PHYSICAL CONDITIONS ASSESSMENT FOR

BELL PARK GARDENS OAKLAND GARDENS, NY



Prepared for: Bell Park Gardens Board of Directors

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I. INTRODUCTION

A. <u>Purpose</u>

Lawless & Mangione, Architects and Engineers, LLP (L+M) was retained to conduct a Physical Condition Survey Bell Park Gardens, Queens, New York and prepare a report on our findings, for the purpose of short and long-term investment of Capital Improvements to be performed. The survey included an onsite visual survey of the exterior walls (including windows), roofs, and site. Mechanical systems were surveyed from common areas. The report lists the description of the buildings and our findings for the above mentioned address.

B. <u>Items Considered</u>

It should be noted that this report is limited to only those readily observable conditions present at the buildings at the time of our survey. Potentially hidden problems that may exist and would not be apparent without an extensive investigation or invasive probes. This was a visual examination only. Destructive probes and tests such as spray bar water testing of building components were not included.

Nothing in this report shall be interpreted as implying that L+M has given an opinion as to the suitability, adequacy or compliance with the building codes of the original design of the buildings, or subsequent repairs.

C. Building Description

Bell Park Gardens is located between 67th Avenue and 73rd Avenue and Springfield Boulevard and Bell Boulevard in Queens, NY. They are 2 story garden style apartments with 800 units within 39 buildings.

The façades of all building consists of red brick masonry with vinyl siding at the second floor at various buildings. Windows are replacement aluminum double-hung windows. All roofs are sloped shingled roofs with pitch to gutters and downspouts.



D. <u>Reported History</u>

Evidence of façade repairs were noted to consist of various areas of shell pointing and stone sill replacements. The main roofs were noted to be replaced 25+ years ago

The original windows were reported to be replaced over 20 years ago with aluminum double hung windows.

The boilers are 34-42 years old. Burners were replaced in 2011. The boilers have passed their useful life of 25 years and appear to be in fair condition. Fire tubes within the boilers were replaced by building staff throughout the years as they failed.



II. ARCHITECTURAL FINDINGS

A. BUILDING ENVELOPE

1. <u>Roofs</u>

The main roofs of Bell Park Gardens are pitched roofs consisting of grey asphalt shingles that drain to perimeter gutters and down spouts. There are a combination of gable roofs and hip roofs at each building structure. Appurtenances at the main roof consist of vent fans and vent pipes.

In addition to the main buildings, there are accessory garage structures for tenant use. These structures and finished in the same asphalt shingles.

OBSERVATIONS AND RECOMMENDATIONS

- 1. The main roofs are noted to be 25+ years old with some roofs throughout the complex being replaced more recently. The older roofs are beginning to show signs of deterioration. Areas of the roofs have begun to pull up at the edge and clearly display wear throughout the shingles. There is evidence of roof repairs throughout the complex assumed to address past water infiltration. While no current leaks have been reported, it is difficult to assess water tightness due to possible leakage into the attic space.
 - 2. The roof edges are terminated with aluminum gutters, downspouts, and fascia. These are assumed to be installed with the replacement roofs over 25+ years ago. The fascia and gutters throughout the property are noted to be in fair condition with signs of wear. Several areas of open elbows at the downspouts and damaged gutters were noted throughout.
 - 3. The garages are 1-story structures with asphalt shingles a similar vintage as the main building roofs.



		UNIT	TOTAL	RE	PAIR BUDGET		
DESCRIPTION	QUANTITY	(\$)	COST	COST YEAR 6- 10 YEAR 8- 10 YEA RS		SUG. YEAR S	
ROOFS							
Main Roof Replacements including gutters, leaders, fascias, and trim.	350,000 SF	\$15/SF	\$5,250,000	\$0	\$5,250,000	\$0	2022
Garage Roof Replacements including gutters, leaders, fascias, and trim.	50,000 SF	\$15/SF	\$750,000	\$0	\$750,000	\$0	2022
Roof Tiebacks	78	\$1000	\$78,000	\$0	\$78,000	\$0	2022
Sheathing replacement (allowance)	40000	\$3.00	\$120,000	\$0	\$120,000	\$0	2022
Roof Maintenance	39	\$3000	\$117,000	\$117,000	\$0	\$0	2021
Contingency /General conditions	1 LS	LS	\$1,578,750	\$15,787.50	\$1,562,962.50	\$0	
TOTAL FOR ROOFS	\$132,787.50	\$7,760,962.50	\$0				

2. Facades

The façades of the building consist of red brick masonry with aluminum siding at the second flood of some structures. The main chimneys for the central boilers are the same red brick masonry and extends up from the first floor to above the main roof level.

Windows are set into punched openings with brick jambs, head, and bluestone sills. Most cooling units are mounted through the window sashes while some units have installed split units.

The unit entrances are elevated from grade at concrete landings leading to a vestibule or direct into individual unit. The doors look to be insulated composite doors with storm doors and wood stools.

Historically, the building has undergone minor façade repair projects as required to help maintain the safety of both the tenants and the public.

OBSERVATIONS AND RECOMMENDATIONS

1. We noted a few locations of cracked, spalled brick masonry, and deteriorated mortar joints throughout the facades including at the chimneys. There are also several locations at each building of shell pointing. Shell pointing is a repair procedure where mortar is simply applied over the existing without cutting out the old joint. There are several areas throughout the complex where the shell pointing has



failed.

- a. The cracked and spalled bricks should be replaced to match the existing red brick. The open mortar joints as well as areas of failed shell pointing should be routed out and repointed in order to maintain the facades and prevent any future water infiltration and further deterioration.
- 2. We also observed heaved bluestone window sills throughout the complex. Beneath these sills are failed mortar joints that look to have shell pointing applied as well. In addition to the heaved sills, there were several cracked or spalled sill stones.
 - a. At the areas of heaved/displaced sill stones, the stone should be removed and reset with a new bed joint.
 - b. At the areas of cracked/spalled sill stones, they should be removed and replaced with new bluestone to match.
- 3. At the facades of each building, the window caulk is noted to be failing throughout the complex. The caulk is pulling away from both the window and the masonry leaving openings at the jambs. This will lead to water infiltration at the jambs and sills. All caulk should be removed and replaced. At areas of oversized joints, a caulk reveal shall be added to the jambs or head.
- 4. At the upper floors of the building, the aluminum siding is noted to display wear and fading due to age. It is assuming the siding is not original and is likely 25+ years old. At several areas, the window surrounds and termination trim is noted to be loose.
- 5. At the base of the building, the foundations are partially exposed and finished with a cement wash or stucco finish. Various locations throughout the complex are cracked or spalled. These areas should be sounded, cracks and spalls repaired, and a new cementitious coating furnished.
- 6. At the unit entrances, numerous wood stools throughout the complex were noted to be cracked or deteriorated. This could lead to tripping hazards, lead to water intrusion, and further deterioration of the frames. All deteriorated stools shall be removed and replaced.



		UNIT	70741	R	EPAIR BUDGET	-	
DESCRIPTION	QUANTITY	(\$)	COST	1 YEAR	2 - 5 YEARS	6 - 10 YEARS	SUG. YEARS
FACADES							
Remove and replace cracked and spalled brick masonry.	750 SF	\$50.00	\$37,500	\$37,500	\$0	\$0	2022
Rout and repoint brick joints	2363 SF	\$18.00	\$42,434	\$42,434	\$0	\$0	2022
Sill replacement (single)	9 EA	\$500	\$4,500	\$4,500	\$0	\$0	2022
Sill replacement (double)	6 EA	\$800	\$4,800	\$4,800	\$0	\$0	2022
Sill Remove and Reset (single)	97 EA	\$300	\$29,100	\$29,100	\$0	\$0	2022
Sill Remove and Reset (double)	158 EA	\$500	\$79,000	\$79,000	\$0	\$0	2022
Lintel Replacements (single)	6	\$750	\$4,500	\$4,500	\$0	\$0	2022
Lintel Replacements (double)	8	\$1200	\$9,600	\$9,600	\$0	\$0	2022
Stucco/Foundation Repairs	182	\$200/SF	\$36,400	\$36,400	\$0	\$0	2022
Caulk Reveal trim	8000	\$12/LF	\$96,000	\$96,000	\$0	\$0	2021
Siding replacement	36000	\$12	\$432,000	\$0	\$432,000	\$0	2022
Contingency /General conditions	Lump Sum Budget	LS	\$340,176	\$278,540.80	\$69,635.20	\$0	2022
TOTAL FOR FACADES				\$622,374.80	\$501,635.20		

B. <u>WINDOWS</u>

1. <u>Windows</u>

The existing windows are aluminum replacement double hung windows. It was reported to us that they were replaced approximately 25+ years ago. The windows observed, were manufactured by Champion.

OBSERVATIONS AND RECOMMENDATIONS

Based off the estimated time of replacement, these windows would be considered past their useful life. Despite the age, the windows considered to be between poor and fair condition. Some windows observed exhibited poor operation, broken tilt latches and meeting rail locks, resulting in air infiltration leaks. Both the tilt latches and meeting rail locks are plastic and the balances are spiral that constantly require adjustments, lubrication, or replacement. As these parts become more antiquated, replacement parts will not exist.



A repair program is currently coordinated by management and being performed by the building staff that services any inadequately functioning windows.

A phased window replacement project performed in conjunction with the building envelope façade repairs is recommended over the next 5 years, as the windows and their components will continue to deteriorate. New aluminum windows would meet the current energy code, operate with ease, and eliminate infiltration of air or possibly water.

		UNIT	TOTAL	R			
DESCRIPTION	QUANTITY	(\$)	COST	1 YEAR	2 - 5 YEARS	6 - 10 YEARS	SUG. YEARS
WINDOWS AND DOORS							
New Aluminum Double Hung windows (single)	2315	\$750	\$1,736,250	\$0	\$1,736,250	\$0	2024
New Aluminum Double Hung windows (double)	2785	\$1,500	\$4,177,500	\$0	\$4,177,500	\$0	2024
Door Stool Replacement	108	\$200/Ea	\$21,600	\$0	\$21,600	\$0	2024
Contingency	Lump Sum Budget	1	\$1,187,070	\$0	\$1,187,070	\$0	
TOTAL FOR WINDOWS				\$1,585,014	\$7,122,420.00		

C. <u>SITE</u>

1. <u>Site</u>

The 39 buildings are located between 67th Avenue and 73rd Avenue and Springfield Boulevard and Bell Boulevard. The complex is split into quadrants by 68th avenue and 218th Street. All buildings are set back from the street with green area between the buildings and public sidewalk. Throughout the complex there are pedestrian walkways that connect the buildings All sidewalks, public and private, are paved with poured concrete flags with tooled joints.

Within the complex, there are private parking lots and associated garages for tenant use. The lots are all finished in asphalt with yellow stripping for parking spaces. The lots are terminated with concrete curbs and pedestrian curb cuts.

Between the buildings are small asphalt paved areas that are used for tenants to air dry laundry. Each paved area has steel posts set in footings with laundry lines run between.



At eight locations between the buildings, there is play equipment for tenant use. Each area is finished with asphalt and enclosed with a chain link fence. Directly under the play equipment, rubberized play surface was installed for fall protection.

OBSERVATIONS AND RECOMMENDATIONS

- Overall, the walkways are in fair condition. Throughout the complex, several cracks were found in numerous concrete flags. Additional flags were noted to be heaving/settling due to tree roots or vegetation. Any deteriorated concrete flags should be removed and replace.
- 2. All on site parking lots seem to be in satisfactory conditions. There are a handful of areas where cracks/settling are present at the asphalt.
 - a. At areas of cracking, the area should be routed clean and prepared for filler material.
 - b. At areas of settling, the asphalt should be removed, subgrade should be properly filled and compacted, and new asphalt should be furnished.
 - c. An additional considered item would be the sealing and re-stripping of the parking areas.
- 3. At the laundry areas, any cracks or depressions at the asphalt should be repaired. All damaged laundry posts should be removed and reset in a sleeve and footing. It is suggested that a concrete curb be furnished at the perimeter of each area in order to prevent perimeter deterioration of the asphalt.
- 4. At the play areas, any cracks or depressions at the asphalt should be repaired. At the areas directly beneath the play equipment, the protective play surfacing is noted to be pulling up at the edges. This could lead to tripping hazards. It is suggested to remove the play surfacing and furnish new surfacing at the entire area, not just beneath the play equipment.
- 5. All unit entrances are elevated 2 or more steps up from grade onto a concrete landing. The walkways in front of several buildings are elevated varying heights as well. Many landings or walkways have no railings. At several areas, the latch side of the door aligns with the edge of the landing where there is no rail and can cause a



falling hazard. It is the understanding of this office that management is coordinating the installation of handrails where required or requested.

		UNIT	7074	F			
DESCRIPTION	QUANTITY	(\$)	COST	1 YEAR	2 - 5 YEARS	6 - 10 YEARS	SUG. YEARS
SITE							
Concrete Flag replacement	50 SF	\$1375	\$68,750	\$27,500	\$41,250	\$0	2022
Parking lot repairs	39720	\$10	\$397,200	\$132,400	\$132,400	\$132,400	2022
Play surface repair/replacement	8	\$10,000	\$80,000	\$80,000	\$0	\$0	2022
Laundry Area repairs	12	\$7,500	\$90,000	\$45,000	\$45,000	\$0	2022
Contingency/General Conditions	1	LS	\$127,190	\$56,980	\$43,730	\$26,480	
TOTAL FOR SITE	•	•	•	\$341,880.00	\$262,380.00	\$158,880.00	

D. ADDITIONAL CONSIDERED ITEMS

1. Facades

With wood framed construction, there is always risk of termite and carpenter ant damage. While not immediately visible, façade deterioration could be a result of damaged/deteriorated wood framing. It would be suggested to hire a pest control company to do a survey of the structures to ensure that structures are free of pest damage.

2. <u>Site</u>

With shrubbery and trees throughout the complex, specifically growing against the structures, there is chance of rodent and other mammals accessing roof structures of the buildings. It would be suggested to hire an arborist and landscaped to ensure that over hanging branches be trimmed back to limit access to the roofs.



III. <u>MECHANICAL</u>

A. <u>HEATING SYSTEM</u>

General Description

Heating and domestic hot water for the complex is provided by fifteen (15) boiler rooms throughout the complex. Each boiler room serves several buildings and contains one steam boiler, a steam to water heat exchanger, heating hot water circulating pumps, a domestic hot water storage tank, and gas fired water heaters. The boilers and associated equipment vary in capacity and age.

The complex is provided heat via a two-pipe low pressure hydronic system with heating elements located along the apartments. Low pressure steam is supplied from the boiler to a shell and tube steam to water heat exchanger from one (1) forced draft gas fired fire tube steel boiler of 3 pass construction. Heating hot water is heated in the heat exchanger and circulated through the buildings served by heating pumps. The boilers also provide domestic hot water from an instantaneous coils located in the top of the boiler. Domestic Hot Water is then stored in a storage tank located in the boiler room. The existing gas fired water heaters were not operational at the time of our visit.

The heating system is controlled by heat timer control panel which senses indoor and outdoor air temperature and controls the boiler operation.

OBSERVATIONS AND RECOMMENDATIONS

1. Low pressure steam is supplied from one (1) forced draft gas fired firetube steel boilers of 3 pass construction. (See Photo #1 thru 6)

The boilers are 34-42 years old and appear to be in fair condition and they have far passed their average useful life of 25 years according to American Society of Heating, Refrigerating and Air Conditioning Engineers.

When the boilers are replaced, consideration should be given to install two (2) smaller boilers each sized at 66% of the load and controlled through a lead lag operation. This will provide a backup in case one



fails and will result in better and more efficient operation for winter and summer. In addition, the new boilers shall be hot water boilers, which will eliminate the requirement of a steam to water heat exchanger.

- 2. The burners are a forced draft type with gas pilot ignition model Type C, as manufactured by Power Flame, utilizing natural gas. All the boilers had their burners replaced in 2011 and appear to be in good condition. These burners shall also be replaced along with the boilers. The new burners will have new controls, which will provide better efficiency.
- 3. The majority of the heating hot water circulation pumps have been replaced (see photo #7). We anticipate that the pumps would need repair as they age and we recommend that the pumps be replaced when the boiler is replaced. The new pumps can be provided with a variable frequency drive to allow for soft startup of the pumps which will increase the pump's lifespan.
- 4. The steam to water heat exchanger is insulated (see photo #8). No leaks were visible and appears to be in fair condition. The heat exchanger shall be removed.
- 5. Pipe insulation appeared to be in fair condition where visible within the mechanical rooms. New insulation should be provided where disyurbed during the boiler replacement.
- 6. The boilers were converted to natural gas ten (10) years ago by the installation of new gas service, gas piping, gas burner, gas trains and associated controls.
- 7. The existing heat timer control panels should be replaced to a newer model. In addition, a new three-way valve along with a control panel and sensors should be installed. The new valve will enhance overall heating system efficiency as well as being comparable with the new heat timer control panel.
- 8. There is no water meter at the make-up line to the boilers. We recommend that a water meter be installed and checked regularly to monitor the water make up to the system. Excessive amount of fresh water to the system will affect the effectiveness of the chemical treatment and result in boiler tube leaks.



- 9. In general, the heating system appears to be in fair condition considering its age and it is well maintained. We recommend the heating plants to be upgraded with new, reliable and efficient equipment within the next ten (10) years.
- 10. The complex has installed two (2) gas-fired atmospheric water heaters model HW-200M 102, manufactured by A.O. Smith, to generate domestic hot water in the summer (see photo #11). The heaters were not in use at the time of our visit. The heaters are vented to the boiler chimney via a separate breeching with a draft inducer fan.

					REPAIR BUDGET		
DESCRIPTION	QUANTITY	COST (\$)	TOTAL COST	1 YEAR	2 - 5 YEARS	6 – 10 YEARS	SUG. YEARS
HEATING SYSTEM							
Replace Boilers, heat exchanger, pumps and associated piping	8	\$450,000	\$3,600,000	\$0	\$3,600,000	\$0	2024
Replace Boilers, heat exchanger, pumps and associated piping	7	\$450,000	\$3,150,000	\$0	\$0	\$3,150,000	2029
Install chimney liner	8	\$25,000	\$200,000	\$0	\$200,000	\$0	2024
Install chimney liner	7	\$25,000	\$175,000	\$0	\$0	\$175,000	2029
TOTAL FOR HEATING SY	STEM			\$0.00	\$3,800,000.00	\$3,325,000.00	



V. <u>APPENDIX</u>

Budget Summary/Estimate

Photographs

Boiler Room Information



COST SUMMARY/ESTIMATE

PHYSICAL CONDITIONS ASSESSMENT COST ESTIMATE Bell Park Gardens, Queens, New York REPAIR BUDGET

DESCRIPTION	QUANTITY	UNIT COST (\$)	TOTAL COST	1 YEARS	2-5 YEARS	5-10 YEARS
ROOFS						
Main Roof Replacements	350,000	\$15.00	\$5,250,000.00	\$0.00	\$5,250,000.00	\$0.00
Garage Roof Replacements	50000	\$15.00	\$750,000.00	\$0.00	\$750,000.00	\$0.00
Roof tie backs	78	\$1,000.00	\$78,000.00	\$0.00	\$78,000.00	\$0.00
Roof Maintenance	39	\$3,000.00	\$117,000.00	\$117,000.00	\$0.00	\$0.00
Sheathing (Allowance)	40000	\$3.00	\$120,000.00	\$0.00	\$120,000.00	\$0.00
Contingency/General						
Conditions	1	LS	\$1,578,750.00	\$15,787.50	\$1,562,962.50	\$0.00
	Total for R	loofs		\$132,787.50	\$7,760,962.50	\$0.00
EXTERIOR WALLS						
Brick Replacement	750	\$50.00	\$37,500.00	\$37,500.00	\$0.00	\$0.00
Brick Pointing	2363	\$18.00	\$42,534.00	\$42,534.00	\$0.00	\$0.00
Sill replacement (Single)	9	\$500.00	\$4,500.00	\$4,500.00	\$0.00	\$0.00
Sill replacement (Double)	6	\$800.00	\$4,800.00	\$4,800.00	\$0.00	\$0.00
Sill remove and reset (Single)	97	\$300.00	\$29,100.00	\$29,100.00	\$0.00	\$0.00
Sill remove and reset (Double)	158	\$500.00	\$79,000.00	\$79,000.00	\$0.00	
Lintel replacement (single)	6	\$750.00	\$4,500.00	\$4,500.00	\$0.00	\$0.00
Lintel replacement (double)	8	\$1,200.00	\$9,600.00	\$9,600.00	\$0.00	\$0.00
Stucco / foundation repairs	182	\$200/SF	\$36,400.00	\$36,400.00	\$0.00	\$0.00
Caulk reveal trim	8000	\$12.00	\$96,000.00	\$96,000.00	\$0.00	\$0.00
Siding Replacement	36000	\$12.00	\$432,000.00	\$0.00	\$432,000.00	
Contingency/General						
Conditions	LS	LS	\$193,983.50	\$155,186.80	\$38,796.70	\$0.00
Tot	al for Exter	ior Walls		\$499,120.80	\$470,796.70	\$0.00
	WIN	DOWS AND DOC	RS			
Window Replacements		A750.00		\$0 00		* • • • •
(single)	2315	\$750.00	\$1,/36,250.00	\$0.00	\$1,/36,250.00	\$0.00
Window Replacements	0705	#1 500.00	#4 477 500 00	#0.00	#4.477.500.00	\$0.00
	2/85	\$1,500.00	\$4,177,500.00	\$0.00	\$4,177,500.00	\$0.00
Door stool replacements	108	\$200.00	\$21,600.00	\$0.00	\$21,600.00	\$0.00
Conditions	LS	LS	\$1,187,070.00	\$0.00	\$1,187,070.00	\$0.00

Total	or Window	s and Doors		\$0.00	\$7,122,420.00	\$0.00
		BUILDING SITE		•		
Sidewalk Flag Replacement	50	\$1,375.00	\$68,750.00	\$27,500.00	\$41,250.00	\$0.00
Parking lot repairs	39720	\$10.00	\$397,200.00	\$132,400.00	\$132,400.00	\$132,400.00
Play area repairs	8	\$10,000.00	\$80,000.00	\$80,000.00	\$0.00	\$0.00
Laundry Area repairs	12	\$7,500.00	\$90,000.00	\$45,000.00	\$45,000.00	\$0.00



Contingency/General										
Conditions	LS	LS	\$127,190.00	\$56,980.00	\$43,730.00	\$26,480.00				
Т	otal for Build	ding Site	S \$127,190.00 \$56,980.00 \$43,730.00 \$26,480.00 \$341,880.00 \$262,380.00 \$158,880.00 SYSTEM \$000.00 \$3,600,000.00 \$0.00 \$3,600,000.00 \$0.00 \$000.00 \$3,600,000.00 \$0.00 \$3,600,000.00 \$0.00 \$000.00 \$3,150,000.00 \$0.00 \$0.00 \$3,150,000.00							
	Н	IEATING SYSTEM	Λ							
Replace Boilers, heat										
exchanger, pumps and										
associated piping	8	\$450,000.00	\$3,600,000.00	\$0.00	\$3,600,000.00	\$0.00				
Replace Boilers, heat										
exchanger, pumps and										
associated piping	7	\$450,000.00	\$3,150,000.00	\$0.00	\$0.00	\$3,150,000.00				
Install chimney liners	8	\$25,000,00	\$200,000,00	\$0.00	\$200,000,00	\$0.00				
	0	φ20,000.00	φ200,000.00	φ0.00	φ200,000.00	φ0.00				
Install chimney liners	7	\$25,000.00	\$175,000.00	\$0.00	\$0.00	\$175,000.00				
Tot	al for Heatir	ng System		\$0.00	\$3,800,000.00	\$3,325,000.00				
Totals			\$973,788.30	\$19,416,559.20	\$3,483,880.00					

ALTERNATES										
Coat and Stripe parking lots	132400	\$7.00	\$926,800.00							





FACADE PHOTOS





Photo # 1: Deteriorated mortar joints



Photo # 2: Open joint at sill





Photo # 3: Open mortar joints and cracked brick





Photo # 4: Deteriorated mortar joints at chimney





Photo # 5: Open mortar joints



Photo # 6: Deteriorated wood stool





Photo # 7: improper window AC supports.



Photo # 8: Deteriorated window sill at siding





Photo # 9: loose siding trim



Photo # 10: Deterioration at foundation/stucco finish





Photo # 11: Deteriorated lintel



Photo # 12: Deteriorated lintel



ROOF PHOTOS





Photo # 1: Roof patches - typical



Photo # 2: Water run off diversion, debris, and aluminum gutter systems





Photo # 3: Deteriorated roofing



Photo # 4: deteriorated down spouts





Photo # 5: Deteriorated gutters



Photo # 6: Deteriorated gutters





Photo # 7: Water diversion and gutter system



Photo # 8: Deteriorated gutters



SITE PHOTOS





Photo # 1: Crack at asphalt - Bldg. 24



Photo # 2: Crack at asphalt - Bldg. 32





Photo # 3: Crack at asphalt - Bldg. 13



Photo # 4: Cracked/Heaved concrete flag - Bldg. 39





Photo # 5: missing hand rail - Bldg. 21



Photo # 6: missing handrails - Bldg. 32





Photo # 7: heaved concrete flag - Bldg. 24



WINDOW PHOTOS





Photo # 1: Replacement Champion Windows throughout the complex



Photo # 2: Damaged tilt latch





Photo # 3: Deteriorated window caulk



Photo # 4: Deteriorated window caulk





Photo # 5: Deteriorated window caulk



MECHANICAL PHOTOS





Photo #1: Typical Boiler and Burner



Photo #2: Typical Boiler with access door open





Photo #3: Typical Boiler, Burner, and Heat Exchanger



Photo #4: Typical Boiler with Access Door Open





Photo #5: Boiler Tubes



Photo #6: Boiler Tubes





Photo #7: Typical Heating Hot Water Circulation Pumps (Replaced Pump & Original Pump)



Photo #8: Typical Steam to Hot Water Heat Exchanger, Condensate Pump & Air Separator





Photo #9: Typical Domestic Hot Water Storage Tank



Photo #10: Typical Domestic Hot Water Mixing Valve





Photo #11: Typical Domestic Water Heaters



Photo #12: Typical Boiler Gas Train

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	Year	2011	2011	2011	2011	2011	2011	2011	2011	2011	2011	2011	2011	2011	2011	2011
rner	Model	C4-G-25ATI	C3-G-25ATI	C4-G-25ATI	C4-G-25ATI	C5-G-30ATI	C5-G-30ATI	C5-G-30ATI	C4-G-25ATI	C5-G-30ATI	C5-G-30ATI	C3-G-25ATI	C5-G-30ATI	C5-G-30ATI	C5-G-30ATI	C5-G-30ATI
Bur	Manufacturer	Power Flame	Power Flame	Power Flame	Power Flame	Power Flame	Power Flame	Power Flame	Power Flame	Power Flame	Power Flame	Power Flame	Power Flame	Power Flame	Power Flame	Power Flame
	Year Manufactured	1984	1986	1985	1987	1981	1979	1982	1985	1979	1981	1987	1979	1979	1981	1979
Boiler	Horsepower	150	100	150	125	175	175	175	125	175	175	100	175	175	175	175
	Model	MP-150	MP-100	MP-150	FST-125	MP-175	MP-175	MP-175	MP-125	MP-175	MP-175	FST-100	MP-175	MP-175	MP-175	MP-175
	Manufacturer	Rockmill	Rockmill	Rockmill	Federal	Rockmill	Rockmill	Rockmill	Rockmill	Rockmill	Rockmill	Federal	Rockmill	Rockmill	Rockmill	Rockmill
	Address	67-21 218th Street	219-08 67th Avenue	67-02 Springfield Avenue	67-68 Springfield Avenue	68-01 218th Street	67-96 Springfield Avenue	68-54 Springfield Avenue	220-45 73rd Avenue	69-51 218th Street	69-42 218th Street	216-72 68th Avenue	216-02 68th Avenue	69-01 Bell Boulevard	67-11 Bell Boulevard	67-32 218th Street
Boiler	Room No.:	0	4	7	6	11	14	15	17	20	24	26	28	31	36	39

PHYSICAL CONDITION ASSESSMENT BOILER INFORMATION

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