority (NYCHA), which received legislative permission from the State of New York under the NYC Housing Authority Modernization Investment Act in 2018 to use design-build project delivery on certain projects.

The City has continued to dedicate resources to fully utilize the provisions in the PWIA. Since the adoption of the legislation, authorized agencies have hired staff, onboarded outside expertise, implemented training programs, and developed new procedures and documents. The agencies continue to conduct outreach, which includes hosting virtual open-houses and roundtables, and engaged with potential contractors and new vendors, particularly small firms and MWBE contractors. Since publication of the 2021 Design-Build Progress Report, the City successfully advocated for and received a five-year extension of the PWIA from the State. In addition, the Department of Citywide Administrative Services (DCAS) was authorized to use design-build.

The City recommends further modifying the PWIA to allow more flexibility in structuring design-build procurements to shrink procurement schedules, maximize collaboration between the City and proposing teams, and control costs. The City recommends that legislation permit a single-step RFP process (as opposed to a two-step process) referred to as Progressive Design Build (PDB). This allows an accelerated procurement, reduces the resource-intensive RFP phase of procurements, and shifts project investigations and associated risk management to the post-award phase. Once a design-builder is selected, PDB allows for an iterative, collaborative process between the selected design-builder and the project owner that leads to a specific scope that meets projects goals and requirements. With this due diligence work in place, the design-builder can develop a more accurate delivery plan, schedule, and pricing, ensuring a high-quality project, further reducing risk, and accelerating the overall project delivery process.

## New York City Department of Design and Construction

## II. Key Findings

While much of the first wave DDC's design-build portfolio is moving through the procurement stage, several early projects are showing promising time savings:

#### Borough-Based Jails

## Queens Garage and Community Space Facility.

One month after the City Council approved the Borough-Based Jails program in late 2019, DDC released its first Request for Qualifications (RFQ), pursuant to State law. A Request for Proposals, the second step of the two-step procurement process required by State law, was released in June 2020. By March 2021, a design-build team had been selected and preparation work for the site had begun. Construction is at about 65% as of August 2022 and should be completed by early 2023. Actual procurement, design and construction duration: 3 years

Forecast design, procurement and construction duration using design-bid-build: 6 years

Total time savings: 3 years

## Facility Dismantling and Site Preparation.

Four procurements advanced concurrently to prepare the Bronx, Brooklyn, Manhattan and Queens sites for new buildings. RFP responses were received during the summer of 2021 and DDC issued notice to proceed with dismantling existing Brooklyn, Manhattan, and Queens facilities in December 2021. Site preparation notice to proceed for the Bronx location was issued at the same time. Site preparations should be completed by the summer of 2023. Forecast procurement, design and construction duration: 3 years

Forecast design, procurement and construction duration using design-bid-build: 6 years

Total estimated time savings: 3 years

#### Public Buildings and Infrastructure Design-Build Pilot Programs

Immediately after passage of the State Legislation in 2020, DDC established a Pilot Program to coordinate with each project management division, organize a design-build project management team, prepare a brand-new procurement strategy, and select and commence procurements for several priority projects. Despite the lead time for this extensive set up, DDC has completed procurements for several of the pilot projects, and on these awarded contracts, DDC is expanding focus to post-award resource needs, including contract administration, design management, regulatory review and approvals processes, and preparations for construction. On the first three awarded DB projects, groundbreaking for early construction should commence in the next fiscal year. Additional procurements are underway, and the agency will continue to identify strong candidates that can benefit from qualifications-based selection and innovative delivery by an integrated team.

## III. Description of each Design-Build Contract

### Portfolio Summary\*

There are 19 projects in DDC's current design-build portfolio with a total estimated cost of \$7- \$8.2 billion. These projects include 3 infrastructure projects and 7 public buildings, as well as 9 projects that are part of the Borough-Based Jails program. Work includes support facilities for the NYC Department of Parks and Recreation, pedestrian ramps for the NYC Department of Transportation, and the construction of new jails for the NYC Department of Correction. Certain projects are City priorities that stand to benefit from design-build's emphasis on innovation and collaboration. Others, including the Green Infrastructure pilot, have the potential to allow the agency to realize significant time savings on overall programs.

For Public Buildings and Infrastructure pilot programs, DDC is selecting projects on a rolling basis in the Front-End Planning process, balancing individual project characteristics with agency resources for concurrent intensive two-step procurements.

Note: The Borough-Based Jails program is administered as a stand-alone program, as the City received design-build authorization for this program in 2018, prior to the PWIA. DDC awarded a program management contract in April 2019, and in October 2019, the New York City Council approved the City's plan to close the jails on Rikers Island and build a network of smaller, safer, and fairer borough-based jail facilities.

\* DDC implements design and construction work on behalf of sponsors, which include other City agencies and public entities, some of which also received design-build authorization. This section of this report addresses the projects under DDC management; some projects in the remainder of this report are self-initiated and self-managed by the other entities.

## **Design-Build Contract Terminology**

This section uses terminology specific to design-build procurement and contracting:

- In a lump sum contract, the proposer provides the total cost at proposal, which becomes basis of the award.
- In a guaranteed maximum price (GMP) structure, the proposer provides a target GMP price at proposal that is then adjusted post-award to a binding GMP. The proposal includes a commitment to soft costs (i.e., professional services including design and pre-construction); then, after the contract is awarded and design and pre-construction services have advanced to better define the work, the binding price for construction work and associated costs is negotiated.

Division / Program	#Design-Build	Total Value
	Projects	
INFRASTRUCTURE	3	\$58,300,000
PUBLIC BUILDINGS	7	\$533,000,000
BOROUGH-BASED JAILS	9	\$6,408,000,000-\$7,608,000,000*
	19	\$6,999,300,000-\$8,199,300,000

\* The borough-based jails program's \$8.2 billion cost, cited elsewhere, includes associated expenses that do not fall under design-build.

#### **Infrastructure Pilot Projects**

#### HWP20MXQC Pedestrian Ramps

Sponsor: Department of Transportation	Contract Type: Lump sum

Description: Complex pedestrian ramp installation across Manhattan, Queens and the Bronx.

**Reasons for selecting project for DB:** Standard scope of work across the Pedestrian Ramp portfolio that can be replicated, and performance can be measured from project to project. If pilot execution is successful, potential to realize significant time savings on overall Pedestrian Ramps program.

#### HWMMLEXAV Lexington Avenue Pedestrian Safety Improvements

Sponsor: Department of Transportation	Contract Type: Lump sum
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**Description:** Construction of seven curb and sidewalk extensions along the east side of Lexington Avenue between East 41st and East 48th Streets, ensuring that all corner ramps and pedestrian crossings in the project area are built to ADA compliance.

**Reasons for selecting project for DB:** Well-defined scope with significant sub-surface investigation complete. Major priority for the City and East Midtown Governing Group.

#### GKOH15-DB Green Infrastructure - Gravesend Bay CSO Phase 4

Sponsor: Department of Environmental Protection	Contract Type: Lump sum

**Description:** Pilot for DB with Gravesend Green Infrastructure project

**Reasons for selecting project for DB:** Standard performance criteria for green stormwater drainage interventions across a large project portfolio and potential for schedule savings. If pilot is successful, potential to realize significant time savings on overall Green Infrastructure program.

### **Public Buildings Pilot Projects**

#### SANDY4-50 Rockaway Operational Headquarters

ponsor: Department of Parks and Recreation	Contract Type: Lump sum
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**Description:** Construction of a new, resilient facility for a Parks operational headquarters in the Rockaways. The new facility will consist of elevated shop space for maintenance activities as well as elevated and ground level storage, elevated office space, locker rooms, and bathrooms.

**Reasons for selecting project for DB:** A Parks priority project with defined performance criteria and potential for schedule savings. Presents opportunity to standardize maintenance facilities across the Parks portfolio.

#### P-1ORCHMO Orchard Beach Maintenance and Operations Facility

**Sponsor:** Department of Parks and Recreation

Contract Type: Lump sum

**Description:** Construction of a new building that will house material and equipment storage, and a variety of Department of Parks and Recreation (DPR) offices to meet a range of critical operational needs, includes an enclosed yard.

**Reasons for selecting project for DB:** A Parks priority project with defined performance criteria and potential for schedule savings. Presents opportunity to standardize maintenance facilities across the Parks portfolio.

#### NDF-CRLYN Mary Cali-Dalton Recreation Center

 Sponsor: Department of Parks and Recreation
 Contract Type: GMP

**Description:** New construction of a recreation center within the Lyons Pool complex with a variety of amenities and flexible programming spaces.

**Reasons for selecting project for DB:** A community priority project with a complex scope of work, including third-party coordination, that will benefit from close coordination between design and construction team experts to accelerate delivery to the community.

#### HAM17GHSE Marlboro Greenhouse

Sponsor: New York City Housing Authority	Contract Type: Lump sum
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**Description:** New building to house a greenhouse, community kitchen, and educational spaces for The Campaign Against Hunger in NYCHA-owned Marlboro Houses in Brooklyn.

**Reasons for selecting project for DB:** A project with a complex scope, site conditions, and specialized agricultural equipment that will benefit from an integrated team.

#### P-217SCRC Shirley Chisholm Recreation Center

Sponsor: Department of Parks and Recreation

Contract Type: Lump sum

**Description:** New recreation center at Nostrand Playground in Flatbush, Brooklyn that will include an indoor pool and kitchen for cooking classes.

**Reasons for selecting project for DB:** A community priority project with a complex scope of work, including specialized indoor aquatic equipment, that will benefit from close coordination between design and construction team experts to accelerate delivery to the community.

#### HR25BRCS 444 Thomas S. Boyland Multi-Service Center

Sponsor: Human Resources Administration       Contract Type: Lump sum
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**Description:** Demolition, design and construction of a new multi-service center. This new building will have sufficient space to accommodate the needs of a Girls Club and also returning (or new) community-based organizations.

**Reasons for selecting project for DB:** A City priority project with a complex scope of work, including demolition and site constraints, that will benefit from close coordination between design and construction team experts to accelerate delivery to the community.

#### HWHARPADM Harper Street Administrative Building

<b>Sponsor:</b> Department of Transportation	Contract Type: Lump sum
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**Description:** Construction of a new administration and personnel building for DOT, including demolition of the existing building and associated trailers to create space for vehicle storage.

**Reasons for selecting project for DB:** A DOT priority project with a complex scope of work, including phased construction for continuous site operations, that will benefit from close coordination between design and construction team experts to optimize delivery and minimize disruption to DOT operations on site.

#### **Borough-Based Jails Program**

#### **BBJ-QGAR** Queens Garage and Community Space

Sponsor: Department of Correction	Contract Type: Lump sum

**Description:** Construction of new multi-level Garage with Community Space as part of the Borough-Based Jails program.

#### **BBJ-MDSS** Manhattan Dismantle and Swing Space

Sponsor: Department of Correction	Contract Type: Lump sum
<b>Description:</b> Dismantle of existing Manhattan Facility and construction of swing space/interim sallyport.	

#### **BBJ-QDSS** Queens Dismantle and Swing Space

Sponsor: Department of Correction	Contract Type: Lump sum
<b>Description:</b> Dismantle of existing Queens Facility and construction of swing space/interim sallyport.	

#### **BBJ-KDSS** Brooklyn Dismantle and Swing Space

Sponsor: Department of Correction	Contract Type: Lump sum
<b>Description:</b> Dismantle of existing Brooklyn Facility and o	construction of swing space/interim sallyport.

#### **BBJ-XSP** Bronx Site Preparation

ponsor: Department of Correction	Contract Type: Lump sum
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**Description:** Site preparation of existing NYPD Bronx Tow Pound for future BBJ Facility, including removal of debris and ground leveling.

#### BBJ-KFAC Brooklyn BBJ Facility

Sponsor: Department of Correction	Contract Type: Cost Plus Not-to-Exceed GMP

**Description:** Construction of new Brooklyn Facility as part of the Borough-Based Jails program. This will be an 886-bed facility focusing on reentry services.

#### **BBJ-MFAC** Manhattan BBJ Facility

Sponsor: Department of Correction	Contract Type: Cost Plus Not-to-Exceed GMP
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**Description:** Construction of new Manhattan Facility as part of the Borough-Based Jails program. This will be an 886-bed facility focusing on reentry services.

#### BBJ-QFAC Queens BBJ Facility

ponsor: Department of Correction	Contract Type: Cost Plus Not-to-Exceed GMP
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**Description:** Construction of new Queens Facility as part of the Borough-Based Jails program. This will be an 886-bed facility focusing on reentry services.

#### BBJ-XFAC Bronx BBJ Facility

Sponsor: Department of Correction         Contract Type: Cost Plus Not-to-Exceed GMP
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**Description:** Construction of new Bronx Facility as part of the Borough-Based Jails program. This will be an 886-bed facility focusing on reentry services.

## IV. Short Lists of each Project

DDC's design-build procurement process during FY21 and FY22 demonstrates that high-caliber industry leaders chose to participate, aiming to partner on innovative projects. Pursuant to the State Law, a two-step procurement process is required. First, interested teams may submit Statements of Qualifications (RFQ), which are evaluated and scored by the selection teams. After that, the highest-evaluated teams are short-listed and may participate in the Requests for Proposals (RFP) phase. Included here is a summary of each project's short list, where applicable, as well as the complete list of proposers for each project that has reached that phase. Short lists are determined based on general capability, capacity, qualifications, experience, and past performance. A best value selection process that prioritizes design, quality, past performance, and qualifications over price will lead to improved outcomes. In the table below, we highlight the number of submissions DDC received from vendors found responsive.

Division / Program	Project Name	# of Respondents	Status	Next Steps
	Pedestrian Ramos	12	 RFP	Award
	Lexington Avenue Pedestrian Safety Improvements	10	RFP	Award
	Green Infrastructure-Gravesend Bay CSO Phase 4	8	RFQ	Short list
PUBLIC	Rockaway Operational Headquarters	17	Design	Construction
BUILDINGS	Orchard Beach M&O	18	Design	Construction
	Mary Cali-Dalton Recreation Center	11	Design	Construction
	Marlboro Greenhouse	16	Design	Construction
	Shirley Chisholm Recreation Center	14	Awarded	Contract
	444 Thomas S. Boyland Multi-Service Center	7	RFP	Award
	Harper Street Admin Building	9	RFP	Award
BOROUGH-BASED	Queens Garage and Community Space	9	Construction	
JAILS PROGRAM	Manhattan Dismantle & Swing Space	3	Construction	
	Queens Dismantle & Swing Space	5	Construction	
	Brooklyn Dismantle & Swing Space	5	Construction	
	Bronx Site Preparation	12	Construction	
	BBJ Facilities: Manhattan, Brooklyn, Queens and the Bronx	6	Short-listed	Proposal

#### Project ID

Project Name

#### **Shortlisted Firm**

HWP20MXQC	Pedestrian Ramps	JR Cruz Corp. Oliviera / LiRo JV		
		Restani Construction		
HWMMLEXAV	Lexington Avenue Pedestrian Safety	JR Cruz Corp.		
	Improvements	Restani Construction		
		Triumph Construction Corp.		
GKOH15-DB	Green Infrastructure - Gravesend Bay CSO Phase 4	Pending shortlist		
SANDY4-50	Rockaway Operational Headquarters	EW Howell + H3/Arquitectonica		
		Gilbane Building Company / Marvel Architects		
		Suffolk Construction Company, Inc. / Ennead Architects		
P-10RCHMO	Orchard Beach M&O Facility	Gilbane Building Company / nARCHITECTS		
		Skanska USA Building, Inc. / Dattner Architects		
		Suffolk Construction Company, Inc. / Ennead Architects		
NDF-CRLYN	Mary Cali-Dalton Recreation Center	Peter Scalamandre & Sons Inc. / STV Incorporated Caples Jefferson Architects PC		
		Padilla Construction Services, Inc. / Rogers Partners		
		Architects Architecture in Formation		
		J. Kokolakis Contracting, Inc./ Ikon.5 Architects, LLC.		
HAM17GHSE	Marlboro Greenhouse	CNY Public LLC PSF Projects Architecture D.P.C		
		Consigli & Associates / Studio Gang Architects		
		Kiss & Cathcart LoDuca Associates Skyline Industries		
P-217SCRC	Shirley Chisholm Recreation Center	Lendlease (US) Construction LMB Inc. / Studio Gang Architects		
		DeMatteis-Dattner		
		Sciame Construction, LLC. / Grimshaw Architects P.C.		
HR25BRCS	444 Thomas S. Boyland	Gilbane Building Company / Marvel Architects		
	Multi-Service Center	Hunter Roberts Construction Group Perkins Eastman		
		Turner Construction Company / WXY Architects		
HWHARPADM	Harper Street Administrative Building	Hunter Roberts Construction Group LLC / Dattner Architects		
		Plaza Construction LLC / Gannet Fleming Engineers and Architects, PC / Sage and Coombe Architects / Socotec, Inc.		
		Scalamandre Construction / Tully Construction Co., Inc. / Urbahn Architects PLLC / Selldorf Architects		

BBJ-QGAR	Queens Garage and Community Space	Hunter Roberts Construction Group, LLC Peter Scalamandre & Sons, Inc. Walsh Construction Company II, LLC
BBJ-MDSS	Manhattan Dismantle and Swing Space	Gramercy Group, Inc. Hudson Meridian - Breeze National Inc. JV Leon D. De Matteis Construction Corp.
BBJ-QDSS	Queens Dismantle and Swing Space	Hudson Meridian Construction Group Hunter Roberts Construction Group NorthStar Contracting Group, Inc.
BBJ-KDSS	Brooklyn Dismantle and Swing Space	Hudson Meridian Construction Group Hunter Roberts Construction Group, LLC Northstar Contracting Group, Inc.
BBJ-XSP	Bronx Site Preparation	ECCO III Enterprises, Inc. Gramercy/LiRo JV Yonkers Contracting Company, Inc.
BBJ-KFAC	Brooklyn BBJ Facility	Cauldwell Wingate Company, LLC Gilbane   Alberici, a Joint Venture
BBJ-MFAC	Manhattan BBJ Facility	Leon D. DeMatteis Construction Corp
BBJ-QFAC	Queens BBJ Facility	Transformative Reform Group, LLC
BBJ-XFAC	Bronx BBJ Facility	Tutor Perini Corporation

## V. Cost of each contract and estimated savings

When the agency utilizes the design-bid-build method, costly and delay-inducing change orders are not uncommon. Design-build is structured to avoid change orders, yielding significant savings. Change orders on designbid-build projects are estimated at 10% of total cost. By minimizing change orders, our design-build projects will yield an estimated \$700-820 million of the estimated portfolio value. As shorter construction schedules will save public funds on a range of costs, such as field office rentals, the time savings of utilizing design-build delivery will also yield significant cost savings, although these are not illustrated within this report. Estimated change order savings are based on a percentage of the estimated contract value and anticipated costs. Because of unprecedented cost escalation and market conditions, though, cost estimates may change over time. DDC anticipates sufficient data will be available in the coming year to begin incorporating comparisons of estimates and actual project costs in future reporting.  Total estimated savings from DB projects - \$700 million to \$820 million out of \$7 - \$8.2 billion total estimated portfolio value

	Estimated Portfolio Value	Estimated CO Savings		
PUBLIC BUILDINGS	\$533,000,000	\$53,300,000		
INFRASTRUCTURE	\$58,300,000	\$5,830,000		
BOROUGH-BASED JAILS	\$6,408,000,000 - \$7,608,000,000	\$640,800,000 - \$760,800,000		
TOTAL	\$6,999,300,000 - \$8,199,300,000	\$699,930,000 - \$819,930,000		

## **DDC** Divisions of Infrastructure and Public Buildings

Project ID	Project Name	Est. Project Size	Est. DB Contract Value	Awarded DB Contract Value	Est. CO Savings
HWP20MXQC	Pedestrian Ramps	69 corners	\$13,300,000	Pending	\$1,330,000
GKOH15-DB	Green Infrastructure - Gravesend Bay CSO Phase 4	30,000 linear ft	\$27,000,000	Pending	\$2,700,000
HWMMLEXAV	Lexington Avenue Pedestrian Safety Improvements	7 curb ext. 11 corners	\$18,000,000	Pending	\$1,800,000
SANDY4-50	Rockaway Operational Headquarters	11,000 ft², + site work	\$23,500,000	\$23,500,000	\$2,350,000
P-10RCHMO	Orchard Beach M&O Facility	10,200 ft² + site work	\$34,500,000	\$34,447,000	\$3,450,000
NDF-CRLYN	Mary Cali Dalton Recreation Center	33,000 ft² + site work	\$85,000,000	\$84,553,649	\$8,500,000
HAM17GHSE	Marlboro Greenhouse	8,000 ft² + site work	\$15,000,000	Pending	\$1,500,000

P-217SCRC	Shirley Chisholm Recreation Center	65,000 ft² + site work	\$131,000,000	Pending	\$13,000,000
HR25BRCS	444 Thomas Boyland Multi-Service Center	60,000 ft² + site work	\$120,000,000	Pending	\$12,000,000
HWHARPADM	Harper Street Administrative Building	77,350 ft² + site work	\$125,000,000	Pending	\$12,500,000
			\$591,300,000		\$59,130,000

#### **Borough-Based Jails Program**

- The BBJ program and plan to close the jails on Rikers Island were initiated in 2018 and approved by City Council in late 2019, prior to the COVID-19 pandemic. DDC is in the process of reevaluating the estimated value of the new facilities based on market conditions and escalation cost and aims to reflect these changes in future reporting.
- Total estimated savings from BBJ portfolio \$641 million to \$761 million out of \$6.4 to \$7.6 billion total estimated portfolio value

	Early Works	New Facilities	
Est. DB Contract Value	\$408,000,000	\$6,000,000,000	\$6,408,000,000
Est. CO Savings	\$40,800,000	\$600,000,000	\$640,800,000
Est DB Contract Value	\$408,000,000	\$7,200,000,000	\$7,608,000,000
Est. CO Savings	\$40,800,000	\$720,000,000	\$760,800,000
	Est. DB Contract Value Est. CO Savings Est DB Contract Value Est. CO Savings	Early WorksEst. DB Contract Value\$408,000,000Est. CO Savings\$40,800,000Est DB Contract Value\$408,000,000Est. DB Contract Value\$408,000,000Est. CO Savings\$40,800,000	Early Works         New Facilities           Est. DB Contract Value         \$408,000,000         \$6,000,000,000           Est. CO Savings         \$40,800,000         \$600,000,000           Est DB Contract Value         \$40,800,000         \$7,200,000,000           Est DB Contract Value         \$40,800,000         \$7,200,000,000           Est. CO Savings         \$40,800,000         \$720,000,000

## Early Works Projects

Project ID	Project Name	Est. Project Size	Est. DB Contract Value	Awarded Contract Value	Est. CO Savings
BBJ-QGAR	Queens Garage and Community Space	247,314 ft <sup>2</sup>	\$81,000,000	\$80,142,427	\$8,100,000
BBJ-MDSS	Manhattan Dismantle and Swing Space	2,819 ft <sup>2</sup> + sallyport	\$137,000,000	\$125,183,169	\$13,700,000
BBJ-QDSS	Queens Dismantle and Swing Space	152,000 ft <sup>2</sup>	\$44,000,000	\$43,104,235	\$4,400,000
BBJ-KDSS	Brooklyn Dismantle and Swing Space	5,500 ft <sup>2</sup> + sallyport	\$63,000,000	\$59,760,000	\$6,300,000
BBJ-XSP	Bronx Site Preparation	135,134 ft <sup>2</sup>	\$83,000,000	\$76,711,100	\$8,300,000
Total Estimate	d Savings		\$408,000,000	\$384,901,531	\$40,800,000

## **New Facilities Projects**

Project ID	Project Name	Est. Project Size	Est. DB Contract Value	Est. CO Savings
BBJ-KFAC	Brooklyn BBJ Facility	1,150,000 ft <sup>2</sup>	\$1,500,000,000 - \$1,800,000,000	\$150,000,000 - \$180,000,000
BBJ-MFAC	Manhattan BBJ Facility	806,000 ft <sup>2</sup>	\$1,500,000,000 - \$1,800,000,000	\$150,000,000 - \$180,000,000
BBJ-QFAC	Queens BBJ Facility	957,273 ft <sup>2</sup>	\$1,500,000,000 - \$1,800,000,000	\$150,000,000 - \$180,000,000
BBJ-XFAC	Bronx BBJ Facility	970,000 ft <sup>2</sup>	\$1,500,000,000 - \$1,800,000,000	\$150,000,000 - \$180,000,000
Total Estim	ated Savings		\$6,000,000,000 - \$7,200,000,000	\$600,000,000-\$720,000,000

## VI. Time Savings

Design-build is already helping DDC accelerate delivery of projects. We remain certain that the emphasis on collaboration and efficiency will allow the agency to complete public projects faster. Selecting teams of design-builders ensures improved coordination to limit delays, and when design and construction team members work together, they can deliver a high-quality and constructible project within the scheduled timeframe. With clear project performance requirements established early in the process, design-build teams can deliver public assets that are inspiring, enduring, practical, constructible, and cost-sensitive. Estimated time savings on design-build projects range from one year to over two years, depending on project complexity and other factors. One procurement process instead of two separate processes leads to time savings of approximately nine months. Construction work can begin during design, creating additional efficiencies. Furthermore, integrated design and construction teams can produce better design results that lead to fewer errors down the line.

As an example, constructing and completing a center like the Shirley Chisholm Recreation Center through design-bid-build would take an estimated 6.5 years. Using design-build, DDC estimates this community asset to be complete in about 3.6 years. This schedule saves nearly 3 years, a tangible difference to the community served by this center.

	Project Name	Project ID	Est. Time Savings (y)
INFRASTRUCTURE	Pedestrian Ramps	HWP20MXQC	2.0
	Lexington Avenue Pedestrian Safety Improvements	HWMMLEXAV	1.0
	Green Infrastructure - Gravesend Bay CSO Phase 4	GKOH15-DB	1.0
PUBLIC	Rockaway Operational Headquarters	SANDY4-50	1.8
BUILDINGS	Orchard Beach M&O Facility	P-1ORCHMO	2.6
	Mary Cali-Dalton Recreation Center	NDF-CRLYN	3.1
	Marlboro Greenhouse	HAM17GHSE	1.8
	Shirley Chisholm Recreation Center	P-217SCRC	2.9
	444 Thomas S. Boyland Multi-Service Center	HR25BRCS	2.3
	Harper Street Administrative Building	HWHARPADM	2.4
BOROUGH-BASED	Queens Garage and Community Space	BBJ-QGAR	3.0
JAILS	Manhattan Dismantle and Swing Space	BBJ-MDSS	2.9
	Queens Dismantle and Swing Space	BBJ-QDSS	3.2
	Brooklyn Dismantle and Swing Space	BBJ-KDSS	3.1
	Bronx Site Preparation	BBJ-XSP	3.1
	Brooklyn BBJ Facility	BBJ-KFAC	1.5
	Manhattan BBJ Facility	BBJ-MFAC	1.5

Bronx BBJ Facility	BBJ-XFAC	1.5	
	A	0.0	

#### **Data Notes**

Design-build and design-bid-build do not have the same alignment in terms of project phases. This report considers the durations for design-bid-build to be Design Notice to Proceed (NTP) through Substantial Completion and for design-build to be design-build NTP through Substantial Completion. Design-bid-build durations are estimates of how long the project would have taken with the delivery method based on either typical durations for those project types and sizes or from an original Front-End Planning design-build schedule development before pivoting to design-build. The design-build substantial completion dates are projections and subject to change.

## VII. M/WBE Participation Goals

In the design-build program, DDC aims to maximize use of qualified firms that have a demonstrated history of hiring, training, developing, promoting, and retaining minority and women staff and to encourage participation by City and State-certified Minority and Women-Owned Business Enterprises. The anticipated M/WBE Participation Goal for design-build projects is 30% for both design and construction. DDC has been conducting a series of forums to inform and educate the industry, thereby increasing knowledge of and participation in the procurement process. In addition, the program allows for those without prior design-build experience to participate, thus increasing the number of firms that are eligible to partner with the agency.

#### Anticipated M/WBE Participation Goal for Design-Build projects:

- Design work 30%
- Construction work 30%

#### **Data Notes**

Based on the refinements in the project's scope and design, DDC may revise the M/WBE participation goals during the RFP period and prior to the Proposal due date.

## M/WBE Participation Goals for Awarded Design-Build Projects

	Design Work	Construction Work
ROCKAWAY OPERATIONAL HEADQUARTERS	30% of value of design work	30% of value of construction work
ORCHARD BEACH M&O FACILITY	30% of value of design work	30% of value of construction work
MARY CALI-DALTON RECREATION CENTER	30% of the value of the cost to perform design work	30% of the value of the cost to perform construction work
QUEENS GARAGE AND COMMUNITY SPACE	30% of value of design work	30% of value of construction work
MANHATTAN DISMANTLE AND SWING SPACE	30% of value of design work	30% of value of construction work
QUEENS DISMANTLE AND SWING SPACE	30% of value of design work	30% of value of construction work
BROOKLYN DISMANTLE AND SWING SPACE	30% of value of design work	30% of value of construction work
BRONX SITE PREPARATION	30% of value of design work	30% of value of construction work

## New York City Health and Hospitals

## I. Executive Summary

In December 2019, the NYC Health & Hospitals (H+H) received legislative permission from the State of New York to use design-build project delivery on certain projects. This allows the corporation to select a team of designers and builders that would work on select design-build projects from start to finish, instead of the standard design-bid-build process. This document serves as an update on H+H's progress on those projects during Fiscal Year 2021 ("FY"), the first full year since that permission was granted.

The legislation requires H+H to provide an annual report on our design-build projects, short lists and proposers, cost savings, time savings, and projected M/WBE utilization.

In 2017 Governor Cuomo expanded design-build authority to state authorities including the New York Power Authority ("NYPA"). Since NYPA's authority was granted H+H has benefited from the completion of multiple design-build energy projects. This report does not include those projects as they were not directly administered by H+H, however they demonstrate the effectiveness of design-build in delivering projects more efficiently.

During FY2021 H+H secured a design-build advisor, identified 3 funded capital projects for design-build. Additionally, H+H secured initial funding for 2 additional design-build projects and has secured an outside legal team to support the RFQ and legal contract writing required to implement this program.

The intent to select and develop the tools and capability to launch this important initiative was directly impacted by the public health system's first priority to expand our bed capacity throughout the COVID-19 pandemic and prepare for the winter wave of COVID-19 which occurred during FY2021.

The data included reports on our design-build projects, short lists and proposers, cost savings, time savings, and projected M/WBE utilization.

Based on the results of on-time and on schedule work with our NYPA design-build portfolio (see Appendix V.) and the benefits of a design-build delivery for certain types of projects, H+H is strongly in favor of extending the design-build legislation as the organization should have this delivery option to deliver project efficiently and cost effectively.

II. Description of each Design-Build Contract

## Portfolio Summary

There are 2 projects in H+H's current design-build portfolio with a total estimated cost of \$42 million. These projects include a new build parking garage at Queens Hospital Campus and cogeneration plant which will include 3 new boilers at our Harlem Hospital Campus. One project is a facility priority that benefits from design-build's emphasis on innovation and collaboration. The other, includes sustainability and client resiliency measures, that have the potential to allow the corporation to realize significant time savings overall.

Facility / Program	<b>#Design-Build Projects</b>	Total Value
QUEENS HOSPITAL	1	\$10,000,000
HARLEM HOSPITAL	1	\$32,000,000
	2	\$42,000,000

#### **Capital Development Group**

#### 34202101 Queens Parking Garage

Facility: Queens Hospital Campus

Est Contract Value: \$10 million	Contract Type: Lump sum, fixed price

**Description:** Project includes construction of a new 350 space two-level parking garage on the western portion of the NYC Queens Hospital Campus for an approximately 142,000 Sq. Ft parking garage structure. The new parking garage will require zoning and massing in compliance with Floor Area Ratio (FAR) allowances. The Performance documents deliverable under this RFP includes identifying a successful path for the future design-builder to design, permit, and construct the new parking garage.

**Reasons for selecting project for DB:** As a new relatively simple structure with only below grade risks and an aggressive schedule, design-build presents opportunity to identify time and cost efficient parking structure standards which may be applicable to additional campus needs.

#### TKYHHC904 Harlem Boiler Plant upgrade

Facility: Harlem Hospital Campus

st Contract Value: \$32 million	Contract Type: Lump sum, fixed price
---------------------------------	--------------------------------------

**Description:** Replacement of all 3 existing 2134HP boilers with 3 smaller right-sized and more efficient 1000HP boilers.

**Reasons for selecting project for DB:** A facility priority project with defined performance criteria and potential for schedule savings. Presents opportunity to standardize large equipment replacements seamlessly at facilities across system-wide.

## III. Short Lists of Each Project

H+H's design-build program aims for high-quality design delivered by an experienced team that will collaborate at all stages of the design and construction process. Our procurement process during FY21 demonstrates that high-caliber industry leaders choose to participate, aiming to partner with us on constructible projects. Reflecting H+H's two-step procurement process where only short-listed firms may participate in the Requests for Proposals phase, we are including reports on each project's short list, where applicable, as well as the complete list of proposers for each project that has reached that phase. (Note that short lists are composed of up to three firms that may proceed to the Requests for Proposals stage.) Short lists are determined based on general capability, capacity, qualifications, experience, and past performance. A best value selection process that prioritizes design, quality, past performance, and qualifications over price will lead to improved outcomes.

We have issued RFQ for the Harlem Boiler Upgrade project on 7/18/2022 and plan to issue the RFP on 8/26/2022.

Facility/ Program	Project Name	Number of Proposers	Status	Next Steps
QUEENS HOSPITAL CAMPUS	Parking Garage		Prep	To Issue Mini-RFP
HARLEM HOSPITAL CAMPUS	Boiler Plant Upgrade		lssued RFQ	To Issue RFP

Project ID	Project Name	Procurement Type	Shortlisted Firm
34202101	Queens Parking Garage	Mini-RFP	Submitted - Gensler, Lothrop, Urbahn) ( 7 no-responses ) Shortlisted - 3 Responded/shortlisted ( Gensler, Lothrop, Urbahn) Awarded - Pending
		RFQ	
		RFP	
ТКҮННС904	Harlem CHP and boilers upgrade	Mini-RFP	
		RFQ	
		RFP	
	Parking Garage	Mini-RFP	Submitted - (Gensler, Lothrop, Moody&Nolan and NK), 3 no responses
			Shortlisted - 4 responded/shortlisted (Gensler, Lothrop, Moody&Nolan and NK),
			Awarded - Lothrop
		RFQ	
		RFP	

## IV. Cost of each contract and estimated savings

When the corporation utilizes the design-bid-build method, costly and delay-inducing change orders are not uncommon. Design-build is structured to avoid change orders, yielding significant savings. As the Corporation is early in launching the program, below applies a conservative 10% savings against the current budget.

As shorter construction schedules will save public funds on a range of costs, such as field office rentals, the time savings of utilizing design-build delivery will also yield significant cost savings, although these are not illustrated within this report. Additionally, design-build builds in certain contingencies that design-bid-build does not. Therefore, the fiscal year convinces us that cost savings from design-build are likely to be significant.

	Est. Portfolio Value	Est. CO Savings
QUEENS HOSPITAL CAMPUS	\$10,000,000	\$10,000,000
HARLEM HOSPITAL CAMPUS	\$32,000,000	\$32,000,000
Total	\$42,000,000	\$42,000,000

## IV. Time Savings

Design-build shows tremendous promise to help H+H efficiently deliver certain types of projects. We remain certain that the emphasis on collaboration and efficiency will allow the corporation to complete public projects faster. Selecting teams of design-builders ensures improved coordination to limit delays, and when design and construction team members work together, they can deliver a high-quality and constructible project within the scheduled timeframe. With clear project performance requirements established early in the process, our design-build teams can deliver public assets that are enduring, practical, constructible, and costsensitive. Estimated time savings on design-build projects range from one year to over two years, depending on project complexity as well as other factors. One procurement process instead of two separate processes leads to time savings of up to nine months. Construction work can begin ahead of full design completion, which creates additional efficiencies. Additionally, integrated design and construction teams can produce better design results that lead to fewer errors down the line.

Facility/ Program	Project Name	Project ID	Est Schedule Savings (years)
QUEENS HOSPITAL CAMPUS	Parking Garage	34202101	1.0
HARLEM HOSPITAL	CHP and boilers upgrades	TKYHHC904	1.0
CAMPUS	Parking Garage	Not yet decided	Planning

## V. M/WBE Participation Goals

H+H intends to use in its design-build program qualified firms that have a demonstrated history of hiring, training, developing, promoting, and retaining minority and women staff and to encourage participation by City- and State-certified Minority and Women-Owned Business Enterprises. Our anticipated M/WBE Participation Goal for design-build projects is 30% for both design and construction. The program allows for those without prior design-build experience to participate, thus increasing the number of firms who are eligible to partner with H+H.

#### Anticipated M/WBE Participation Goal for Design-Build projects:

- Design work 30%
- Construction work 30%

#### **Data Notes**

Based on the refinements in the project's scope and design, H+H may revise the M/WBE participation goals during the RFP period and prior to the Proposal due date.

## New York City Housing Authority

### **Portfolio Summary**

## I. Details of Design-Build Projects

There are 23 projects in NYCHA's current design-build portfolio with a total estimated budget of \$1.2 billion. These projects include 4 comprehensive modernizations, 7 waste yards, 1 pneumatic waste system, and 11 heating and hot water projects.

Project Type	#Design-Build Projects	Total Budget			
COMPREHENSIVE MODERNIZATION	4	\$800,000,000			
HEATING & HOT WATER SYSTEMS	111	\$435,337,329			
PNEUMATIC SYSTEMS	1	\$26,394,400			
WASTE YARDS	7	\$18,680,296			
TOTAL	23	\$1,280,412,025			

The comprehensive modernization projects include a broad scope of renovations at each of the four sites, such as environmental hazards abatement, roofs, facades, plumbing systems, heating and hot water systems, elevators, apartment including full kitchen and bath renovation, electrical upgrades, and other areas. The heating and hot water systems projects involve replacing boilers with new heating and hot water equipment and technologies to reduce heating outages and improve energy efficiency of NYCHA's heating plants.

The waste yard projects include the construction of new waste yards with auger compactors, hydraulic compactors, and for certain projects, secondary waste collection centers, which greatly improve the waste management of NYCHA developments, thereby addressing a key quality of life area for residents. The pneumatic waste system project also addresses waste management at developments by replacing individual compactors with a network of underground pipes, which keep trash away from residents' homes and deters pests.

<sup>1</sup>Three projects are contracted through and managed by the New York State Power Authority (NYPA).

## **Project Details**

	NYCHA Property	Current Budget	Contracted Design-Build Firm or JV
COMPREHENSIVE MODERNIZATION	St. Nicholas	\$500,000,000	All projects are currently in the planning and/or RFQ phase. No design-build firms or JVs have submitted proposals or been shortlisted.
	Todt Hill	(anocation to each site TDD)	
	Gowanus	\$200,000,000	
	Wyckoff	(allocation to each site IBD)	
	TOTAL	\$700,000,000	
HEATING & HOT WATER SYSTEMS	830 Amsterdam Avenue	\$28,595,486	Dynamic US
	Marble Hill	\$42,019,630	
	Berry	\$31,972,882	
	Ocean Hill Apartments	\$11,037,617	Tully Construction Co. /
	Saratoga Village	\$22,722,316	Richards Plumbing & Heating Co. JV
	Brownsville	\$44,355,166	
	Eastchester Gardens	\$45,051,012	Adam's European Contracting
	Jackson	\$34,134,990	
	Pink	\$51,576,534	Willdan Energy Solutions
	Tilden	\$62,746,069	
	Marlboro	\$79,867,828	Macan-Deve Engineers / Maric Mechanical JV
	TOTAL	\$454,079,530	

	NYCHA Property	Current Budget	Contracted Design-Build Firm
WASTE YARDS	303 Vernon Ave.	\$ 2,695,604	All projects contracted as a
	East 180th St-Monterey Ave.	\$ 2,407,719	Engineers / JR Cruz JV
	Webster	\$ 2,306,184	
	Morris II	\$ 2,549,067	
	Jackson	\$ 3,146,965	
	La Guardia	\$ 2,572,790	
	Marcy	\$ 3,001,966	
	TOTAL	\$18,680,296	
PNEUMATIC WASTE COLLECTION SYSTEM	Pneumatic System – Polo Grounds Towers	\$ 26,394,400	Navillus Title / DBA Navillus Contracting JV
	TOTAL	\$ 26,394,400	

The Design-Build firms that were selected to participate in submission of proposals under the RFP stages for these various projects were: Hunter Roberts Construction Group, Hudson Meridian Construction Group, MLJ Contracting Corp., Tully Construction Co. / Richards Plumbing & Heating Co. JV, Wildan Energy Solutions, Navillus Tile / DBA Navillus Contracting JV, Adam's European Contracting, WDF, Technico Construction Services, LiRo Engineers / JR Cruz JV, and Macan Deve Engineers-Maric Mechanical JV. There were three Design-Build firms that were selected to participate in submission of proposals under the RFP stage of the NYPA projects: CDM Smith, Dynamic US and LiRo Engineers.

## II. Estimated Cost and Time Savings

Projects listed above are in various phases from planning and procurement to design-build; construction is not yet completed on these projects. However, compared to the traditional design-bid-build approach, design-build will provide NYCHA significant time and cost savings, innovative solutions and technologies, and better value-for-money, especially for projects with complex or comprehensive scopes of work.

On a project level, NYCHA anticipates that use of design-build will on average save 0.5 to 1 year in time depending on the project complexity, and save 4% to 8% in costs. This cost savings is a benchmark range based on experience in New York and nationally, but the Authority will learn more about exact cost savings as these projects continue and when the projects are ultimately completed. Applying this savings benchmark to NYCHA's current portfolio of design-build projects, with a total estimated budget of \$1.2 billion, implies a savings of approximately \$50 million to \$100 million overall.

## III. M/WBE Participation

Use of design-build can also improve M/WBE participation and resident employment, through best value selection criteria emphasizing these areas. The Authority is committed to addressing historic disparities in contracting by providing opportunities for minority and women entrepreneurs, and employment and training for low- and very low-income persons, including NYCHA residents. Annually, the City reports its progress toward the Mayor's OneNYC commitment to M/WBEs of \$25 billion in contract awards by 2025. In the most recent report for Fiscal Years 2015-2021, NYCHA awarded \$3.257 billion to M/WBEs, the third highest by all Mayoral and Non-Mayoral agencies.<sup>2</sup>

NYCHA launched a revitalized M/WBE program on July 1, 2021. Goods and services contracts now include a mandatory 30% M/WBE contracting goal, with 15% of the total contract value subcontracted to MBE(s) and 15% to WBE(s). Of the contracted firms for the projects listed above, two design-build firms or JVs have M/WBE status, and six subcontractors approved to-date under these projects are M/WBEs. The Authority is undertaking extensive promotional and training activities directed at M/WBE firms, and in particular for the large-value comprehensive modernization projects, to try to ensure the 30% goal can be met. In addition, NYCHA is investing in technology that will improve NYCHA's capability to monitor awarded contractors' M/WBE subcontracting performance during the term of contract.

<sup>2</sup>OneNYC MWBE Bulletin - City M/WBE Awards Fiscal 2015-2021

## New York City Department of Transportation

## I. Details of Design-Build Projects

There are 4 projects in NYCDOT's current design-build portfolio with a total estimated budget of \$527.5 million. This includes 3 projects within the Division of Bridges; each project comprising of multiple bridges and 1 ferry terminal project. The Bridge Division is nearing completion of procurement of two teams of Owner's Representative to support the design-build program going forward. NYCDOT is also working closely with NYSDOT to make sure our policies and procedures adhere to federal guidelines as these bridge and ferry projects will likely be recipients of federal funding.

Program	#Design-Build Projects	Total Value
BRIDGES	3	\$302,100,000
FERRIES	1	\$45,000,000
	4	\$347,100,000

## II. Portfolio Summary

Project Name	Est. Contract Value	Status	Next Steps
East183rd Street Bridge & East 188th St Bridge Over Metro North Railroad Harlem Line	\$63 million	Preliminary Design / Design Approval	RFQ Development
Belt Shore Parkway over Sheepshead Bay Road / Ocean Avenue / Bedford Avenue/ Nostrand Avenue	\$193.1 million	Preliminary Design / Design Approval	RFQ Development
191st St Pedestrian Tunnel over Broadway & IRT #1 Subway	\$46 million	Preliminary Design / Design Approval	RFQ Development
Ferry Terminal Floodproofing	\$45 million	RFQ Evaluation	Shortlist Announcement

## III. Estimated Cost and Time Savings

Design build shows promise to help DOT speed projects and reduce costs for the following reasons.

- Design-build is structured to avoid change orders resulting from development of design without the collaboration with the contractor or other contract documentation related issues which are estimated at 10% of total cost for design-bid-build projects.
- Construction work can begin earlier in the project development and overlap with design completion which reduces the overall project duration and associated costs. These cost savings could take the form of reduced administrative burden as well as shorter contract duration for related consultant contracts.
- Selecting teams of design-builders based on best value ensures improved coordination and innovation to limit delays by delivering high-quality, constructible projects.
- Efficient construction schedules determined by contractor and designer working together result in the time saving and significant cost savings for design-build contracts.

## New York City Department of Environmental Protection

## I. Executive Summary

Under the New York City Public Works Investment Act (PWIA), the New York City Department of Environmental Protection (DEP) received authorization to use the design-build project delivery method for projects over \$10 million. This legislation permits DEP to select a team of designers and builders to work on selected projects from start to finish, instead of the standard design-bid-build methodology. In anticipation of the authorization, DEP established a roadmap to successfully initiate design-build projects by 2022. With executive support, development of the program has been a high priority initiative for DEP.

In fiscal years (FY) 2020 and 2021, DEP developed an implementation plan and created a team of design-build champions in key strategic areas across the agency. The team completed training, established a standardized approach to design-build project delivery (informed by industry best practices), began drafting documents, developed procedures, and identified project selection criteria. DEP also started outreach to the market and also hosted experienced practitioners, including other utility owners.

During FY 2022, DEP contracted an Owner's Advisor to assist in project selection, guidance and development of the procurement process, identified six funded capital projects to be delivered through design-build, and advanced the procurement of two Architect-Engineer service ("AE1") contracts to develop the design criteria for each project. DEP has also secured support from an outside legal team to assist in the development of the Design-Build Agreement template. DEP continued outreach, training, expanding the project delivery team, and performing preliminary design work on the selected projects.

The goals for FY 2023 are to register the AE1 contracts, develop the project requirements and design criteria, and release three Requests for Qualifications and the subsequent Requests for Proposals (RFP). DEP will capture lessons learned and develop standard operating procedures to guide and improve delivery of future projects.

## II. Details of Design-Build Projects

## Portfolio Summary

DEP design-build pilot program currently includes six projects with a total estimated budget of approximately \$230 million. The selected projects will provide DEP with the benefits of experience delivering multiple typologies of projects, ability to consolidate and deliver multiple projects under a single contract, opportunity to develop and deliver on performance-based design criteria, and potential time and cost savings. These typologies include roadway reconstruction upstate, in-city marine work, and electrical system upgrades at in-city wastewater resource recovery facilities. Estimated budgets are based on Class 5 Engineer's Estimates and will be refined as the design criteria is further developed in preparation of the RFPs.

Projects	Capital Projects bundled as one DB Project	Estimated Budget
UPSTATE ROADWAY RECONSTRUCTION	3	\$75-80M
ELECTRICAL DISTRIBUTION UPGRADES	1	\$65M
DOCK/BULKHEAD RECONSTRUCTION	2	\$85-90M
	6	~\$230M

Additional information on the scope of work is provide below:

- Three planned roadway projects will be bundled into a single design-build contract to provide the reconstruction of nearly 10 miles of two-lane roads, stabilization of approximately 55 culverts, and other supporting work spanning across Westchester, Ulster, and Greene counties.
- The electrical distribution system upgrade will include replacement of electrical feeders, substations, switchgears, generators, and motor control centers at the Port Richmond Wastewater Resource Recovery Facility in Staten Island.
- The marine work will include two dock and bulkhead/fender systems replacement projects bundled as a single contract. The work will include reconstruction of bulkhead, dock and fender systems to support sludge handling operations at the Port Richmond and Rockaway Wastewater Resource Recovery Facilities in Staten Island and Queens, respectively.

DEP is reviewing business cases on a rolling basis to identify additional projects that would benefit from design-build. DEP intends to expand the program over time, as design-build is an established methodology being used to deliver water/wastewater system capital projects successfully by other municipalities around the country with positive outcomes.

## III. Estimated cost and time savings & MWBE/DBE participation

Based on guidance, market insight and best practices, DEP set a target to pilot projects valued at \$50M or more. DEP intends to attract a diverse community of contractors to the program. DEP hopes to benefit from larger scale projects allowing for innovative and cost-effective approaches to performing construction on critical infrastructure while maintaining operations. Compared to the traditional design-bid-build approach, design-build is expected to provide time and cost savings, a best value selection determined by the owner's needs.

On a project level, DEP anticipates that use of design-build:

- Saves 0.5 to 1 year on average depending on the project complexity and contracting strategy (this is for the implementation phase, and we expect to save more time as the program matures);
- Cost savings (we are evaluating projections);
- Improves value; and
- Expands MWBE/DBE participation.

Time savings projections result from: (i) reduced procurement timelines, (ii) ability to overlap design and construction phases, and (iii) reduced communication lead times between design and construction partners during construction.

Cost savings projections will be as a result of: (i) best value selection criteria, value engineering and constructability analysis during design, (ii) shorter project timelines, and (iii) reduced change orders due to improved coordination.

In its design-build program, DEP intends to use qualified firms that have a demonstrated history of hiring, promoting, and retaining minority, women, and disadvantaged staff and to encourage participation by City- and State-certified Minority and Women-Owned and Disadvantaged Business Enterprises.