

**BUILDING SCIENCES INC.**

**CONSULTING ENGINEERS**

**(PRIVATE AND CONFIDENTIAL)**  
**(DRAFT FOR DISCUSSION PURPOSES ONLY)**

**RESERVE FUND STUDY UPDATE**

**FOR**

**METROPOLITAN TORONTO CONDOMINIUM  
CORPORATION No. 600**

**LOCATED  
AT**

**256 JARVIS STREET  
TORONTO, ONTARIO**

**PREPARED  
FOR**

**THE BOARD OF DIRECTORS**

**NOVEMBER 16, 2009**

**PREPARED  
BY**

**BUILDING SCIENCES INC.**

**Project No.: 02459**

Table 2 - Annual Outlay (Period 2010-2019)

Item No.	Description of Common Element Items	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1	Concrete and Precast Wall Panels										
2	Exterior Caulking						\$137,000				
3	Exterior Architectural Coating									\$152,000	
4	Window System Repairs						\$0				
5	Window System Replacement										
6	Window Weatherstripping	\$0									
7	Lobby and Vestibule Glazing/Doors							\$16,000			
8	Metal Grilles						\$5,700				
9	Inverted Roofing System-Phase 1										
10	Inverted Roofing System-Phase 2										
11	Inverted Roofing System-Phase 3										
12	Inverted Roofing System-Phase 4										
13	Inverted Roofing System Repairs				\$5,000					\$5,000	
14	Metal Soffit Finishes									\$26,200	
15	Roof Anchors										
16	Suspended Slab Concrete Repairs										
17	Suspended Slab Waterproofing System										
18	Roof Slab Concrete Repairs										
19	Roof Slab Waterproofing System										
20	Parking Garage Repairs			\$25,000					\$25,000		
21	Parking Garage Painting										
22	Parking Garage Overhead Door					\$9,000					
23	Parking Garage Ramp Heating Cables										
24	Corridor Carpeting and Wall Finishes				\$123,000						
25	Decorative Mouldings/Finishes-Suite Doors										
26	Flooring/Wall/Ceiling Finishes-Phase 1									\$50,000	
27	Flooring/Wall/Ceiling Finishes-Phase 2	\$100,000									
28	Interior Painting		\$18,200								
29	Interior Elevator Finishes				\$28,500						
30	Interior Elevator Finishes				\$28,500						
31	Main Lobby Finishes										
32	Miscellaneous Furnishings and Appliances								\$20,000		
33	Superintendent's Suite						\$0				
34	Saunas	\$18,400									
35	Hot Tub	\$18,800									
36	Suite Entrance Doors								\$18,500		
37	Common Area Doors								\$18,500		
38	Roof Top Trellis, Planters and Irrigation Sys.						\$12,000				
39	Asphalt Pavement Repairs			\$0					\$0		
40	Asphalt Pavement Replacement(Grade)										
41	Asphalt Pavement Replacement(Roof Slab)										
42	Concrete Pavement										
43	Metal Fencing-Phase 1							\$4,500			
44	Metal Fencing-Phase 2										
45	Concrete Planter										
46	Interlocking Pavement							\$25,000			
47	Landscaping and Miscellaneous Items					\$0					
48	Sanitary and Storm Sewer System								\$25,000		
49	Domestic Water Heating Boilers	\$50,000									
50	Heating Boilers	\$70,000									
51	Building System Pumps						\$15,000				
52	Domestic Hot Water Recirculation System			\$15,400							
53	Domestic Hot Water Storage Tank					\$6,000					
54	HVAC Unit										
55	Domestic Water Pipes and Risers	\$260,000									
56	Fire Protection System			\$51,300							
57	Make-Up Air, Vent. & Exhaust Sys.-Phase 1		\$38,000								
58	Make-Up Air, Vent. & Exhaust Sys.-Phase 2			\$38,000							
59	Plumbing Systems	\$20,000									
60	Heating/Cooling Units-Common Areas						\$6,800				
61	Garbage Chute								\$10,000		
62	Garbage Compactor			\$15,000							
63	Hot Tub Equipment		\$8,700								
64	Elevator Upgrades							\$138,000			
65	Mechanical Controls-Phase 1	\$15,000									
66	Mechanical Controls-Phase 2						\$25,000				
67	Power Supply and Switch Gear									\$50,000	
68	Electrical Distribution						\$25,000				
69	Panels and Sub-Circuits						\$35,000				
70	Interior Lighting-Building Tower									\$18,800	
71	Interior Lighting-Parking Garage										
72	Exterior Lighting					\$22,000					
73	Fire Alarm System-Phase 1										\$32,400
74	Fire Alarm System-Phase 2		\$60,000								
75	Fire Alarm System-Phase 3										
76	Fire Alarm System-Phase 4										
77	Emergency Generator										
78	Common Area Camera System					\$24,600					
79	Common Area Security System							\$48,300			
80	Enterphone System				\$20,500						
81	Pipe Tracing System	\$12,000									
82	Building Structure					\$20,000					\$20,000
83	Reserve Fund Study Updates			\$2,500			\$2,500			\$2,500	
84	Contingency	\$20,000					\$20,000				
Total Outlay Per Year, Present Value		\$584,200	\$124,900	\$147,200	\$205,500	\$81,600	\$284,000	\$231,800	\$117,000	\$304,500	\$52,400
Total Outlay Per Year, Future Value		\$584,200	\$127,398	\$153,147	\$218,078	\$88,326	\$313,559	\$261,044	\$134,396	\$356,770	\$62,623

Table 2 (Con't) - Annual Outlay (Period 2020-2029)

Item No.	Description of Common Element Items	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
1	Concrete and Precast Wall Panels				\$35,000						
2	Exterior Caulking										
3	Exterior Architectural Coating										
4	Window System Repairs	\$0					\$0				
5	Window System Replacement		\$390,000								
6	Window Weatherstripping										
7	Lobby and Vestibule Glazing/Doors										
8	Metal Grilles										
9	Inverted Roofing System-Phase 1						\$177,000				
10	Inverted Roofing System-Phase 2										
11	Inverted Roofing System-Phase 3				\$47,600						
12	Inverted Roofing System-Phase 4										
13	Inverted Roofing System Repairs				\$5,000					\$5,000	
14	Metal Soffit Finishes										
15	Roof Anchors							\$20,000			
16	Suspended Slab Concrete Repairs			\$250,000							
17	Suspended Slab Waterproofing System			\$142,500							
18	Roof Slab Concrete Repairs								\$20,000		
19	Roof Slab Waterproofing System								\$74,100		
20	Parking Garage Repairs			\$25,000					\$25,000		
21	Parking Garage Painting	\$26,000									
22	Parking Garage Overhead Door					\$9,000					
23	Parking Garage Ramp Heating Cables			\$48,000							
24	Corridor Carpeting and Wall Finishes						\$123,000				
25	Decorative Mouldings/Finishes-Suite Doors							\$25,000			
26	Flooring/Wall/Ceiling Finishes-Phase 1										
27	Flooring/Wall/Ceiling Finishes-Phase 2										
28	Interior Painting		\$18,200								
29	Suspended Ceiling Tiles										
30	Interior Elevator Finishes									\$28,500	
31	Main Lobby Finishes	\$60,000									
32	Miscellaneous Furnishings and Appliances										
33	Superintendent's Suite	\$0					\$0				
34	Saunas										
35	Hot Tub										
36	Suite Entrance Doors										
37	Common Area Doors										
38	Roof Top Trellis, Planters and Irrigation Sys.						\$12,000				
39	Asphalt Pavement Repairs			\$0					\$0		
40	Asphalt Pavement Replacement(Grade)								\$20,500		
41	Asphalt Pavement Replacement(Roof Slab)								\$11,400		
42	Concrete Pavement								\$20,500		
43	Metal Fencing-Phase 1										
44	Metal Fencing-Phase 2										
45	Concrete Planter										
46	Interlocking Pavement										
47	Landscaping and Miscellaneous Items										\$0
48	Sanitary and Storm Sewer System										
49	Domestic Water Heating Boilers										
50	Heating Boilers										
51	Building System Pumps						\$15,000				
52	Domestic Hot Water Recirculation System								\$15,400		
53	Domestic Hot Water Storage Tank	\$6,000						\$6,000			
54	HVAC Unit										
55	Domestic Water Pipes and Risers										
56	Fire Protection System										
57	Make-Up Air, Vent. & Exhaust Sys.-Phase 1										
58	Make-Up Air, Vent. & Exhaust Sys.-Phase 2										
59	Plumbing Systems	\$20,000									
60	Heating/Cooling Units-Common Areas						\$6,800				
61	Garbage Chute										
62	Garbage Compactor										
63	Hot Tub Equipment							\$8,700			
64	Elevator Upgrades										
65	Mechanical Controls-Phase 1										
66	Mechanical Controls-Phase 2										
67	Power Supply and Switch Gear										
68	Electrical Distribution										
69	Panels and Sub-Circuits										
70	Interior Lighting-Building Tower										
71	Interior Lighting-Parking Garage				\$17,100						
72	Exterior Lighting										
73	Fire Alarm System-Phase 1										
74	Fire Alarm System-Phase 2										
75	Fire Alarm System-Phase 3										
76	Fire Alarm System-Phase 4										
77	Emergency Generator		\$30,800								
78	Common Area Camera System										\$24,600
79	Common Area Security System										
80	Enterphone System										
81	Pipe Tracing System						\$12,000				
82	Building Structure					\$20,000					\$20,000
83	Reserve Fund Study Updates		\$2,500			\$2,500			\$2,500		
84	Contingency	\$20,000					\$20,000				
Total Outlay Per Year, Present Value		\$132,000	\$441,500	\$465,500	\$104,700	\$31,500	\$365,800	\$59,700	\$189,400	\$33,500	\$44,600
Total Outlay Per Year, Future Value		\$160,907	\$548,950	\$590,367	\$135,441	\$41,564	\$492,319	\$81,955	\$265,206	\$47,846	\$64,974

Table 2 (Con't) - Annual Outlay (Period 2030-2039)

Item No.	Description of Common Element Items	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
1	Concrete and Precast Wall Panels										
2	Exterior Caulking	\$137,000									
3	Exterior Architectural Coating				\$152,000						
4	Window System Repairs	\$0					\$0				
5	Window System Replacement										
6	Window Weatherstripping	\$0									
7	Lobby and Vestibule Glazing/Doors										
8	Metal Grilles										
9	Inverted Roofing System-Phase 1										
10	Inverted Roofing System-Phase 2	\$46,000									
11	Inverted Roofing System-Phase 3										
12	Inverted Roofing System-Phase 4	\$16,000									
13	Inverted Roofing System Repairs				\$5,000					\$5,000	
14	Metal Soffit Finishes										
15	Roof Anchors										
16	Suspended Slab Concrete Repairs								\$250,000		
17	Suspended Slab Waterproofing System								\$142,500		
18	Roof Slab Concrete Repairs										
19	Roof Slab Waterproofing System										
20	Parking Garage Repairs			\$25,000					\$25,000		
21	Parking Garage Painting	\$26,000									
22	Parking Garage Overhead Door					\$9,000					
23	Parking Garage Ramp Heating Cables								\$48,000		
24	Corridor Carpeting and Wall Finishes								\$123,000		
25	Decorative Mouldings/Finishes-Suite Doors										
26	Flooring/Wall/Ceiling Finishes-Phase 1									\$50,000	
27	Flooring/Wall/Ceiling Finishes-Phase 2	\$100,000									
28	Interior Painting		\$18,200								
29	Suspended Ceiling Tiles						\$7,500				
30	Interior Elevator Finishes										
31	Main Lobby Finishes										
32	Miscellaneous Furnishings and Appliances								\$20,000		
33	Superintendent's Suite	\$0					\$0				
34	Saunas	\$18,400									
35	Hot Tub						\$18,800				
36	Suite Entrance Doors										
37	Common Area Doors										
38	Roof Top Trellis, Planters and Irrigation Sys.						\$12,000				
39	Asphalt Pavement Repairs			\$0					\$0		
40	Asphalt Pavement Replacement(Grade)										
41	Asphalt Pavement Replacement(Roof Slab)										
42	Concrete Pavement										
43	Metal Fencing-Phase 1										
44	Metal Fencing-Phase 2										
45	Concrete Planter										
46	Interlocking Pavement								\$6,000		
47	Landscaping and Miscellaneous Items										
48	Sanitary and Storm Sewer System										
49	Domestic Water Heating Boilers						\$50,000				
50	Heating Boilers									\$70,000	
51	Building System Pumps						\$15,000				
52	Domestic Hot Water Recirculation System										
53	Domestic Hot Water Storage Tank			\$6,000						\$6,000	
54	HVAC Unit				\$153,000						
55	Domestic Water Pipes and Risers						\$260,000				
56	Fire Protection System										
57	Make-Up Air, Vent. & Exhaust Sys.-Phase 1							\$38,000			
58	Make-Up Air, Vent. & Exhaust Sys.-Phase 2								\$38,000		
59	Plumbing Systems	\$20,000									
60	Heating/Cooling Units-Common Areas						\$6,800				
61	Garbage Chute										
62	Garbage Compactor										
63	Hot Tub Equipment										
64	Elevator Upgrades										
65	Mechanical Controls-Phase 1	\$15,000									
66	Mechanical Controls-Phase 2						\$25,000				
67	Power Supply and Switch Gear										
68	Electrical Distribution										
69	Panels and Sub-Circuits										
70	Interior Lighting-Building Tower										
71	Interior Lighting-Parking Garage										
72	Exterior Lighting										
73	Fire Alarm System-Phase 1										
74	Fire Alarm System-Phase 2							\$60,000			
75	Fire Alarm System-Phase 3	\$18,800									
76	Fire Alarm System-Phase 4						\$20,000				
77	Emergency Generator										
78	Common Area Camera System										
79	Common Area Security System							\$48,300			
80	Enterphone System									\$20,500	
81	Pipe Tracing System										
82	Building Structure					\$20,000					\$20,000
83	Reserve Fund Study Updates	\$2,500			\$2,500			\$2,500			\$2,500
84	Contingency	\$20,000					\$20,000				
Total Outlay Per Year, Present Value		\$419,700	\$18,200	\$31,000	\$312,500	\$29,000	\$435,100	\$148,800	\$652,500	\$151,500	\$22,500
Total Outlay Per Year, Future Value		\$623,652	\$27,585	\$47,925	\$492,781	\$46,645	\$713,828	\$249,005	\$1,113,743	\$263,765	\$39,957

Table 4

Financial Analysis-Cash Flow 2 (Based on Proposed Level of Funding)

Assumed Interest Rate: 3.0%

Assumed Inflation Rate: 2.0%

Annual Acceleration Rate: 4.0% (2010-2022); 1.0% (2023-2039)

Recommended Annual Contribution for 2010: \$182,475

Supplemental Assessment: Nil

Projected Reserve Fund Balance at December 31, 2009: \$555,000

Fiscal Year	Opening Balance	Annual Contribution	Supplemental Assessment	Expenses Future Value	Interest Earned	Closing Balance	
						Future Value	Present Value
2010	\$555,000	<u>\$182,475</u>		\$584,200	\$10,624	\$163,899	\$163,899
2011	\$163,899	\$189,774		\$127,398	\$5,853	\$232,128	\$227,576
2012	\$232,128	\$197,365		\$153,147	\$7,627	\$283,973	\$272,946
2013	\$283,973	\$205,260		\$218,078	\$8,327	\$279,481	\$263,361
2014	\$279,481	\$213,470		\$88,326	\$10,262	\$414,886	\$383,291
2015	\$414,886	\$222,009		\$313,559	\$11,073	\$334,409	\$302,885
2016	\$334,409	\$230,889		\$261,044	\$9,580	\$313,834	\$278,676
2017	\$313,834	\$240,125		\$134,396	\$11,001	\$430,563	\$374,831
2018	\$430,563	\$249,730		\$356,770	\$11,311	\$334,834	\$285,778
2019	\$334,834	\$259,719		\$62,623	\$13,001	\$544,931	\$455,974
2020	\$544,931	\$270,108		\$160,907	\$17,986	\$672,118	\$551,371
2021	\$672,118	\$280,912		\$548,950	\$16,143	\$420,223	\$337,970
2022	\$420,223	\$292,148		\$590,367	\$8,133	<u>\$130,138</u>	\$102,613
2023	\$130,138	\$295,070		\$135,441	\$6,299	\$296,066	\$228,868
2024	\$296,066	\$298,021		\$41,564	\$12,729	\$565,251	\$428,390
2025	\$565,251	\$301,001		\$492,319	\$14,088	\$388,021	\$288,306
2026	\$388,021	\$304,011		\$81,955	\$14,971	\$625,048	\$455,314
2027	\$625,048	\$307,051		\$265,206	\$19,379	\$686,273	\$490,110
2028	\$686,273	\$310,121		\$47,846	\$24,522	\$973,070	\$681,304
2029	\$973,070	\$313,223		\$64,974	\$32,916	\$1,254,235	\$860,945
2030	\$1,254,235	\$316,355		\$623,652	\$33,018	\$979,955	\$659,482
2031	\$979,955	\$319,518		\$27,585	\$33,778	\$1,305,666	\$861,447
2032	\$1,305,666	\$322,714		\$47,925	\$43,292	\$1,623,746	\$1,050,302
2033	\$1,623,746	\$325,941		\$492,781	\$46,210	\$1,503,115	\$953,209
2034	\$1,503,115	\$329,200		\$46,645	\$49,332	\$1,835,002	\$1,140,860
2035	\$1,835,002	\$332,492		\$713,828	\$49,330	\$1,502,997	\$916,123
2036	\$1,502,997	\$335,817		\$249,005	\$46,392	\$1,636,201	\$977,760
2037	\$1,636,201	\$339,175		\$1,113,743	\$37,468	\$899,100	\$526,749
2038	\$899,100	\$342,567		\$263,765	\$28,155	\$1,006,057	\$577,854
2039	\$1,006,057	\$345,993		\$39,957	\$34,772	\$1,346,866	\$758,437