

**NYC DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP)
BUREAU OF ENGINEERING DESIGN AND CONSTRUCTION
CROTON FACILITY MONITORING COMMITTEE MEETING MINUTES
THURSDAY, MARCH 21, 2013 – 7:00 PM**

The Croton Facility Monitoring Committee (CFMC) met on Thursday, March 21, 2013 at the DEP Office, 3660 Jerome Avenue, Bronx, NY 10467.

Welcome

The meeting started shortly after 7:00 pm with six CFMC representatives in attendance. Chairman Robert Fanuzzi thanked the CFMC and the public for arriving promptly.

Attending - CFMC Representatives – Attachment 1

Lawrence Scoones, Representative of the Bronx Commissioner, Department of Parks and Recreation (DPR); Mr. Fanuzzi, Chair, Community Board # 8; Rev. William Francis, Community Board #7; Wilhelm Ronda, Representative of the Bronx Borough President; Council Member G. Oliver Koppell and George Diaz, Office of Council Member Koppell; Shane Ojar, DEP. **Others Attending:** DEP Staff; DPR Staff; Department of Design and Construction (DDC) staff; DEP Construction Manager; and members of the public.

Adoption of CFMC Meeting Agenda - Attachment 2

The meeting agenda, as prepared, was accepted by the CFMC.

Adoption of CFMC Meeting Minutes from December 6, 2012

The CFMC accepted the January 17, 2013 meeting minutes following a motion to adopt made by Mr. Diaz. Mr. Fanuzzi reminded DPR that at the last meeting, he asked for a summary of the Memorandum of Understanding on Croton-funded projects with DPR's aggregated spending for 2012, and the anticipated spending for 2013.

Status of DEP Responses to Croton FMC letters about Schlesinger Siemens Electrical (SSE) and a Site-wide Emergency Generator for the Croton Filter Plant

Mr. Fanuzzi asked Mr. Ojar when the CFMC will receive responses from DEP to its letters dated January 28, 2013. Mr. Ojar said that the DEP Commissioner received both letters and that replies are being prepared. Mr. Fanuzzi asked if the delay in replies is due to any special circumstances. Mr. Ojar said there are no unusual circumstances but that DEP letters go through an internal approval process that sometimes takes awhile. He added that the responses should reach the CFMC soon. Mr. Fanuzzi said the minutes of this meeting must report that the CFMC is extremely disappointed with the delay in DEP's replies. He said the delay is disrespectful to the CFMC, and that the public has a right to know DEP's position on matters raised by the CFMC.

Mr. Fanuzzi said concern about a backup generator particularly resonated with the CFMC because of problems with NYC's infrastructure following Superstorm Sandy. Robert Cooney, retired Verizon engineer, said he has long followed the lack of a Croton emergency generator to run the Croton Filter Plant if there is a power failure.

Dissatisfied with limited information from government, he filed Freedom of Information Law (FOIL) request for documents explaining why a backup generator waiver was granted by New York State Department of Health (NYSDOH). NYSDOH denied Mr. Cooney's FOIL request. Mr. Cooney appealed the denial. Because Croton water will be needed when DEP briefly shuts down the Catskill Aqueduct to optimize capacity related to the Delaware Aqueduct leak, and because two pumping stations will be retired when the Croton Filter Plant goes on line, Mr. Cooney said no backup power could be catastrophic in a power failure. Mr. Fanuzzi said the matters of backup generator and SSE commissions and omissions would be revisited at the June CFMC meeting.

Update on Van Cortlandt Park Landscape Design and Construction - Attachment 3

Rebecca Clough, Assistant Commissioner, DDC, and Eric Johnson, Grimshaw Architects, presented narrative and slides about the design for the park, driving range and other features above and around the Croton Filter Plant. They were supported by Julie Nymann and Steve DesNoyer of DPR, Tatiana Rezeanu of DDC, and Dennis Stanford of DEP. The presentation included changes to the plan that were based on past input from the CFMC. The CFMC was supportive of the revised plan.

Karen Argenti, Bronx Council on Environmental Quality (BCEQ), asked the cost for landscaping and why the landscaping won't be complete when the Croton Filter Plant goes into operation. Mr. Diaz asked when DDC construction is expected to start. Mr. Daly said that above grade architectural work in the DEP area including the driving range on top of the plant roof prevents the DDC contractors from starting until DEP contractors move trailers and equipment off site. The current schedule, which is an aggressive one, is that this will be completed by December 31, 2014 which would allow the DDC contractors to begin in 2015 at the earliest. DDC said \$45 million has been estimated at this time for construction costs for their portion of the project.

Mr. Fanuzzi said the plan will offer an exceptional amenity to the Bronx. He and Mr. Francis suggested a natural resources educational component as part of the program at the site. A discussion followed on the educational portion of the design. DEP also said that the current concessionaire is a youth-centered educational non-profit. Ms. Clough said the New York Botanical Garden might be interested in an educational program. Way-finding and signage were discussed. There was also a brief discussion about minimizing light pollution from illumination of the golf course at night, and about birds.

Ms. Argenti said some in the community still believe the plan goes beyond the boundaries of the statutory park alienation. She said more community people would be at the meeting if they had known Grimshaw's plan was being presented. Council Member Koppell said the CFMC expected to have a presentation by Grimshaw as it had been requested by the CFMC at the past two CFMC meetings.

Mr. Koppell asked for assurance that DEP will operate the Croton Filter Plant instead of privatizing its operations. Mr. Daly said that the Plant will be run by DEP staff who work directly for the Bureau of Water and Sewer Operations (BWSO).

DEP was asked how long the Croton Filter Plant contractor must maintain the driving range above the Plant. Mr. Stanford said that the current DEP contract specifies that after the project acceptance by the City, the contractor must maintain the driving range for a year. A discussion also took place about who would maintain the wetland cells. Mr. Stanford said that there is no agreement in place yet between DEP and DPR on the maintenance issue, and that discussions are ongoing between the agencies.

Mr. Koppell said the plan should be shared with the area's Community Boards and that it should receive widespread support. Mr. Francis said that Community Board #7 had previously seen and liked the plan. Mr. Koppell encouraged DDC to get the item to the PDC quickly. Ms. Clough said in order to continue the design of the project, PDC approval is required. To get added to the PDC calendar, a letter of support by the CFMC is needed. Mr. Fanuzzi repeated that the CFMC supports the plan. However, he asked that first the agencies present the plan to Community Board #8's Parks Committee so that a wider public will see it. The representatives agreed. (Note: the CB #8 Parks Committee met on April 24, 2013. Following that meeting, the CFMC's letter was signed and forwarded to the agencies. *Attachment 4*)

Croton Construction Update, Costs and Schedule and Equipment Testing

Bernard Daly, DEP, asked if the CFMC had questions about the costs report (*Attachment 5*). There were no questions. Mr. Daly and Lauren D'Attile, DEP, gave the construction and equipment testing update (*Attachment 6*):

Construction at the Croton Filter Plant at Van Cortlandt Park (VCP) continues. The majority of mechanical process equipment inside the Plant is installed. Checkout field equipment testing and field system testing have started. Placement of filter media (sand and anthracite) is ongoing. Electrical, heating, ventilation and air conditioning (HVAC), plumbing and interior finish work in the Croton Filter Plant also continues. Construction of the DEP above-grade structures, retaining and gabion walls, and site grading are proceeding at the Croton Filter Plant site.

At Jerome Park Reservoir (JPR), construction of the Croton Shaft and Meter Chamber/Distribution Chamber has been completed, except for minor change order and punch list work. Emergency repair of a leaking water main in Goulden Avenue was completed last summer, and connection to two high service water mains will be made during the scheduled shutdown of Goulden Avenue from Sedgwick Avenue to 205 Street and detour to Paul Avenue in summer 2013, when regular school is not in session. As part of the Croton Filter Plant equipment testing, the north basin will periodically fill and drain as raw water flows through the Croton Filter Plant. This water will not go to the water distribution system.

Ms. Argenti said there is dust and dirt at JPR and at the VCP site too. Thomas Farrell, Construction Manager, said he had recently looked at these areas. Parked cars and remaining snow prevented the street from being properly cleaned of sand from the past winter's snow removal operations. Street sweepers from the Department of Sanitation have begun to make their rounds again. Mr. Farrell will follow up to have both areas

cleaned. Ms. Argenti complained about garbage and dumpsters at the JPR demonstration filter plant site. Mr. Daly said this area will be cleaned and DEP plans to give back the demonstration filter plant parcel to DPR later this year. In response to Mr. Koppell's question, Mr. Daly said the JPR noise wall will come down in late fall 2013.

Electrical upgrades continue in the various Gate Houses at JPR and at Gate House No. 1, including installation of a new permanent electric service to Gate House No. 5 and the Shaft and Meter Chamber/ Croton Distribution Chamber. Plumbing, HVAC and interior finish work in Gate House No. 5 continues. A new temporary roof was installed at Gate House No. 2.

Additional space in a lane of Sedgwick Avenue will be needed to better access Shaft 3 on the corner of Goulden Avenue and Sedgwick Avenue to bring old equipment out of and install new equipment in Shaft 3. A portion of the eastbound right lane of Sedgwick Avenue near Goulden Avenue will become part of an expanded DEP work area for six months beginning in fall 2013.

Regarding the force main, as the CFMC knows, the plant residuals will be disposed of using an on-site sewer connection. Restoration of the test pits excavated along the original force main route was completed by the CRO-312FM contractor. The contractor must complete road striping and minor punch list items, after which all work associated with the CRO-312FM contract will have been completed, and this contract will be closed out.

Robert Press, Bronx News, asked if Croton water is really necessary. Mr. Daly said it is not required at this time but the Croton Filter Plant was mandated to be built under a federal consent decree. Mr. Cooney asked how much money has been paid to the federal government in fines. Mr. Daly said \$5 million, as the consent date for the Plant to be in operation was April 2012.

Ms. D'Attile said that fourteen systems in the Croton Filter Plant have now been energized. Plant A is farther along in the testing process: most field equipment tests have been completed and field systems are now being tested. The Raw Water System is being tested using the Main Control Room computers to automatically operate the system and confirm the system is complete. The other thirteen systems will follow. In Plant B, the fourteen systems have been energized and field equipment testing is beginning.

Ms. Argenti asked who does the testing. Ms. D'Attile said the contractors handle the testing with supervision by the construction manager and DEP. She said that training of the plant's future operators is underway.

In response to Mr. Koppell, Ms. D'Attile said the Croton Filter Plant will be ready to go into operation in the first quarter of 2014.

Mr. Ojar said that when the Croton Filter Plant commences operations, the responsibility will go from DEP's Bureau of Design and Construction (BEDC) to BWSO.

Preliminary Budget Planning/Van Cortlandt Park Pedestrian Bridge

Mr. Fanuzzi asked the other Community Board representatives to add to their list of 2015 budget priorities the funding of a pedestrian bridge for VCP. He asked that the Borough President's Office also request this item. Mr. Koppell said he will raise the matter again with the City Council Speaker and with the Bronx City Council Delegation. He recommended that all candidates for Mayor get asked to commit to a pedestrian bridge if they are elected.

CFMC Discussion

Mr. Fanuzzi said the CFMC should have a walking tour between the fences of JPR before the June meeting. He asked Mr. Ojar to follow up with BWSO to make arrangements and to involve Deputy Commissioner James Roberts. Mr. Ojar said he would contact Mr. Roberts.

Council Member Koppell suggested the CFMC June meeting be earlier than the third Thursday. On the June agenda the CFMC wants an update by DPR on the jogging path project. June 6th was the preferred meeting date, with a fallback date of June 13th in the event CFMC representatives have a conflict.

Mr. Scoones moved to adjourn the meeting at 8:50pm.

<u>Name</u>	<u>Organization / Company</u>	<u>Address</u>	<u>Phone</u>	<u>Fax</u>	<u>E-Mail</u>
Hon. Oliver Koppell	Council Member	3636 Waldo Avenue Bronx NY 10463	(718) 549-7300		okoppell@council.nyc.gov
Thomas Farrell PE	URS-MP Construction Management	3701 Jerome Avenue Bronx, NY 10467	(718) 696 2000		thomas.farrell@shawgrp.com
Brian Farrelly PE	URS-MP Construction Management	3701 Jerome Avenue Bronx, NY 10467	(718) 696-2000		brian.farrelly@crotoncm.com
Robert Fanuzzi	Community Board #8	5676 Riverdale Avenue Bronx NY 10471	(718) 884-4740		fanuzzir@stjohns.edu
Steve Des Noyer	Department of Parks & Recreation	Flushing Meadows-Corona Park	(718) 760-6617		steve.desnoyer@parks.nyc.gov
William Francis	Community Board #7	229 A East 204 Street Bronx NY 10458	(718) 933-5650		wfrancis@bronxcb7.info
Lawrence Scoones	Bronx Parks Commissioner's Office	1 Bronx River Parkway Bronx NY	(718) 430-1856		lawrence.scoones@parks.nyc.gov
Bernard Daly PE	Department of Environmental Protection	3701 Jerome Avenue Bronx, NY 10467	(718) 696-2000		bdaly@dep.nyc.gov
George Diaz	Office of Council Member Oliver Koppell	3636 Waldo Avenue Bronx NY 10463	(718) 549-7300		gdiaz@council.nyc.gov
Martha Holstein	Strategic Urban Solutions, Inc.	335 Adams Street Brooklyn, NY 11201	(718) 625-1005 x. 223	(718) 625-1032	mholstein@urbansol.com
Ed Neisch PE	URS-MP Construction Management	3701 Jerome Avenue Bronx, NY 10467	(718) 696-2000	(718) 324-3034	ed.neisch@arcadis-us.com
Robert Lopez	URS-MP Construction Management	3701 Jerome Avenue Bronx, NY 10467	(718) 696-2000		rlopez@crotoncm.com
Josh Sager PE	Department of Environmental Protection	3701 Jerome Avenue Bronx, NY 10467	(718) -696-2000		jsager@dep.nyc.gov
Wilhelm Ronda	Office of Bronx Borough President Diaz	198 East 161st Street Bronx, NY 10451	(718) 590-8087		wronda@bxbp.nyc.gov

<u>Name</u>	<u>Organization / Institution</u>	<u>Address</u>	<u>Phone</u>	<u>Fax</u>	<u>Email</u>
Rebecca Clough RA	Department of Design & Construction	30-30 Thomson Avenue Long Island City NY 11101	(718) 391-1127		cloughr@ddc.nyc.gov
Lauren D'Attilie PE	Department of Environmental Protection	3701 Jerome Avenue Bronx NY 10467	(718) 696-2000		laurend@dep.nyc.gov
Shane Ojar	Department of Environmental Protection	59-17 Junction Blvd Flushing NY 11368	(718) 595-4148		sojar@dep.nyc.gov
Robert M.Cooney PE		147 Skytop Dr Pleasantville NY 10570	(914) 769-7859		bobcooney@optonline.net
Dennis Stanford PE	Department of Environmental Protection	3701 Jerome Avenue Bronx NY 10467	(718)696-2000		dstanford@dep.nyc.gov
Karen Argenti	BCEQ	PO Box 346 Bronx NY 10471	(646) 529 1990		kabx101@gmail.com
Erica Spirites	Department of Environmental Protection	3701 Jerome Avenue Bronx NY 10467	(718) 696-2000		espiritos@dep.nyc.gov
Julie Nymann	Department of Parks & Recreation	Olmstead Center Flushing Meadows-Corona Park	(718) 760-6926		julie.nymann@parks.nyc.gov
Tatiana Rezeanu	Department of Design & Construction	30-30 Thomson Avenue Long Island City NY 11101	(718) 391-1850		rezeanuta@ddc.nyc.gov
Eric Johnson	Grimshaw Architects		(646)417-4415		eric.johnson@grimshaw-architects.com

Attachment 2

Agenda

Croton Facility Monitoring Committee Meeting

Thursday, March 21, 2013 – 7:00 PM

DEP Office – 3660 Jerome Avenue, Bronx NY 10467 - (718) 231-8470

- | | |
|---|--------------------------------------|
| I Welcome | Bob Fanuzzi, Chair |
| II Consider, Adopt March CFMC Agenda | CFMC Representatives |
| III Consider, Adopt 1/17/13 Meeting Minutes | CFMC Representatives |
| IV Comment on CFMC Letters to DEP & DEP Responses | Bob Fanuzzi & CFMC |
| V Update on Croton Filter Plant Landscape Design & Construction | DPR, DDC, DEP, & Grimshaw Architects |
| VI Croton Construction Schedule & Costs Report | Bernard Daly, DEP |
| VII Update on Field Equipment & Field System Testing | Bernard Daly
Lauren D'Attile, DEP |
| VIII Preliminary Budget Planning 2015 – Van Cortlandt Park Pedestrian Bridge | Bob Fanuzzi |
| IX CFMC Discussion & Set Date for Next Meeting | CFMC Representatives |

X Adjourn



CROTON WATER TREATMENT PLANT ABOVE GROUND STRUCTURES AND LANDSCAPE

GRIMSHAW Architects

NYC Dept. of Parks & Recreation

NYC Dept. of Environmental Protection

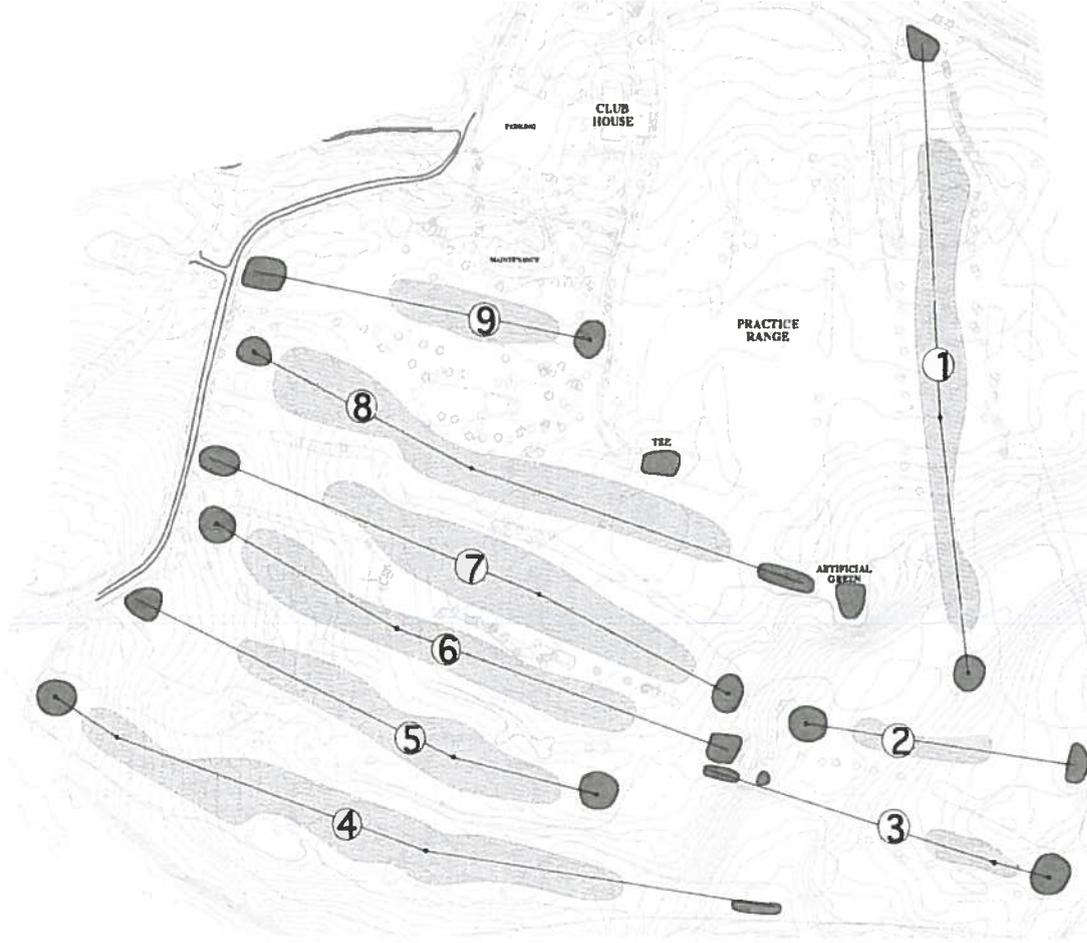
NYC Dept. of Design & Construction



Attachment 3

FINAL DESIGN OF DPR CLUBHOUSE & LANDSCAPING
FACILITY MONITORING COMMITTEE MEETING, MARCH 21, 2013

GOLF COURSE LAYOUT



PRE CONSTRUCTION LAYOUT



CURRENT LAYOUT

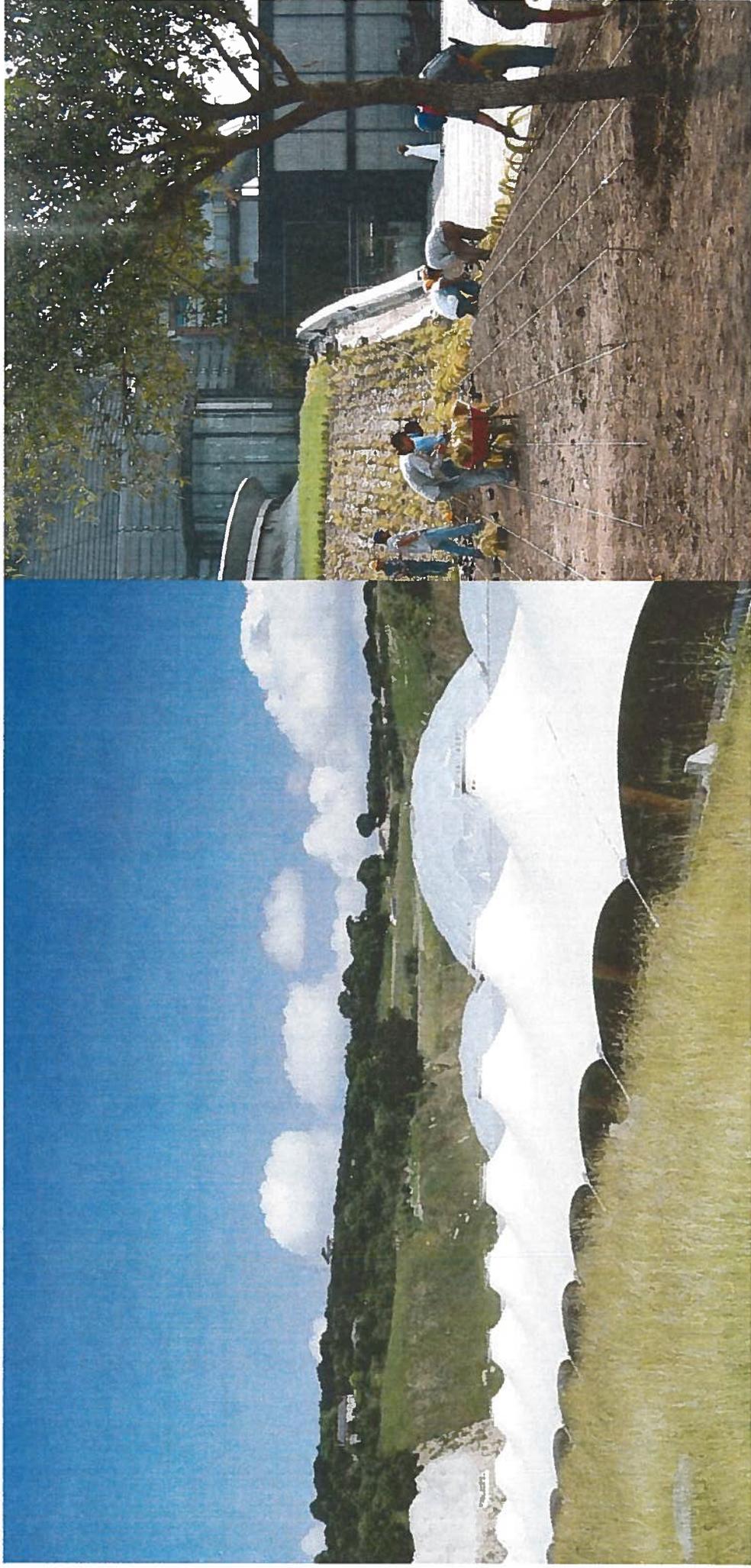
GOLF COURSE LAYOUT



POST CONSTRUCTION LAYOUT

CORE CONCEPTS

Artistic and creative integration of buildings in the landscape





CORE CONCEPTS

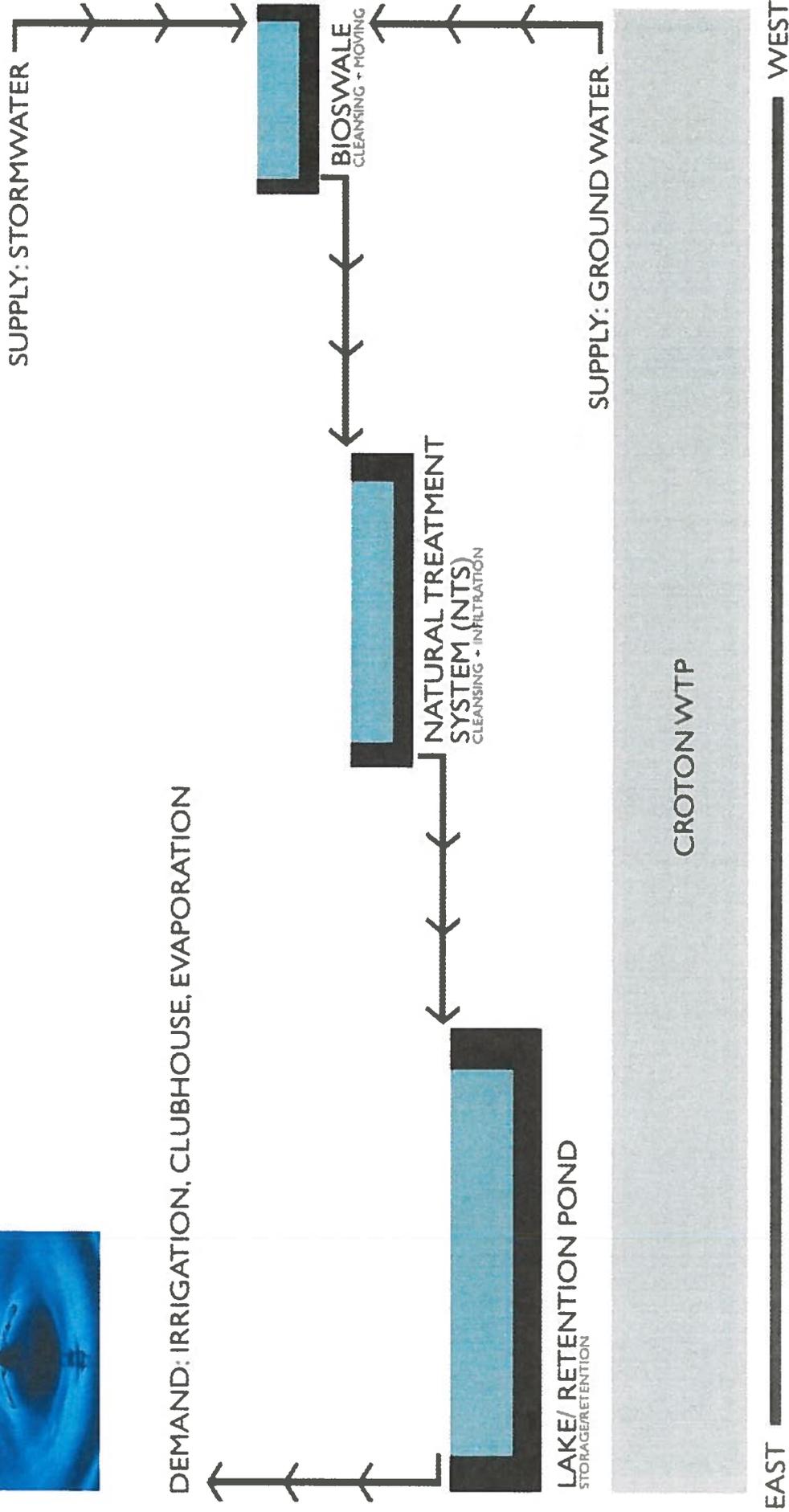
Create amenity for recreation and education





CORE CONCEPTS

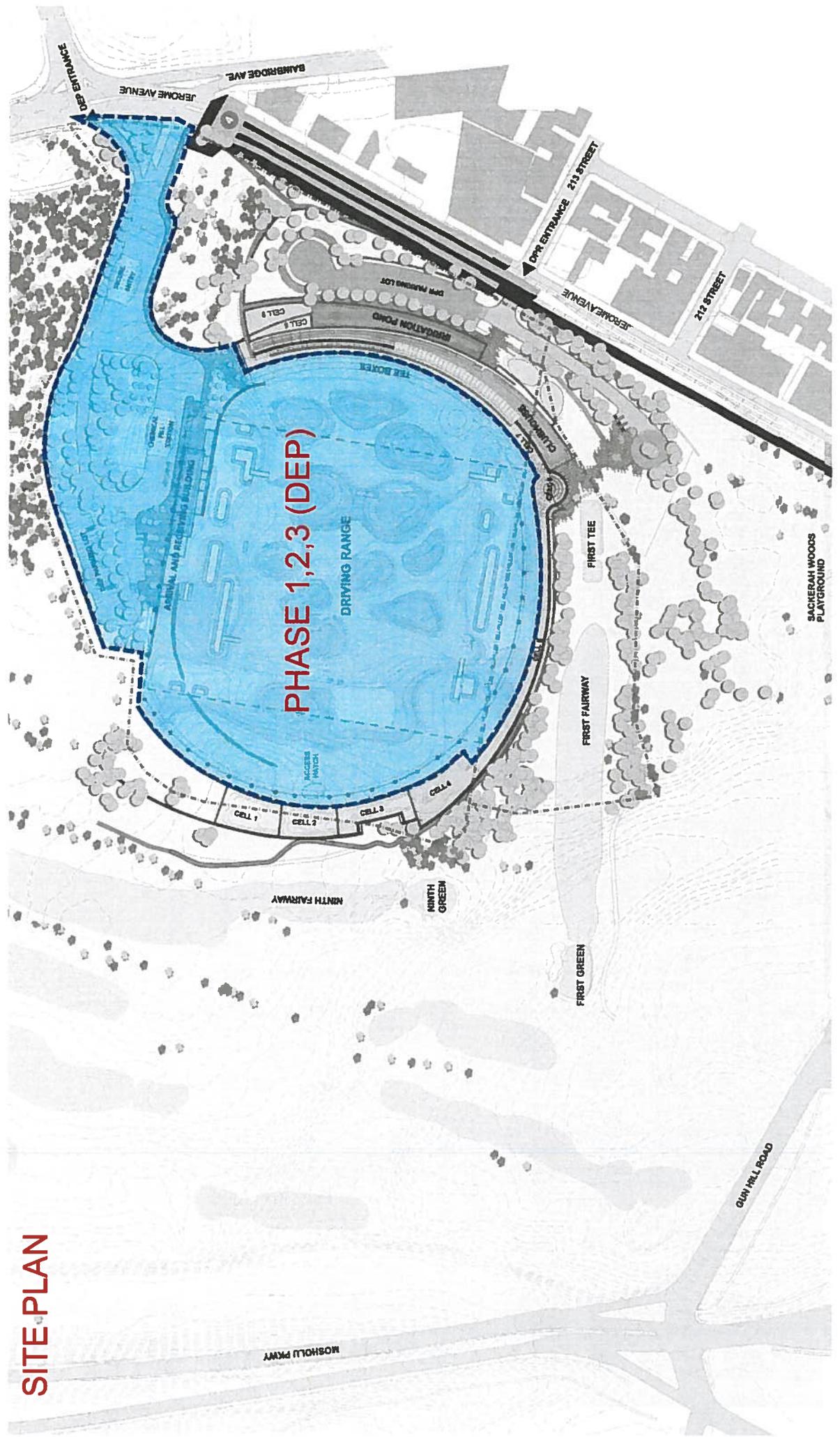
Sustainable design through the best practices of storm water management and site design





CROTON WATER TREATMENT PLANT

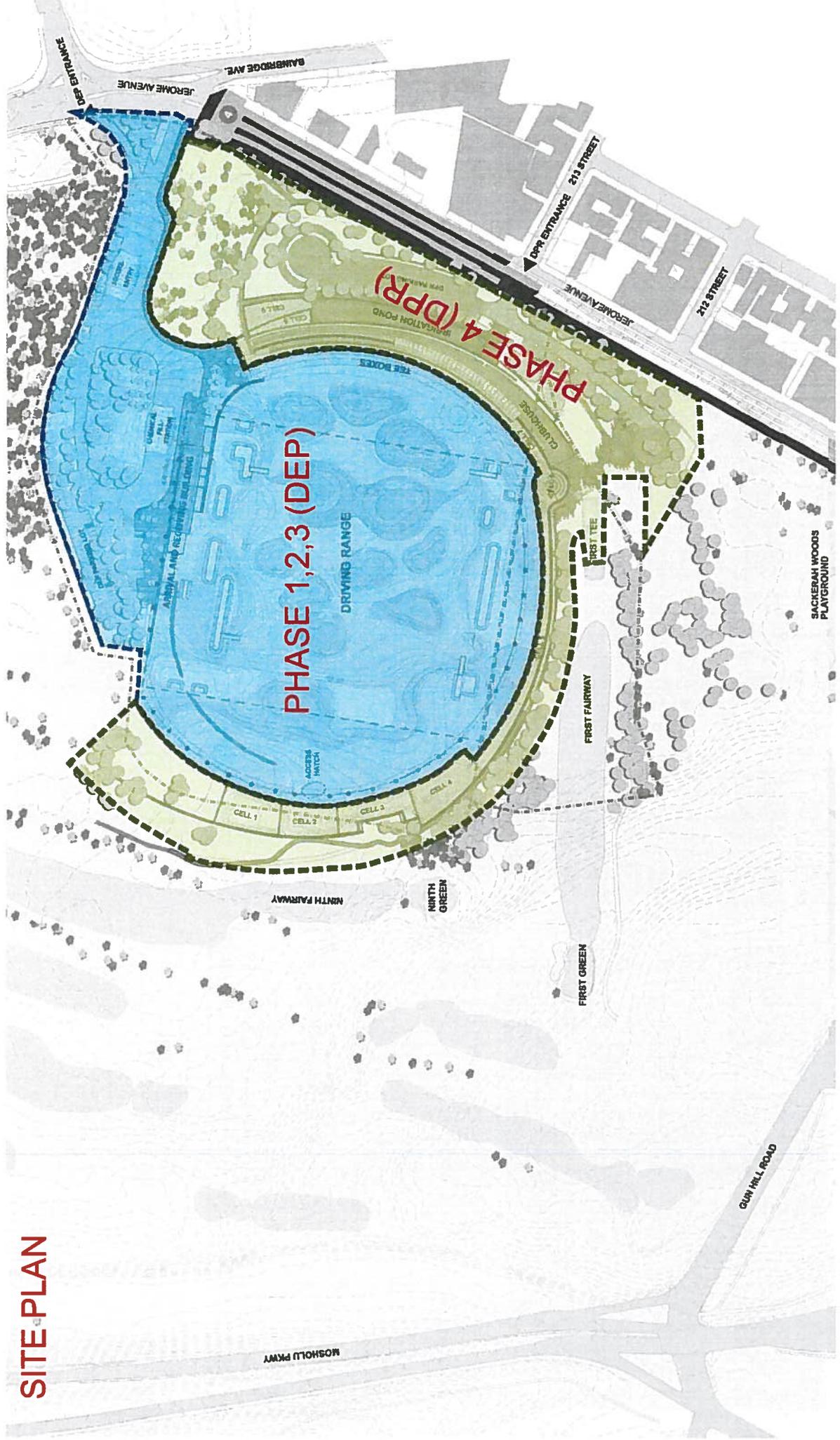
SITE PLAN





CROTON WATER TREATMENT PLANT

SITE PLAN





CROTON WATER TREATMENT PLANT ABOVE GROUND STRUCTURES AND LANDSCAPE

Facility Monitoring Committee Meeting, March 21, 2013



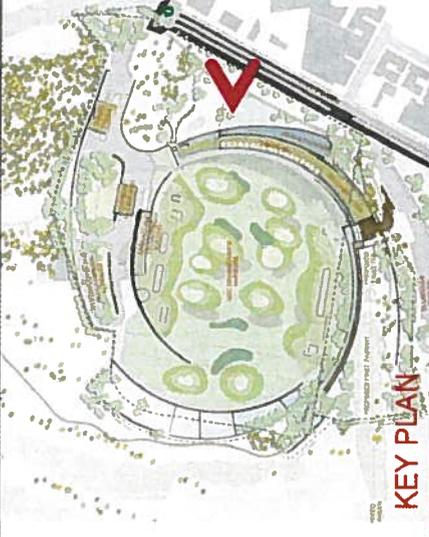
FINAL DPR CLUB HOUSE AND LANDSCAPE DESIGN

MARCH 2013



DPR TEE BOXES & PARKING AREA

VIEW FROM JEROME AVENUE



GRIMSHAW



CROTON WATER TREATMENT PLANT ABOVE GROUND STRUCTURES AND LANDSCAPE

Facility Monitoring Committee Meeting, March 21, 2013



NEW YORK CITY DEPARTMENT OF DESIGN + CONSTRUCTION

DPR CLUB HOUSE VIEW FROM JEROME AVENUE



GRIMSHAW



CROTON WATER TREATMENT PLANT ABOVE GROUND STRUCTURES AND LANDSCAPE

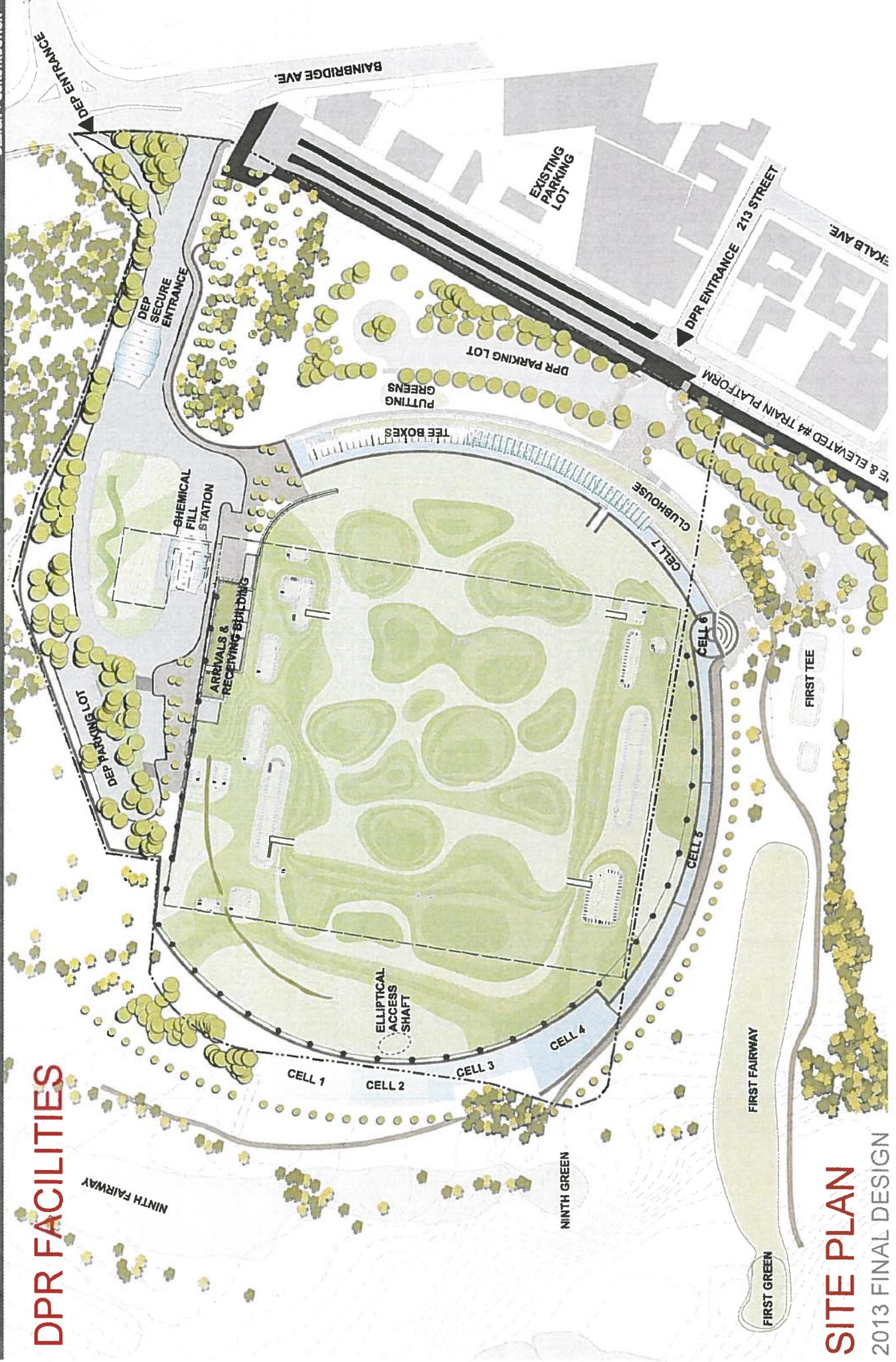
Facility Monitoring Committee Meeting, March 21, 2013



DPR CLUB HOUSE VIEW OF BUILDING ENTRANCE



DPR FACILITIES



SITE PLAN

2013 FINAL DESIGN



DPR FACILITIES

FORMER IRRIGATION POND



GRIMSHAW

BIRD'S EYE VIEW

2009 DESIGN

FORMER LOCATION OF PUTTING GREENS

RELOCATED GOLF COURSE PARKING



DPR FACILITIES

IRRIGATION POND
RELOCATED BEHIND
CLUBHOUSE



BIRD'S EYE VIEW
2013 FINAL DESIGN

CELL 6 AMPHITHEATER
FOR SCHOOL GROUPS

PUTTING GREENS REPLACE
IRRIGATION POND

WATER FEATURE ALONG
STONE CLAD WALL



DPR FACILITIES

PROJECT SCHEDULE

- DDC ABOVE GRADE CONSTRUCTION WILL DOVETAIL WITH DEP'S COMPLETION OF ABOVE GROUND WORK AND THE DEMOBILIZATION OF CONSTRUCTION EQUIPMENT
- DDC CONSTRUCTION DURATION 30 MONTHS



CROTON WATER TREATMENT PLANT ABOVE GROUND STRUCTURES AND LANDSCAPE

Facility Monitoring Committee Meeting, March 21, 2013



THANK YOU

CROTON FACILITY MONITORING COMMITTEE

Robert Fanuzzi, Chair
C/O Bronx Community Board #8
5676 Riverdale Avenue
Bronx NY 10471

May 8, 2013

Public Design Commission of New York City
City Hall – Third Floor
New York NY 10007

Re: Croton Water Treatment Plant: Above-Grade Department of Parks and
Recreation Facilities
Address: 3651 Jerome Avenue, Bronx NY 10467

Dear Public Design Commission Officials,

This project was previously reviewed in detail by the Croton Facility Monitoring Committee (CFMC) on October 27, 2010. Following CFMC comments, in 2012 the golf clubhouse, ring of wetland cells, and adjacent landscape under the jurisdiction of Department of Parks and Recreation (DPR) were value engineered. A short presentation of the revised design was made to the CFMC by Department of Design and Construction's (DDC) Assistant Commissioner on September 20, 2012.

On March 21, 2013 the CFMC heard from DDC, Department of Environmental Protection (DEP), DPR and the Grimshaw Architects design team for a review of the final phase of the Croton Water Treatment Plant above-grade DPR Facilities (known as Package IV). Because the designers have taken into consideration many of the CFMC comments related to safety, removed the retention pond in front of the parking area, and moved the location of the parking area, among other things, the CFMC supports the design in general. At my request, the agencies also presented the information to Community Board #8's Parks Committee on April 24, 2013, where the design was similarly supported. In that April 24 discussion, community concerns related to future DPR maintenance were raised by the Community Board #8 Parks Committee, and will be discussed further as the project proceeds. The support of the Parks Committee of Community Board 8 reads as follows, from the minutes of the April 24, 2013 meeting:

"After discussion, the committee voted to approve the design subject to a commitment by DPR and DEP to return to the committee in the near future with a plan for operating and maintaining the facility, including the nature of the concessionaire's responsibilities, thus

addressing the questions left unresolved at this meeting. Representatives of DPR and DEP agreed to this condition.”

The CFMC and Community Board #8 will continue to follow the agencies’ plans for bidding and construction.

Accordingly, the CFMC supports PDC’s calendaring and approval of the project.

Sincerely,

A handwritten signature in blue ink that reads "Robert Fanuzzi" with a stylized flourish at the end.

Robert Fanuzzi, Chair
Croton Facility Monitoring Committee

WM-11 Croton Water Treatment Plant
Cost Summary as of 2/28/2013

Croton WTP Construction Costs							
Contract	Contractor Name	Original Contract Price	Registered Change Orders	Current Contract Amount	Amount Invoiced to Date	% Contract Increase	% Complete based on Amount Invoiced to Date
CRO-311	Schiavone Construction Co.	\$127,660,000	-\$14,445,214	\$113,214,786	\$113,214,786	-11%	100%
CRO-312G	Skanska/Tully, JV	\$1,327,700,000	\$141,684,806	\$1,469,384,806	\$1,298,025,123	11%	88%
CRO-312E1	Schlesinger-Siemens, LLC	\$134,680,000	\$25,907,710	\$160,587,710	\$99,871,559	19%	62%
CRO-312E2	Schlesinger-Siemens, LLC	\$37,678,000	\$8,152,912	\$45,830,912	\$35,237,570	22%	77%
CRO-312H	Durr Mechanical Construction	\$105,700,000	\$25,139,971	\$130,839,971	\$109,015,102	24%	83%
CRO-312P	Picone/WDF, JV	\$58,475,000	\$14,987,183	\$73,462,183	\$66,370,898	26%	90%
CRO-312OS-G	Picone-Schiavone, JV	\$96,842,500	\$31,358,468	\$128,200,968	\$101,548,637	32%	79%
CRO-312OS-E	Eldor Electric	\$15,762,500	\$1,869,664	\$17,632,164	\$14,694,972	12%	83%
CRO-312OS-H	AWL Industries	\$822,000	\$56,971	\$878,971	\$448,643	7%	51%
CRO-312OS-P	JPP Plumbing	\$872,000	\$235,755	\$1,107,755	\$783,981	27%	71%
CRO-312FM (1)	Maspeth Supply Co. LLC	\$18,626,745	-\$324,387	\$18,302,358	\$1,628,792	-2%	9%
CRO-313	Schiavone/Picone, JV	\$212,227,000	-\$6,787,681	\$205,439,319	\$205,645,619	-3%	100%
CRO-315G	Angelakis Construction Corp.	\$3,641,000	\$2,282	\$3,643,282	\$3,643,282	0%	100%
CRO-315E	Interphase Electric	\$807,317	\$144,874	\$952,191	\$952,191	18%	100%
CRO-312CE	Con Edison	\$4,074,526	\$0	\$4,074,526	\$2,716,351	0%	67%
TOTAL		\$2,146,668,688	\$227,993,316	\$2,373,561,903	\$2,063,797,606	11%	87%
Croton WTP Design / Construction Management Costs							
HED-543 DES	Metcalf & Eddy / Hazen and Sawyer, JV	\$44,226,000	\$248,899,624	\$293,125,624	\$277,510,949	563%	95%
HED-545 CM	URS/Malcolm Pirnie, JV	\$63,400,000	\$76,195,713	\$139,595,713	\$117,550,922	120%	84%
TOTAL		\$107,626,000	\$325,095,337	\$432,721,337	\$395,061,871	302%	91%

Rehabilitation of the New Croton Aqueduct Construction Costs							
Contract	Contractor Name	Original Contract Price	Registered Change Orders	Current Contract Amount	Amount Invoiced to Date	% Contract Increase	% Complete based on Amount Invoiced to Date
CRO-334G	Frontier-Kemper/Schiavone/Picone JV	\$91,696,805	\$23,212,037	\$114,908,842	\$96,597,503	25%	84%
CRO-334E	Community Electric	\$1,119,000	\$325,115	\$1,444,115	\$1,034,088	29%	72%
TOTAL		\$92,815,805	\$23,537,152	\$116,362,957	\$97,631,691	26%	84%
Rehabilitation of the New Croton Aqueduct Construction Management Costs (2)							
TCM-CRO-334	Washington/HAKS JV	\$5,952,446	\$2,161,900	\$8,114,346	\$8,081,027	36%	100%
TOTAL		\$5,952,446	\$2,161,900	\$8,114,346	\$8,081,027	36%	100%

Notes:

(1) Costs shown for CRO-312FM are for the original Force Main Route to Hunts Point WPCP.

(2) Design costs for CRO-334G and CRO-334E are included in Contract HED-543 DES.

