ON-SITE INSIGHT
A RECAP REAL ESTATE ADVISORS COMPANY

Condominium

Capital Needs Assessment and Replacement Reserve Analysis

Prepared for:

Bay Square Condominium Trust
c/o Thayer and Associates
1812 Massachusetts Avenue
Cambridge, MA 02140

Bay Square

Cambridge, MA

March 25, 2016

Final Report (v.3)

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Bay Square Condominium: Property Overview

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Total Buildings: 1

Number of Residential Buildings: 1

Total Residential Units: 110

Number of Non-Residential Buildings: 0

Building Type	# of Buildings	Residential Units	Garage Units	Commercial Units
Elevator	1	110	1	3
Walk-up	-	-	-	-
Townhouse	-	-	-	-
Totals:	**1**	**110**	**1**	**3**

Occupancy: Families
Financing: Condominium

Property/Development Age: 28 years

Year of Construction: 1988

City & State: Cambridge, MA
Addresses: 950 Massachusetts Avenue

OSI Project Number: 16085

Assessment Date: March 4, 2016

Assessment Conditions: Overcast, dry, cool.

Assessor: Steve Ninos

Property Description:

Bay Square is a mixed residential and commercial condominium building located on Massachusetts Avenue in Cambridge, Massachusetts. The nine-story brick-clad structure was originally constructed in 1988 and contains 110 private residential condominium units in a mix of styles; three commercial units with ground-level direct entries along the Massachusetts Avenue elevation; a two-level partially below-grade parking garage; and several community spaces including a lobby, fitness center, locker rooms, and outdoor pool and spa.

Executive Summary

Bay Square Condominium

Cambridge, MA

Bay Square is a mixed-used condominium building located on Massachusetts Avenue in Cambridge, Massachusetts. The nine-story brick and precast concrete-trim structure was originally constructed in 1988 and contains 110 interiorly-accessed private residential condominium units of varying sizes (some with large private terraces and four townhouse-style units along its Green Street rear elevation with private fenced patios and exterior direct entries); three commercial units with ground-level direct entries along the front (Massachusetts Avenue) elevation; and one parking garage unit (Unit G-1) that is comprised of 58 parking spaces in the lower level of the two-level partially below-grade parking garage set within the building foundation. Amenities available for resident use include laundry facilities; a fitness center with professional-grade equipment; adjacent men's and women's locker rooms; a library/meeting room with adjacent kitchenette; and a large rear elevation courtyard with heated pool and spa.

Overall the property is in good condition. The residential spaces, common areas, and various building systems are adequately appointed and maintained with evidence of timely maintenance and capital expenditures noted during the course of the assessment. That said, the property has substantive capital needs anticipated in the coming years as a number of systems and components are at or approaching the end of their expected useful service lives. Anticipated near-term needs include exterior and parking garage concrete

surface repairs; large planting structure membrane lining replacements and repairs to mitigate on-going leaking issues; exterior fence and private terrace railing painting; upcoming boiler replacement; circulation pump replacements and rebuilding; trash compactor replacement; on-going as-needed building distribution piping sectional repairs and rooftop exhaust fan replacements; exterior caulk replacement, brick cleaning, as-needed repair/repointing, and terrace capstone replacements; roof membrane replacement under the southwest private terrace; interior common space painting and carpet replacements; and planned fitness center locker room refurbishments and upgrades.

Future capital actions are based on useful life expectations and assume continued effective maintenance and physical management. Costs for the twenty-year plan total **$3,643,780**, or **$36,438** per percent of beneficial interest (per % of B.I.) in current dollars. At current funding levels (referenced as *Plan One*), current annual contributions of $330,412 per year ($3,304 per % of B.I.) indexed at 3% per year combined with a reported replacement reserve balance of $673,443 as of January 1, 2016 and two assessments totaling $395,624 (collected from January 2016 through April 2017) are projected to fully fund the plan; however large reserve balances are anticipated in the latter half of the plan. To help mitigate the anticipated excessive reserve balances, an alternate plan (referenced as *Plan Two*) shows a one-time annual contributions decrease of $2,400 per % of B.I. per year ($200 per % of B.I. per month) in Year 5. A third option (referenced as *Plan Three*) removes the $100,000 third assessment balance from Year 2 and keeps the annual contributions to reserves amount constant throughout the twenty year plan (0% indexing). The annual contributions are then decreased to $2,000 per % of B.I. per year starting in Year 4. Plans Two and Three are both hypothetical options and are included for illustrative and discussion purposes only; no assumptions are made about their viability, and various alternatives might achieve similar results.

Site

Projected capital needs related to the site are limited, as the building footprint occupies the majority of the site space. The building is set on a sloping site and abuts the city owned sidewalk along a portion of the front (north) elevation, a portion of the rear (south) elevation, and the entire west elevation. The east elevation is set at the property boundary line bordering a narrow strip of land adjacent to the neighboring buildings. A concrete-paved driveway and loading dock at the east elevation is accessed from Massachusetts Avenue and is used by residents moving in and moving out as well as for trash and recycling pickup. The front elevation features a small park-like landscaped courtyard with grass, shrubs, plantings, mature trees, and concrete walkways all surrounded by a painted metal fence. A narrow strip of land between the city owned sidewalk and the Green Street townhouse unit private entries allows for small private patios at each unit enclosed by PVC privacy screen fencing with access gates. Taking advantage of the sloping site, the first floor lobby rear elevation doors lead out to a garage rooftop concrete courtyard and pool area with large brick planters, PVC fencing, Azek timber pergola, heated pool, and spa.

1. **Costs for the development's site related elements total $263,499 or $2,635 per % of B.I. in inflated dollars.**
2. The east elevation driveway concrete surface, adjacent walkway, and loading dock exhibit age and use related wear with several large sections of deterioration in need of repair. Costs to sectionally repair and resurface the drive and loading dock are shown in Year 1. Costs to apply a protective epoxy coating to the loading dock platform are shown in Year 1, with a re-application shown in Year 11.
3. Costs to remove and re-pour the elevated concrete walkway adjacent to the loading dock driveway are shown in Year 1.
4. The concrete pool deck and rear courtyard surface is in generally good condition with some localized deterioration noted. Periodic costs for as-needed sectional repairs and resurfacing are shown every five years starting in Year 1.

5. Costs to remove and replace the aging, deteriorating pool deck and pool rim caulk is shown in Years 1 and 11, concurrent with surface repair cycles.

6. General paint failure, flaking, and chipping is evident along the entire length of the front courtyard painted metal fence. Costs to sand, prime, and paint the fence are shown in Year 1, with a future refurbishment shown in Year 16.

7. New Azek PVC fencing was installed at the Green Street private patios in 2010 and at the rear courtyard in 2012. All fencing remains in good observable condition with no cracked or damaged/leaning sections noted during the assessment. Replacement of the Green Street patio fencing is shown in Year 19, based on a twenty-five year expected useful service life. Replacement of the rear courtyard fencing is not anticipated within the twenty-year timeframe of this plan.

8. Replacement of the aging front elevation bollard-style lights and carriage-style entrance gate pier lights with new energy-efficient LED fixtures is shown in Year 2.

9. The pool and spa were covered on the day of the assessment, however both were reported to be in good condition. The pool was last resurfaced in 2005; and future resurfacing costs are shown in Years 4 and 19. The spa was last resurfaced in 2010, and future spa resurfacing costs are shown in Year 9.

10. The pool/spa spring-anchored mesh safety cover was recently replaced in 2015. Future replacements are show in Years 9 and 19.

11. No issues regarding the various pool mechanical equipment – sand filers, separators, chlorinators, pumps, etc. – were reported during the assessment, and periodic allowances for as-needed replacements and upgrades are shown every five years throughout the plan.

Mechanical Room

The building's mechanical room is located on the 7th-floor Mansard level and contains the majority of the heating, cooling, and domestic hot water (DHW) generation systems for the building. All residences, commercial spaces, and common spaces are heated and cooled via a closed-loop water-source heat pump system. Two 40-horsepower base-mounted pumps, each with a newly installed Teco MA7200 variable frequency drives (VFD's) circulate the service loop water (maintained at a range of 65-90 degrees) through all of the residence, commercial space, and common area refrigerant heat pump units (HPU). The HPU's extract heat from the loop to provide heating to the spaces, or they reject heat from the spaces to the loop to provide cooling. During peak heating conditions (winter) when the HPUs cool the loop by extracting its heat, a 3,825 MBH H.B. Smith cast-iron, natural gas-fired boiler maintains the loop's 65-90 degree temperature range. Two 5-horsepower base-mounted pumps circulate the boiler water through an Alfa-Laval A15-BFG, 4,600 sf, 150-psi plate and frame heat exchanger which transfers the boiler water heat to the building loop to return the loop to its necessary temperature range.

During peak cooling conditions (summer) when the HPUs reject heat to the service loop, the loop temperature tends to rise above 90 degrees. At this point the service loop water passes through the same plate and frame heat exchanger and rejects the heat to the cooling tower loop. Two 20-horsepower pumps circulate the cooling tower loop through the heat exchanger to collect the rejected heat and then up to the roof-mounted Evapco AT-112, induced-draft, counterflow cooling tower which rejects the heat to the atmosphere. A chemical treatment system conditions the loop water which helps prevent contaminants from fouling the pumps and heat exchanger.

Domestic hot water for the building is created via a pair of dedicated 500-MBH Power-Fin PFN0502 natural gas fired boilers (87% AFUE) with integrated modulating controls which work in concert with a single 1,000-gallon Lochinvar cement-lined commercial storage tank with internal heat exchanger. Three fractional horsepower Bell & Gossett in-line pumps circulate the boiler water and DHW; and a thermostatic mixing valve tempers the DHW to a safe-use temperature before being sent to the residences, locker rooms, fitness area kitchen, bathrooms, and laundry rooms for use.

12. Costs related to the development's boilers and boiler room systems total $796,332 or $7,963 per % of BI in inflated dollars.

13. No operating issues related to the H.B. Smith cast-iron boiler were reported during the assessment; however this original equipment is approaching the end of its expected useful service life of thirty years. Replacement of the current setup with a series of high-efficiency, natural gas-fired condensing boilers of equal capacity is shown in Year 2.
14. The pool and spa water is heated by a pair of 399-MBH RayPak natural gas-fired boilers located in the pool mechanical room. These were installed in 2008 and remain in reportedly good operating condition. Future replacement of both boilers is shown in Year 17, after twenty-five years of use.
15. The Alfa-Laval plate and frame heat exchanger is periodically opened, inspected, cleaned, and all gaskets are checked and replaced as-needed. Costs to continue this preventative maintenance work are shown every five years throughout the plan.
16. The 40-hp service loop pump motors were replaced in 2011; and future replacement of both motors is shown in Year 15, based on a twenty-year expected useful service life. The service loop pumps are rebuilt approximately every fifteen years; and alternating rebuild costs are shown in Years 2, 9, and 17.

17. The Teco service loop pump VFD's were newly installed in 2014. Replacement of these units is shown in Year 13, after fifteen years of use.
18. Rebuilding of the cooling tower loop pumps and motors are shown on alternating cycles throughout the plan based on the last-reported rebuild for each pump and motor.
19. One of the two 5-horsepower boiler water loop pumps was recently replaced in 2015. Future replacement of this pump is shown in Year 19, based on a twenty-year expected useful service life. Replacement of the older (original) pump is shown in Year 1.
20. The cooling tower was newly installed in 2012 and remains in good observable condition with no reported operating issues. Future replacement is shown in Year 20, after twenty-five years of use.
21. Future replacement of the Power-Fin DHW boilers with high-efficiency condensing boilers is shown in Year 12.
22. The DHW storage tank was last re-lined in 2008. Future allowances for inspection and re-lining are shown in Years 2 and 12.
23. Allowances for as-needed DHW system fractional horsepower pump replacements are shown every five years throughout the plan.

Building Mechanical and Electrical Systems

Major building systems include the fire sprinkler system (equipped with a backflow preventer); waste management; distribution piping for domestic hot and cold water, sanitary wastewater, and natural gas services; heating, ventilation and air conditioning (HVAC) services; electrical, fire detection, security, and elevators.

24. Costs related to the development's mechanical and electrical systems total $750,760 or $7,508 per % B.I. in inflated dollars.

25. Waste management at the building is facilitated via an aging, chute-fed forward-feed, hydraulic compactor that dates to the 1988 construction, with two rolling containers. The compactor has been maintained in good operating condition over the years; however it approaching the end of its expected useful life of thirty years, and replacement is shown in Year 2. The rolling waste containers receive hard use by the waste management company and are shown for alternating replacement in Years 2, 7, 12, and 17.
26. The building contains a wet fire-suppression system with backflow prevention device in place (designed to keep stagnant sprinkler water from flowing back into the potable water system), Leeson 75-horsepower electric fire pump, 2-horsepower Grundfos jockey pump, and Firetrol transfer switch and controller. There were no reported operational issues regarding the fire pump or the fire suppression system, and full replacement is not anticipated within the twenty-year timeframe of this plan. All components are reportedly tested and serviced on a regular basis; and an overhaul of the pump and controls was recently completed. A future allowance to overhaul the fire pump, jockey pump, transfer switch, and controller is shown in Year 18.
27. Although operational, the aging jockey pump exhibits considerable corrosion at is flange and base; and replacement is shown in Year 1.
28. The parking garage features a dry-pipe fire suppression system with 3/4-horsepower compressor that was reportedly replaced approximately fifteen years ago. Future compressor replacement is shown in Year 10, after twenty-five years of use.
29. The parking garage features a ToxAlert carbon monoxide (CO) detection system with nine wall-mounted CO detectors and one control panel. The system monitors the CO level in the garages and activates four wall-mounted intake and exhaust fans when an established CO level is detected. Future replacement of the CO detection system (including monitors and control panel) is shown in Year 8. Future periodic allowances to overhaul the exhaust fan motors, belts, and controls are shown in Years 5 and 15.

30. The building reportedly experiences on-going leaking issues related to the aging distribution piping; and the reported annual expenditure for as-needed sectional repairs and replacements are shown throughout the plan.
31. Two Carrier WeatherMaster 4-ton, energy-efficient (13 SEER), single-package, rooftop units provide fresh and conditioned air to the hallways. Future replacement of both units is shown in Year 9, after twenty years of use.
32. The lobby, front desk area, fitness room, locker rooms, and rear ground floor area are heated and cooled via four Carrier ceiling-mounted water-source heat pumps all gradually replaced over the past six years. No operating issues were reported; and future gradual replacement of these units is shown in Years 17-20, at one unit per year.
33. Replacement of the large original stairwell smoke ventilation fans is shown in Year 2 after thirty years of use, and allowances for as-needed replacement of the various rooftop ventilation fans serving the resident kitchens and bathrooms, laundry rooms, locker rooms, and trash rooms are shown annually throughout the plan.
34. A SyncroFlo cold water booster system with control panel and dual 5-horsepower pumps was newly installed in 2015. Future costs to replace the pumps and update/overhaul the control panel are shown in Year 14.
35. No issues related to the building's electrical system were reported during the assessment; however due to its age, allowances for periodic infra-red, Megger, DLRO, and injection testing and maintenance of the main distribution equipment, switch gear, and automatic transfer switches are shown every five years starting in Year 1. Costs include utility, permit, and city code enforcement inspection fees.
36. A 300 kW Caterpillar diesel-powered standby generator (interiorly located on the 7th-floor Mansard level) provides emergency power to key building systems including elevators, emergency lighting, ventilation, and other systems managed by the fire alarm control panel. No operational problems were reported, however the generator is approaching the end of its expected useful service

life of thirty-five years. Replacement is shown in Year 7. Periodic replacement of the generator starter batteries (currently three years old) is shown every five years starting in Year 2.

37. The building features a SimplexGrinnell 4100U fully addressable fire alarm control panel with integrated command center and EVAC (emergency voice alarm communication) system, sub panels on each floor, and hard-wired end devices (smoke detectors, heat detectors, flow switches, pull stations, horn/strobes, etc.) throughout the building. The panel was newly installed and all peripherals tested in 2009. No problems were reported regarding the system or its components; and complete replacement including peripherals is shown in Year 13, based on an expected useful service life of twenty years.
38. Building and parking garage entry is monitored and regulated by a magnetic key-card access control system; a large wall-mounted entry intercom/door buzzer panel at the front lobby vestibule; and a video surveillance system with 11 strategically-placed interior and exterior mounted cameras and digital video recorder station. System components vary in age, and allowances for as-needed component replacements and upgrades are shown every five years throughout the plan.
39. The building is served by two hoist-type elevators, one each located at the east and west ends of the building. Both elevators underwent a complete overhaul and refurbishment in 2014 including new Imperial 25-horsepower overhead traction machines, new solid state controller/dispatchers with Magnetek HVP-900 AC drives, and all new cables, rollers, and governors. The traction machines should have a generally long useful service life of thirty-five years, and therefore subsequent replacement is not anticipated within the twenty-year time-frame of this plan. An allowance to overhaul both machines is shown in Year 16 after 50% of their expected useful service life has been reached.
40. The elevator cab interior finishes, last updated in 2005, include wood laminate panels, brass trim, and carpeted floors. Future allowances to refurbish the cab interiors and replace/update the door operators are shown in Years 4 and 19.

Building Architectural Systems

The Bay Square Condominium property consists of a single building that sits on a reinforced poured concrete foundation with a two-level partially below-grade concrete parking garage located within the building footprint. Because of its sloping site there are seven above-grade stories at its front (Massachusetts Avenue) elevation and nine above-grade stories at the rear (Green Street) elevation. The building is predominately clad in face-brick with precast concrete decorative trim bands, lintels, and sills. Units feature a mix of Juliet-style balconies, Mansard-level full balconies with pre-cast concrete deck pavers, and large open rooftop terraces (taking advantage of their location adjacent to a building structural or entryway protrusion) also with concrete deck pavers.

The two-level main parking garage is accessed off of Bay Street (west elevation). Each level features separate entry and exit powered overhead doors flanking a flush metal passage door. A separate garage for the exclusive use of the townhouse residents is accessed off of Green Street and features a single dual-use entry and exit vehicle door with adjacent flush metal passage door. A rooftop courtyard and pool deck are constructed on top of the upper garage which is accessed from the main lobby as well as the fitness area. The pool deck includes a large pool with adjacent spa surrounded by large brick and concrete planters containing a variety of shrubs, plantings, and trees, one of which was recently rebuilt after installation of a new membrane liner to mitigate persistent historical leaking issues into the garage below.

Windows are predominately fiberglass slider-type models with insulating glass units (IGUs), all newly installed in 2015. The first floor commercial units as well as the lobby and fitness center feature large fixed IGU panels. The front entrance features a pair of double-leaf, full-lite, aluminum-framed glass entry doors (one exterior set and one interior vestibule set leading into the lobby), and

several single-leaf, full-lite, aluminum-framed glass doors provide entry into the commercial units as well as egress out to the rear courtyard and pool deck. The various service entrances, stairwell egresses, loading dock, rooftop access, and elevator machine room penthouses all feature a mix of single and double-leaf flush metal service doors.

The building has several flat roofs with a mix of newer adhered Sarnafil polyvinyl chloride (PVC) membrane roof coverings and older EPDM rubber membrane coverings, some covered by pre-cast concrete deck pavers to form private rooftop terraces for select units. The top floor of the building features a Mansard-style roof with faux-slate fiber-cement shingle covering.

Interior common spaces include the front entry vestibule; a large light-filled lobby with concierge desk, elevators and mail service areas; a resident-use fitness center with professional-grade equipment and adjacent men's and women's locker rooms complete with showers and saunas; a small library and meeting room with adjacent kitchenette; laundry facilities; as well as residence hallways and egress stairwells. Finishes in these areas include painted drywall walls; a mix of stone tile, ceramic tile, carpet, vinyl composition tile (VCT) and bare concrete flooring; and a mix of painted drywall and suspended acoustic tile ceilings.

41. Costs related to the development's architectural systems total $2,977,053 or $29,771 per % of B.I. in inflated dollars.

42. Where observed, the foundation walls appeared to be in good condition with no significant cracking or other issues observed or reported during the assessment. Continued monitoring of all foundation walls is recommended going forward.

43. The upper garage floor was sealed with an epoxy coating in 2007 and remains in generally good observable condition with normal age and use-related wear. The coating has a typical useful life of ten years; and costs to wash, prepare, and re-coat the upper garage epoxy surface are shown in Years 2 and 12.

44. The lower garage retains its original bare concrete surface with several areas of age, use, salt, and moisture related surface deterioration visible throughout. Costs to repair, resurface, clean, etch, and then epoxy-coat the lower garage surface are shown in Year 1. Future costs to clean and re-apply the epoxy coating are shown in Year 11.
45. All of the ground floor front elevation and rear elevation courtyard aluminum and glass entry doors are original to the 1988 construction. Replacement of all these doors is shown in Year 8, after thirty-five years of use.
46. Gradual replacement of the single-leaf flush metal service doors is shown over a four-year period starting in Year 7. The loading dock double-leaf flush metal service doors receive hard use, have visible impact damage, as well as corrosion that has progressed completely through the exterior surface at its base. Because of its current condition, replacement of this door is shown in Year 1.
47. The parking garage elevator vestibule glass doors feature remote operated power openers. Replacement of the doors is shown in Year 7. Replacement of the power door openers is shown in Year 7 (concurrent with the door replacement) and again in Year 17.
48. The five fiberglass segmented panel overhead garage doors were all replaced in 2006 and remain in reportedly good operating condition. Future replacement of all overhead doors is shown in Year 10.
49. Each overhead door features a wall-mounted PowerMaster J-52, 1/2-horsepower hoist operator. These vary in age, and allowances for staggered replacements are shown every three years starting in Year 2.
50. Exterior as-needed spot brick repair and repointing was last performed in 2005 and remains in good observable condition from available vantage points. Future allowances for professional review and as-needed brick/crack repairs and repointing are shown in Years 5 and 20 (at 10% of the total).
51. Visible efflorescence (white crystalline masonry surface deposits) was noted at the pool area, southwest (Bay St/Green St) corner, and along Green Street. Costs for periodic power-washing to remove the damaging salts are shown in Years 1, 6, 11, and 16.

52. Cohesion failure of the horizontal and vertical control and expansion joint caulk is visible from the ground. Replacement of all joint caulking is shown in Year 1, with a future replacement shown in Year 16.
53. All sliding glass windows were newly replaced in 2015 and remain in good operable condition. Future replacement is not anticipated within the twenty-year timeframe of the plan. All fixed window panels are original to the 1988 construction, however; and full replacement is shown in Year 8, based on a thirty-five year expected useful service life.
54. The Juliet balcony railings were all painted in 2010 with a reportedly durable, long-lasting RhinoShield ceramic coating which carries a twenty-five year materials warranty. One railing at the lower front elevation exhibits pre-mature paint failure, and management is reportedly contacting the provider to rectify the issue. Future costs to re-apply the coating are shown in Year 19, based on the twenty-five year warranty timeframe.
55. The private terrace and Mansard-level balcony brick parapet walls are topped with a square metal railing system. These were all painted with a standard oil-based paint and exhibit overall paint failure, chipping, and flaking. Repainting of all terrace and Mansard-level balcony railings is shown in Years 1 and 11.
56. One of the Mansard-level balcony cast concrete parapet capstones was recently replaced. Costs to gradually replace the remaining five capstones are shown in Years 1-3.
57. A mix of wall-mounted and recessed, HID and fluorescent fixtures provide exterior lighting at all elevations. Allowances for as-needed spot fixture replacements are shown annually throughout the plan.
58. The main structure roof and Mansard balcony PVC membranes were all installed in 2009 and remain in good observable condition with no visible significant ponding and no reported leaking issues. Replacement of these membranes is shown in Year 13, after twenty years of use. Replacement of the lower southwest (townhouse) PVC membrane (installed in 2007) is shown in Year 11.

59. The membrane under the large southwest private terrace is reportedly an EPDM rubber membrane that was last replaced in 1999. Replacement of this membrane with a more durable PVC membrane (to better withstand the weight and wear of the concrete deck pavers) is shown in Year 3.
60. The EPDM membranes under the front elevation 6th-floor private terrace, the east elevation first-floor private terrace, and the terraces over the front entrance and lower garage entrance all reportedly date to 2005. Replacement of these membranes with durable PVC membranes is shown in Year 9.
61. The Mansard-level faux-slate fiber-cement shingles have a typically long useful service life, and full replacement is not anticipated within the timeframe of this plan. Allowances for as-needed spot shingle repairs and replacements are shown every four years throughout the plan.
62. Replacement of the flush metal roof access and elevator machine room doors is shown in Year 7, after thirty-five years of use.
63. Hallways and common areas were last refurbished in 2001. The walls reportedly receive as-needed touch-up painting as an on-going operating measure; however the carpet exhibits age and use related wear and staining throughout. Based on management input, replacement of all hallway, lobby, and library carpet is shown in Years 3 and 13. Wall and ceiling painting is shown concurrently in Years 3 and 13 as well. An allowance to update/replace the lobby furniture and art work is shown in Year 5.
64. Future costs to upgrade the original frosted-glass wall-sconce hallway lighting fixtures are shown in Year 13 (prior to the scheduled wall-painting in that year); and replacement of the recessed aluminum mailbox cluster panels is shown in Year 17.
65. The kitchenette, laundry rooms, and the garage elevator vestibules all feature aging VCT flooring. Replacement of all VCT is shown in Years 1 and 16. Replacement of the kitchenette compact kitchen unit and appliances is shown in Year 7.

66. The gym features several pieces of commercial-grade cardio machines and resistance equipment as well as dumbbells and television sets, all varying in age. Annual allowances are shown throughout the plan for as-needed replacements and upgrades.

67. The current management plan is to update and renovate the original men's and women's locker rooms in the near term to include new ceramic tile, paint, sink counters, dividers, showers, and fixtures in the wet area, as well as new carpet and paint in the dry areas. Costs for this work are shown in Year 1. Future repainting needs are shown in Year 16.

68. The men's and women's sauna heating elements were last replaced in 2009. Future replacement of units is shown in Year 8.

Additional Notes:

1. The Physical Assessment of the property was conducted on March 4th, 2016. Additional information was provided to ON-SITE INSIGHT by site staff and others. OSI was represented on this assignment by Steve Ninos. We would like to thank site staff for their assistance.

2. Regular updates of this plan are recommended to ensure careful monitoring of major building systems and to adjust the program to accommodate unanticipated circumstances surrounding the buildings, operations, and/or occupants.

3. This report is delivered subject to the conditions on Appendix A, *Statement of Delivery*.

View of the front elevation landscaping. Grass, shrubs, plantings, and large, mature trees.

The painted metal fence bordering the front park exhibits overall age and weather-related paint failure; in need of sanding priming, and painting.

View of the loading and trash removal dock at the building east elevation. Note general surface deterioration and cracking visible at several locations along the walkway.

Sectional concrete deterioration and cracking is visible on the loading dock surface as well.

The townhouse-style units at the rear (Green Street) elevation feature low-maintenance Azek PVC privacy screen fence enclosures, all newly installed in 2012

View of the rear elevation elevated poured concrete pool deck, construction over the parking garage.

View from the pool deck looking towards the rear elevation lobby courtyard and planter with new PVC fencing and gate.

Sectional concrete surface deterioration is visible at the pool area and rear courtyard; in need of sectional repair/resurfacing.

View of the 3,825 MBH, H.B. Smith sectional cast-iron natural gas-fired hot water boiler serving the two-pipe fan coil unit system.

The service loop water is circulated by this pair of Leeson WattSaver 40-hp pumps. Both pump motors were recently replaced in 2012.

The service loop pumps are each controlled by a 40-hp Teco MA7200 variable frequency drive (VFD) which save energy, reduce wear and tear, and help extend the life of the pumps

The cooling tower water is circulated by this pair of 20-hp base-mounted pumps.

The service loop is warmed by the boiler water or cooled by the cooling tower water via this Alfa-Laval A15-BFG, 4600 sf, 150 PSI, plate and frame heat exchanger.

The building domestic hot water is created by this pair of dedicated Power-Fin 500 MBH (87% AFUE) natural gas-fired DHW boilers.

Domestic hot water is stored in this single Lochinvar 1,000 gallon indirect-fired storage tank which is periodically cleaned, inspected, and re-lined.

View of the Evapco induced draft, counterflow cooling tower. Newly installed in 2012.

Two Carrier 4-ton, high-efficiency (SEER 13) single-package rooftop unit (RTU) that provide fresh and conditioned air to the hallways.

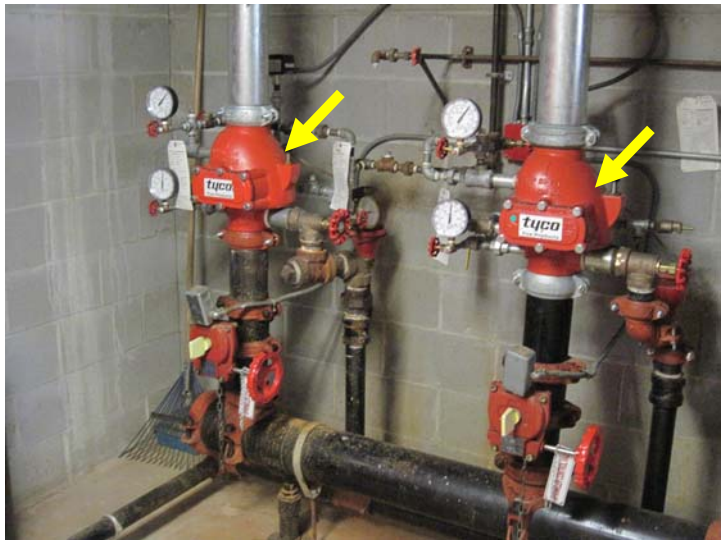
View of typical mushroom-type down-blast rooftop exhaust fans and the Mitsubishi 2-ton mini-split system heat pump (arrow) that heats and cools the east elevator machine room. The west elevator machine room is heated and cooled by a similar unit.

View of the SyncroFlo cold water booster system with dual Baldor 5-horsepower pumps.

View of the Lincoln wet-pipe fire suppression system 75-horsepower electric fire pump; maintained, tested, and serviced on a regular basis.

The ageing 2-horsepower fire-suppression system jockey pump shows signs of leaking and corrosion at its flange and base. Due for replacement in 2016.

View of the parking garage dry-pipe fire suppression system Leeson 3/4-horsepower compressor.



View of the new dry-valves installed in 2015.

The 300 kW Caterpillar diesel-fired generator is interiorly located on the 7th floor Mansard level.

The 450-gallon generator diesel fuel storage tank was newly installed in the parking garage in 2013.

A dual-pump fuel delivery system transfers the fuel up to the 7th floor generator room day tank.

View of the Simplex 4100U fully addressable fire alarm control panel with command center

View of the parking garage ToxAlert carbon monoxide (CO) detection system control panel.

Nine of these wall-mounted CO sensors are located throughout both garage levels. The system activates the four intake and exhaust fans located in the garage when a set CO level is detected

The five segmented panel overhead garage doors are operated by individual PowerMaster 1/2-horspower hoist machines controlled by magnetic key cards at the entry doors and remote sensors at the exit doors.

A large door buzzer/intercom panel is located at the front entrance vestibule; and building security is aided by a surveillance system with 11 strategically located interior and exterior cameras.

View of the west elevator Imperial Electric 25-horsepower traction machine located in the rooftop elevator machine room penthouse. Both machines were newly installed in 2014.

New solid state elevator controls with Magnatek HPV900 AC drives (arrow) were also installed in 2014.

Both elevators feature wood laminate panels with brass trim and carpeted floors.

The front entrance features two sets of original full-lite aluminum and glass entry doors.

The rear courtyard entrance features two single-leaf full-lite aluminum and glass doors and low maintenance Azek PVC/polymer pergola.

Several commercial unit aluminum and glass doors are located around the front courtyard and along Massachusetts avenue.

The aging loading dock flush metal service doors is corroding at the base and in need of replacement in the near term.

View of the front (north) Massachusetts Avenue elevation. Note ground floor commercial units. Window frames and resident balcony sliding glass doors were all newly replaced in 2015

View of the west (Bay Street) elevation. Note upper and lower garage entrance/exits. Balcony railings were all coated in 2010 with a RhinoShield ceramic paint carrying a 25-year warranty.

View of the rear (south) Green Street elevation. Note visible efflorescence at southwest corner.

The rear elevation townhouse units have access to a private garage and entrance located on Green Street.

Door and control joint caulk exhibit age-related cohesion failure many locations. In need of replacing.

Close-up of control joint cohesion failure.

The upper garage features a suspended acoustic tile ceiling and epoxy deck surface coating.

The lower garage currently has no epoxy concrete deck surface coating.

The lower garage concrete deck exhibits areas of surface deterioration. In need of repair, resurfacing, and an epoxy deck coating.

The upper and lower garage each feature powered fiberglass segmented-panel overhead vehicle entry and exit doors flanking a flush metal passage door.

View of the Sarnafil PVC membrane roof and variety of exhaust and stairwell pressurization fans.

View of the east elevator penthouse.

The steeply pitched Mansard level roof features faux-slate fiber-cement shingles.

View of typical hallway finishes. Painted walls and ceilings, and carpeted floors.

Egress stairwells feature painted walls and ceilings, painted steel stringers and railings, and concrete treads and landings.

The first floor lobby features painted walls and ceilings, mix of carpet and stone tile floors, and large window walls looking out to the rear courtyard.

View of the lobby looking towards the concierge desk (arrow).

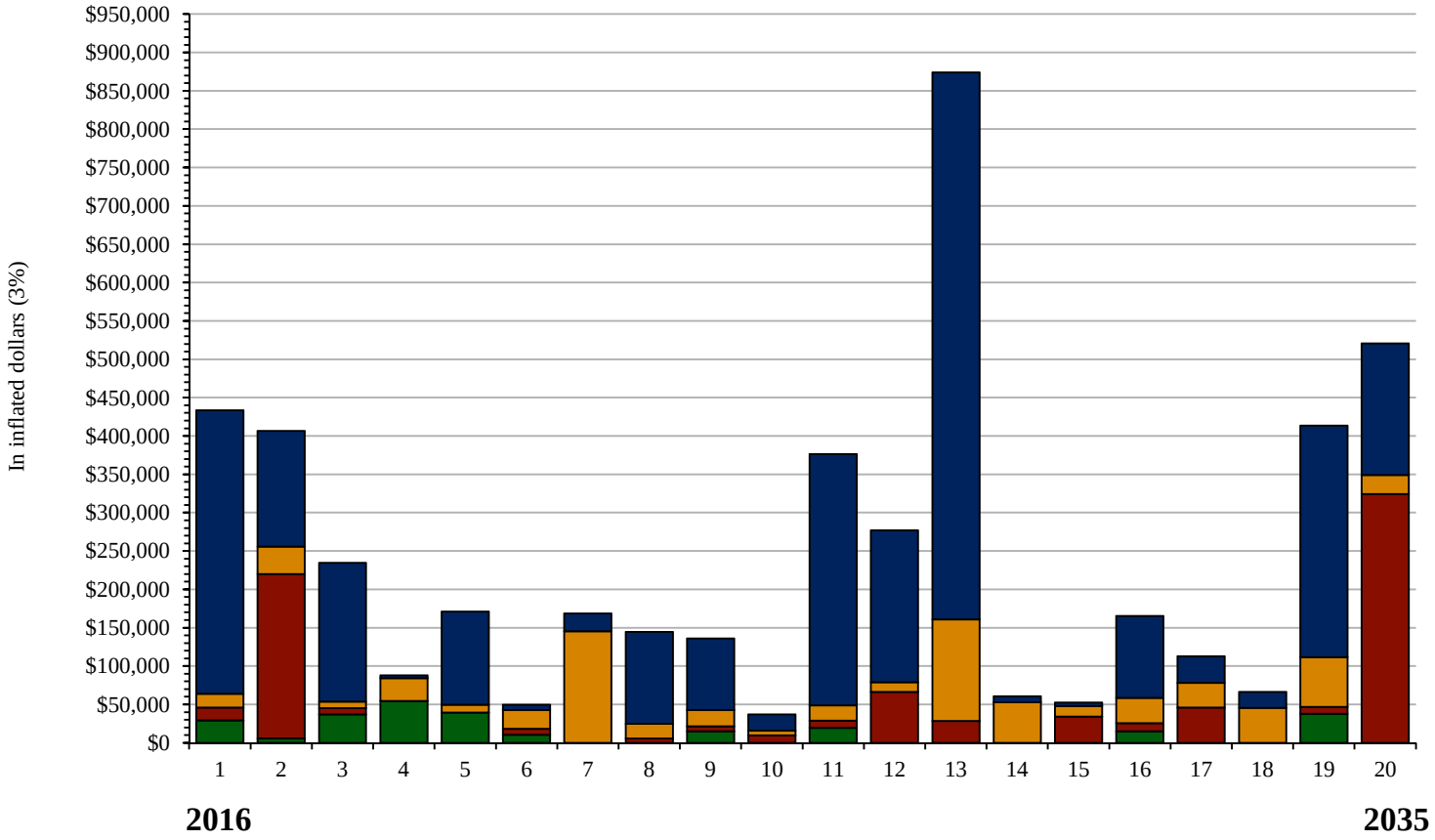
View of the recessed aluminum mailbox cluster panels located adjacent to the gym

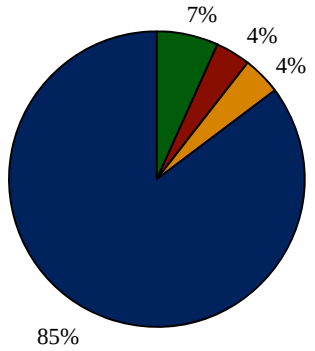
View of the fitness center located adjacent to the first floor lobby.

The fitness room rolled rubber flooring is showing signs of age and use related wear.

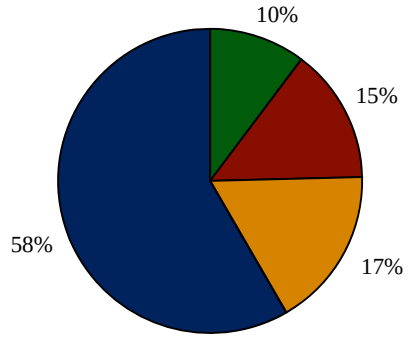
View of the men's locker room finishes. Painted walls and ceilings. Carpet in the dry area and ceramic tile in the wet area.

Both men's and women's locker rooms feature a sauna and metal lockers.

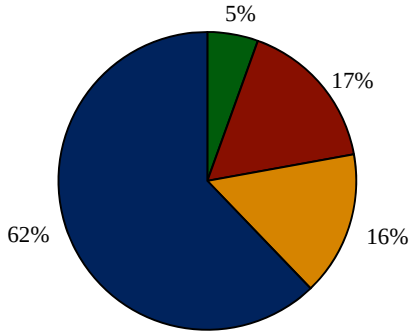




Year One Distribution



Ten Year Distribution



Twenty Year Distribution

Total Costs by Building System (inflated dollars)

	In Year 1	In Years 1-10	In Years 1-20
Site Systems	$29,185 or $292/%B.I.	$191,493 or $1,915/%B.I.	$263,499 or $2,635/%B.I.
Mechanical Room	$16,600 or $166/%B.I.	$268,392 or $2,684/%B.I.	$796,332 or $7,963/%B.I.
Building Mech. & Elec.	$18,100 or $181/%B.I.	$318,377 or $3,184/%B.I.	$750,760 or $7,508/%B.I.
Building Architectural	$369,605 or $3,696/%B.I.	$1,090,344 or $10,903/%B.I.	$2,977,053 or $29,771/%B.I.
In inflated dollars:	$433,489 or $4,335/%B.I.	$1,868,606 or $18,686/%B.I.	$4,787,645 or $47,876/%B.I.
In current dollars:	$433,489 or $4,335/%B.I.	$1,718,320 or $17,183/%B.I.	**$3,643,780 or $36,438/%B.I.**

Capital Needs Summary

Bay Square Condominium
Cambridge, MA

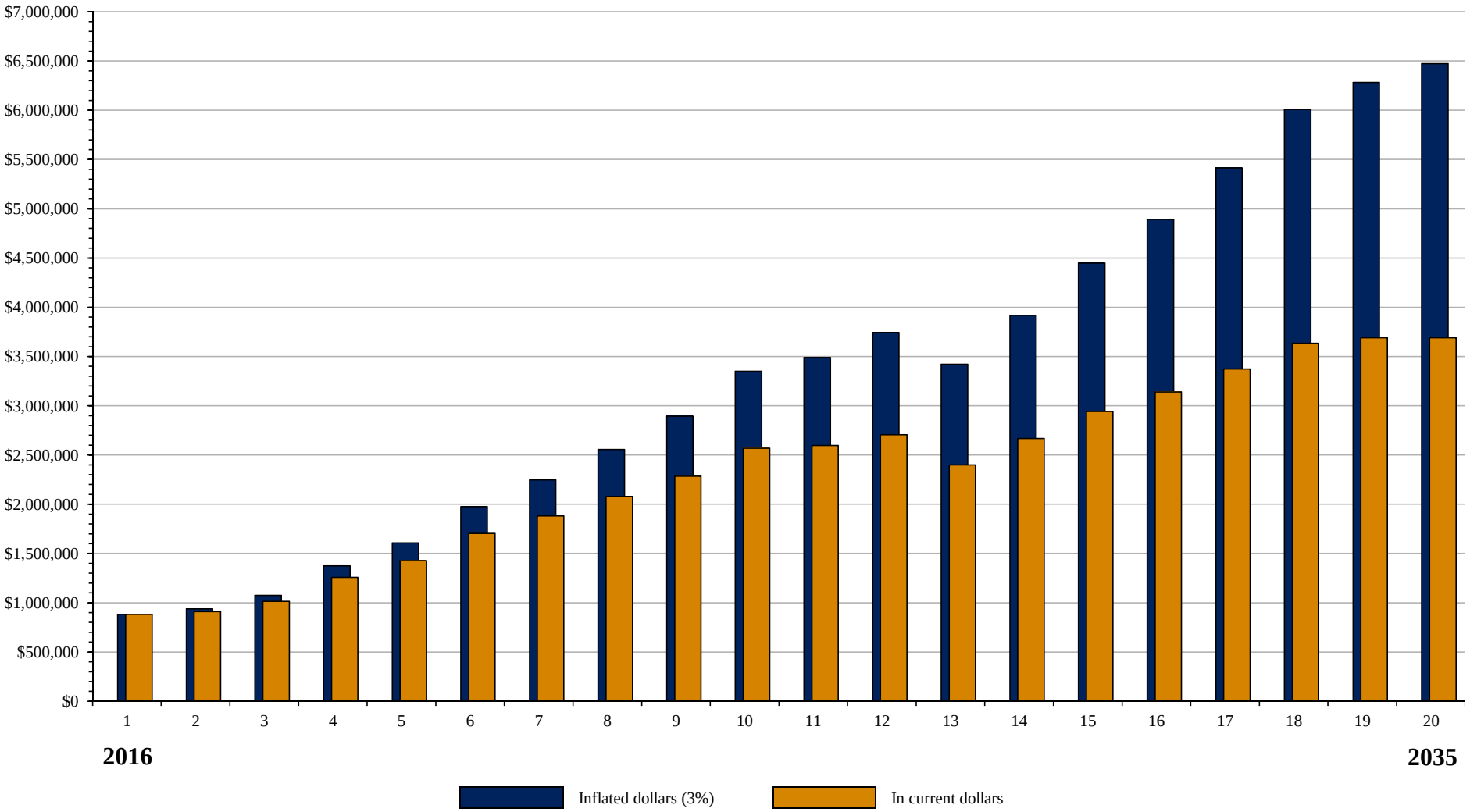
OSI Ref: **16085**
Property Age: **28 Years**
Financing: **Condo**

Number of Buildings: **1**
Total Number of Units: **113**

	2016 Year 1	2017 Year 2	2018 Year 3	2019 Year 4	2020 Year 5	2021 Year 6	2022 Year 7	2023 Year 8	2024 Year 9	2025 Year 10
Site Systems										
Surface	$29,185	$5,717	$37,132	$54,636	$39,393	$10,420	$0	$0	$15,011	$0
Site Distribution Systems	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Site Sub-Total	**$29,185**	**$5,717**	**$37,132**	**$54,636**	**$39,393**	**$10,420**	**$0**	**$0**	**$15,011**	**$0**
Mechanical Room										
Boilers	$14,750	$211,150	$7,957	$0	$0	$5,796	$0	$5,534	$6,334	$9,786
Boiler Room Systems	$1,850	$3,090	$0	$0	$0	$2,145	$0	$0	$0	$0
Mechanical Sub-Total	**$16,600**	**$214,240**	**$7,957**	**$0**	**$0**	**$7,941**	**$0**	**$5,534**	**$6,334**	**$9,786**
Building Mech. & Electrical										
Mechanical	$6,100	$33,578	$3,289	$3,387	$10,242	$10,549	$8,478	$13,037	$21,345	$6,002
Electrical	$12,000	$2,060	$5,305	$0	$0	$13,911	$136,719	$6,149	$0	$0
Elevators	$0	$0	$0	$26,225	$0	$0	$0	$0	$0	$0
Mechanical & Electrical Sub-Total	**$18,100**	**$35,638**	**$8,593**	**$29,613**	**$10,242**	**$24,461**	**$145,197**	**$19,186**	**$21,345**	**$6,002**
Building Architectural										
Structural and Exterior	$324,822	$148,908	$3,006	$1,275	$99,345	$4,316	$13,214	$113,661	$3,885	$18,680
Roof Systems	$7,500	$0	$54,371	$0	$8,441	$0	$3,403	$0	$86,932	$0
Halls, Stairs, Lobbies	$0	$0	$109,335	$0	$11,255	$0	$0	$0	$0	$0
Community Spaces	$37,283	$2,060	$14,038	$2,185	$2,251	$2,319	$6,567	$6,149	$2,534	$2,610
Building Architectural Sub-Total	**$369,605**	**$150,968**	**$180,749**	**$3,460**	**$121,292**	**$6,634**	**$23,185**	**$119,810**	**$93,350**	**$21,290**
Total Capital Costs	**$433,489**	**$406,562**	**$234,431**	**$87,710**	**$170,927**	**$49,456**	**$168,381**	**$144,531**	**$136,041**	**$37,077**

Costs on these two pages are aggregated by category from the Capital Needs worksheets which follow. Total capital costs on these two pages are carried forward to line F of the Replacement Reserve Analysis(es) that follow.

2026 Year 11	2027 Year 12	2028 Year 13	2029 Year 14	2030 Year 15	2031 Year 16	2032 Year 17	2033 Year 18	2034 Year 19	2035 Year 20	
										Site Systems
$19,391	$0	$0	$0	$0	$14,906	$0	$0	$37,709	$0	Surface
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	Site Distribution Systems
$19,391	**$0**	**$0**	**$0**	**$0**	**$14,906**	**$0**	**$0**	**$37,709**	**$0**	Site Sub-Total
										Mechanical Room
$6,720	$0	$28,515	$0	$34,033	$7,790	$45,734	$0	$8,938	$0	Boilers
$2,486	$66,443	$0	$0	$0	$2,882	$0	$0	$0	$324,399	Boiler Room Systems
$9,206	**$66,443**	**$28,515**	**$0**	**$34,033**	**$10,672**	**$45,734**	**$0**	**$8,938**	**$324,399**	Mechanical Sub-Total
										Building Mech. & Electrical
$4,166	$9,828	$4,420	$23,643	$13,765	$14,178	$29,045	$37,354	$24,004	$24,724	Mechanical
$16,127	$2,768	$127,962	$0	$0	$18,696	$3,209	$8,264	$0	$0	Electrical
$0	$0	$0	$29,371	$0	$0	$0	$0	$40,858	$0	Elevators
$20,293	**$12,597**	**$132,382**	**$53,014**	**$13,765**	**$32,873**	**$32,255**	**$45,619**	**$64,863**	**$24,724**	Mechanical & Electrical Sub-Total
										Building Architectural
$201,131	$195,183	$1,663	$4,504	$1,765	$95,461	$10,859	$1,928	$298,720	$154,776	Structural and Exterior
$123,587	$0	$452,184	$0	$0	$0	$12,035	$0	$0	$13,151	Roof Systems
$0	$0	$253,869	$0	$0	$0	$8,704	$0	$0	$0	Halls, Stairs, Lobbies
$2,688	$2,768	$5,475	$2,937	$3,025	$11,346	$3,209	$18,829	$3,405	$3,507	Community Spaces
$327,406	**$197,951**	**$713,192**	**$7,441**	**$4,790**	**$106,807**	**$34,807**	**$20,757**	**$302,125**	**$171,434**	Building Architectural Sub-Total
$376,296	**$276,991**	**$874,089**	**$60,455**	**$52,588**	**$165,258**	**$112,796**	**$66,376**	**$413,634**	**$520,557**	**Total Capital Costs**



Reported Reserve Balance as of 01/01/2016 :	**$673,443**	At the end of Year One, Reserve Balances are projected to be:	**$882,763**
Current annual contributions to reserves :	**$330,412**	At the end of Year 20, Reserve Balances are projected to be:	**$6,472,415**
		All projected capital needs are met throughout the plan	

1. Starting replacement reserve balance of $673,443 as of January 1, 2016.
2. Remaining second assessment income of $95,624, plus 8 months of third assessment in the amount of $200,000 (total of $295,624) shown in Year 1.
3. Remaining four months of third assessment in the amount of $100,000 shown in Year 2.
4. Annual contribution to reserves of $330,412 ($3,304 per % of B.I.), indexed at 3% per year going forward.

Reserve Funding In Year 1

Starting replacement reserve balance: **$673,443** or $6,734/%B.I.

Contributions to Reserves: **$330,412** or $3,304/%B.I.

Replacement Reserve (RR) analysis starts here with the starting RR balance reported, or imputed, to have been on hand at the start of Year 1, and current annual RR contributions. The projections below reflect Starting RR Balance (Line A), plus the Total Annual RR Contributions (Line D) and Interest Earnings on RR (Line E), minus Total Annual Capital Costs (Line F), taken from the CNS above. This is expressed arithmetically as (A+D+E)-F=G, Year-End Balances, then carries forward to Line A of the following Year.

		2016 Year 1	2017 Year 2	2018 Year 3	2019 Year 4	2020 Year 5	2021 Year 6	2022 Year 7	2023 Year 8	2024 Year 9	2025 Year 10
(A)	**Reserve Balances**										
	Starting Replacement Reserves	$673,443	$882,763	$937,583	$1,075,943	$1,374,413	$1,606,574	$1,976,118	$2,245,734	$2,556,547	$2,894,379
(B)	**Annual Funding**										
	Contributions Indexed at 3%	$3,304	$3,403	$3,505	$3,611	$3,719	$3,830	$3,945	$4,064	$4,186	$4,311
(C)	Additional Unit Contributions										
		3,304	3,403	3,505	3,611	3,719	3,830	3,945	4,064	4,186	4,311
(D)	Total Annual Reserve Funding	$330,412	$340,324	$350,534	$361,050	$371,882	$383,038	$394,529	$406,365	$418,556	$431,113
(E)	Interest on Reserves at 2%	$16,773	$21,058	$22,257	$25,129	$31,207	$35,962	$43,468	$48,978	$55,316	$62,199
	Total Funds Available	**$1,020,628**	**$1,244,145**	**$1,310,374**	**$1,462,123**	**$1,777,502**	**$2,025,574**	**$2,414,115**	**$2,701,077**	**$3,030,419**	**$3,387,690**
(F)	Total Capital Cost	$433,489	$406,562	$234,431	$87,710	$170,927	$49,456	$168,381	$144,531	$136,041	$37,077
(G)	**Reserve Balances**	**$587,139**	**$837,583**	**$1,075,943**	**$1,374,413**	**$1,606,574**	**$1,976,118**	**$2,245,734**	**$2,556,547**	**$2,894,379**	**$3,350,613**
	Outside Capital:	**$295,624**	**$100,000**								
	Adjusted Reserve Balances	$882,763	$937,583	$0	$0	$0	$0	$0	$0	$0	$0

Notes:

1. **Starting replacement reserve balance of $673,443 as of January 1, 2016.**
2. **Remaining second assessment income of $95,624, plus 8 months of third assessment in the amount of $200,000 (total of $295,624) shown in Year 1.**
3. **Remaining four months of third assessment in the amount of $100,000 shown in Year 2.**
4. **Annual contribution to reserves of $330,412 ($3,304 per % of B.I.), indexed at 3% per year going forward.**

*ANNUAL RR CONTRIBUTIONS are shown being indexed for inflation at the % specified above except when Additional Contributions are called for.

Line C, Additional Contributions allows for material adjustments in annual RR funding that would enable the property to meet all projected needs out of reserves through Year 20.

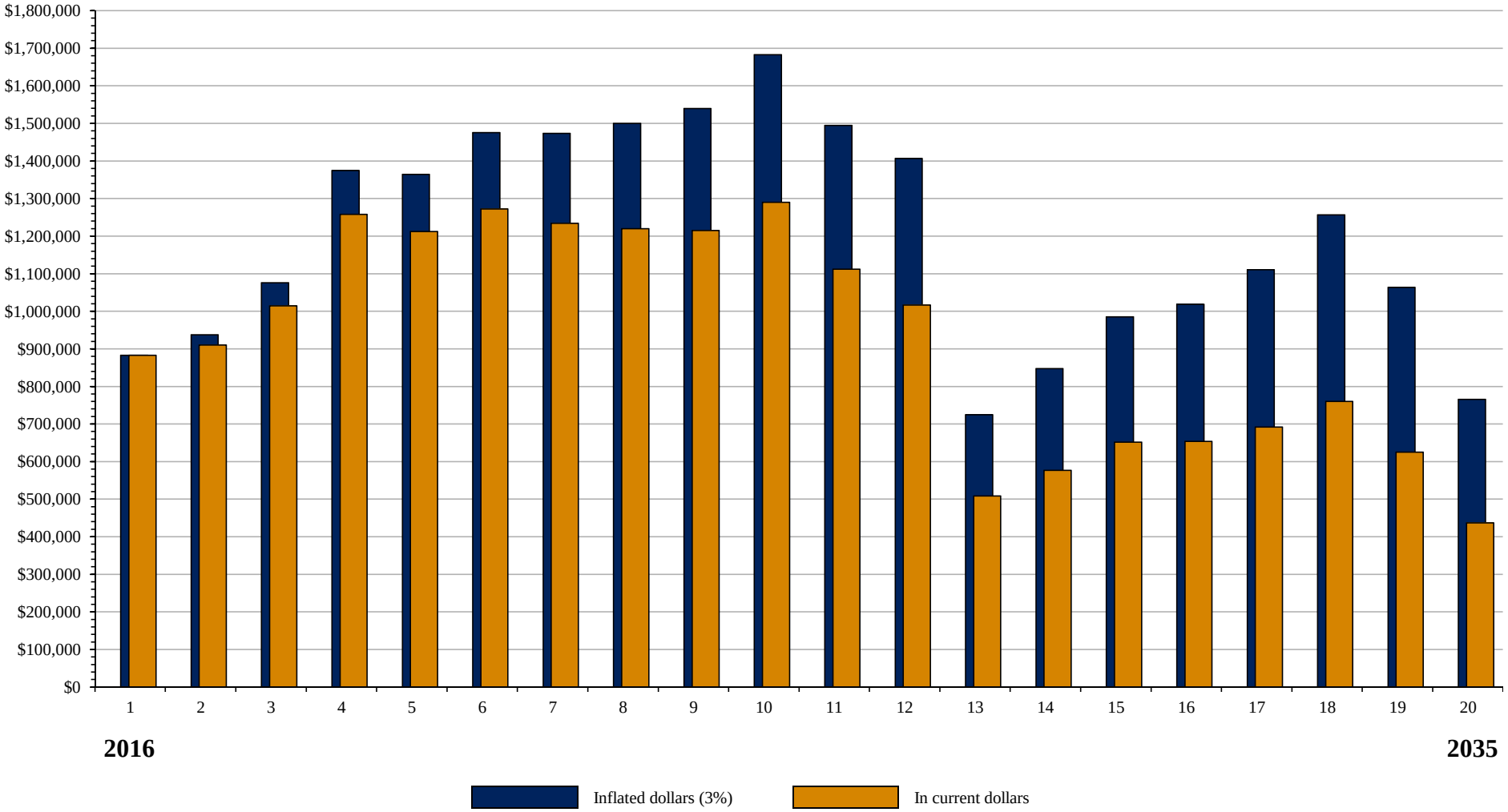
**INTEREST EARNINGS ON RESERVES are calculated on 100% of starting balances and on 50% of the total annual contribution for the year at the rate shown

Reserve Funding In Year 20

Projected replacement reserve balance is **$6,472,415** This is $64,724 per % B.I. in inflated dollars or $36,911 per % B.I. in uninflated dollars

Projected annual funding to reserves is **$579,379** This is $5,794 per % B.I. in inflated dollars or $3,304 per % B.I. in uninflated dollars

2026 Year 11	**2027** Year 12	**2028** Year 13	**2029** Year 14	**2030** Year 15	**2031** Year 16	**2032** Year 17	**2033** Year 18	**2034** Year 19	**2035** Year 20	
										Reserve Balances (A)
$3,350,613	$3,489,816	$3,744,562	$3,421,164	$3,919,206	$4,449,778	$4,893,435	$5,414,024	$6,007,511	$6,282,156	Starting Replacement Reserves
										Annual Funding (B)
$4,440	$4,574	$4,711	$4,852	$4,998	$5,148	$5,302	$5,461	$5,625	$5,794	Contributions Indexed at 3%
										Additional Contributions **(C)**
4,440	4,574	4,711	4,852	4,998	5,148	5,302	5,461	5,625	5,794	
$444,046	$457,367	$471,089	$485,221	$499,778	$514,771	$530,214	$546,121	$562,504	$579,379	Total Annual Reserve Funding **(D)**
$71,453	$74,370	$79,602	$73,275	$83,382	$94,143	$103,171	$113,742	$125,775	$131,437	Interest on Reserves at 2% **(E)**
$3,866,112	**$4,021,553**	**$4,295,253**	**$3,979,661**	**$4,502,366**	**$5,058,693**	**$5,526,820**	**$6,073,887**	**$6,695,790**	**$6,992,972**	**Total Funds Available**
$376,296	$276,991	$874,089	$60,455	$52,588	$165,258	$112,796	$66,376	$413,634	$520,557	Total Capital Cost **(F)**
$3,489,816	**$3,744,562**	**$3,421,164**	**$3,919,206**	**$4,449,778**	**$4,893,435**	**$5,414,024**	**$6,007,511**	**$6,282,156**	**$6,472,415**	**Reserve Balances (G)**
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	



Reported Reserve Balance as of 01/01/2016 :	**$673,443**	At the end of Year One, Reserve Balances are projected to be:	**$882,763**
Current annual contributions to reserves :	**$330,412**	At the end of Year 20, Reserve Balances are projected to be:	**$765,901**
		All projected capital needs are met throughout the plan	

1. Starting replacement reserve balance of $673,443 as of January 1, 2016.

2. Remaining second assessment income of $95,624, plus 8 months of third assessment in the amount of $200,000 (total of $295,624) shown in Year 1.

3. Remaining four months of third assessment in the amount of $100,000 shown in Year 2.

4. Annual contribution to reserves of $330,412 ($3,304 per % of B.I.), indexed at 3% per year going forward.

5. Annual contribution to reserves *reduction* of $2,400 per percent of B.I. ($200 per % of B.I. per month) in Year 5 to help mitigate excessive accumulation.

Reserve Funding In Year 1

Start replacement reserve balance: **$673,443** or $6,734/%B.I.

Contributions to Reserves: **$330,412** or $3,304/%B.I.

Replacement Reserve (RR) analysis starts here with the starting RR balance reported, or imputed, to have been on hand at the start of Year 1, and current annual RR contributions. The projections below reflect Starting RR Balance (Line A), plus the Total Annual RR Contributions (Line D) and Interest Earnings on RR (Line E), minus Total Annual Capital Costs (Line F), taken from the CNS above. This is expressed arithmetically as (A+D+E)-F=G, Year-End Balances, then carries forward to Line A of the following Year.

		2016 Year 1	2017 Year 2	2018 Year 3	2019 Year 4	2020 Year 5	2021 Year 6	2022 Year 7	2023 Year 8	2024 Year 9	2025 Year 10
(A)	**Reserve Balances**										
	Starting Replacement Reserves	$673,443	$882,763	$937,583	$1,075,943	$1,374,413	$1,364,174	$1,475,202	$1,473,521	$1,499,774	$1,539,280
(B)	**Annual Funding**										
	Contributions Indexed at 3%	$3,304	$3,403	$3,505	$3,611	$3,719	$1,319	$1,358	$1,399	$1,441	$1,484
(C)	Additional Contributions					**($2,400)**					
		3,304	3,403	3,505	3,611	1,319	1,319	1,358	1,399	1,441	1,484
(D)	Total Annual Reserve Funding	$330,412	$340,324	$350,534	$361,050	$131,882	$131,882	$135,838	$139,913	$144,111	$148,434
(E)	Interest on Reserves at 2%	$16,773	$21,058	$22,257	$25,129	$28,807	$28,602	$30,862	$30,870	$31,437	$32,270
	Total Funds Available	**$1,020,628**	**$1,244,145**	**$1,310,374**	**$1,462,123**	**$1,535,102**	**$1,524,658**	**$1,641,903**	**$1,644,304**	**$1,675,321**	**$1,719,984**
(F)	Total Capital Cost	$433,489	$406,562	$234,431	$87,710	$170,927	$49,456	$168,381	$144,531	$136,041	$37,077
(G)	**Reserve Balances**	**$587,139**	**$837,583**	**$1,075,943**	**$1,374,413**	**$1,364,174**	**$1,475,202**	**$1,473,521**	**$1,499,774**	**$1,539,280**	**$1,682,907**
	Outside Capital:	**$295,624**	**$100,000**								
	Adjusted Reserve Balances	$882,763	$937,583	$0	$0	$0	$0	$0	$0	$0	$0

Notes:

1. **Starting replacement reserve balance of $673,443 as of January 1, 2016.**
2. **Remaining second assessment income of $95,624, plus 8 months of third assessment in the amount of $200,000 (total of $295,624) shown in Year 1.**
3. **Remaining four months of third assessment in the amount of $100,000 shown in Year 2.**
4. **Annual contribution to reserves of $330,412 ($3,304 per % of B.I.), indexed at 3% per year going forward.**
5. **Annual contribution to reserves *reduction* of $2,400 per percent of B.I. ($200 per % of B.I. per month) in Year 5 to help mitigate excessive accumulation.**

*ANNUAL RR CONTRIBUTIONS are shown being indexed for inflation at the % specified above except when Additional Contributions are called for.

Line C, Additional Contributions allows for material adjustments in annual RR funding that would enable the property to meet all projected needs out of reserves through Year 20.

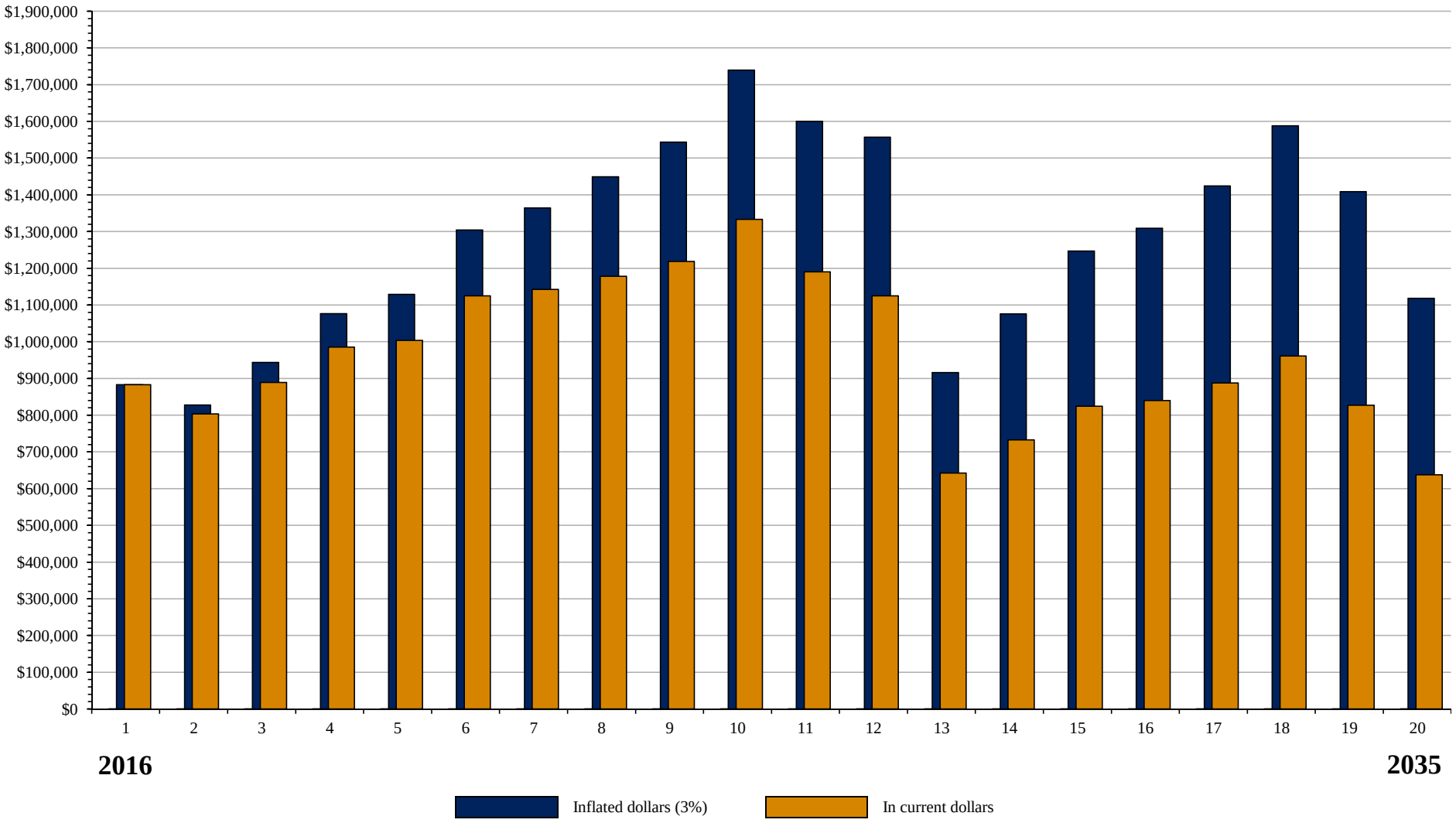
**INTEREST EARNINGS ON RESERVES are calculated on 100% of starting balances and on 50% of the total annual contribution for the year at the rate shown

Reserve Funding In Year 20

Projected replacement reserve balance is **$765,901** This is $7,659 per % B.I. in inflated dollars or $4,368 per % B.I. in uninflated dollars

Projected annual funding to reserves is **$199,483** This is $1,995 per % B.I. in inflated dollars or $1,138 per % B.I. in uninflated dollars

2026 Year 11	**2027** Year 12	**2028** Year 13	**2029** Year 14	**2030** Year 15	**2031** Year 16	**2032** Year 17	**2033** Year 18	**2034** Year 19	**2035** Year 20	
										Reserve Balances **(A)**
$1,682,907	$1,494,685	$1,406,636	$724,500	$847,270	$985,424	$1,018,885	$1,110,847	$1,256,600	$1,063,707	Starting Replacement Reserves
										Annual Funding **(B)**
$1,529	$1,575	$1,622	$1,671	$1,721	$1,772	$1,826	$1,880	$1,937	$1,995	Contributions Indexed at 3%
										Additional Contributions **(C)**
1,529	1,575	1,622	1,671	1,721	1,772	1,826	1,880	1,937	1,995	
$152,887	$157,474	$162,198	$167,064	$172,076	$177,238	$182,555	$188,032	$193,673	$199,483	Total Annual Reserve Funding **(D)**
$35,187	$31,468	$29,755	$16,161	$18,666	$21,481	$22,203	$24,097	$27,069	$23,269	Interest on Reserves at 2% **(E)**
$1,870,981	**$1,683,627**	**$1,598,589**	**$907,724**	**$1,038,011**	**$1,184,142**	**$1,223,643**	**$1,322,976**	**$1,477,341**	**$1,286,459**	**Total Funds Available**
$376,296	$276,991	$874,089	$60,455	$52,588	$165,258	$112,796	$66,376	$413,634	$520,557	Total Capital Cost **(F)**
$1,494,685	**$1,406,636**	**$724,500**	**$847,270**	**$985,424**	**$1,018,885**	**$1,110,847**	**$1,256,600**	**$1,063,707**	**$765,901**	**Reserve Balances** **(G)**
										Outside Capital
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	Additional Capital



Reported Reserve Balance as of 01/01/2016 : **$673,443**
Current annual contributions to reserves : **$330,412**

At the end of Year One, Reserve Balances are projected to be: **$882,763**
At the end of Year 20, Reserve Balances are projected to be: **$1,117,961**
All projected capital needs are met throughout the plan

1. Starting replacement reserve balance of $673,443 as of January 1, 2016.
2. Remaining second assessment income of $95,624, plus 8 months of third assessment in the amount of $200,000 (total of $295,624) shown in Year 1.
3. Remaining four months of third assessment in the amount of $100,000 is *removed.*
4. Annual contributions to reserves of $330,412 ($3,304 per % of B.I.), *indexed at 0% per year* going forward and *reduced* to $2000 per % of B.I starting in Year 4.

Reserve Funding In Year 1

Start replacement reserve balance: **$673,443** or $6,734/%B.I.

Contributions to Reserves: **$330,412** or $3,304/%B.I.

Replacement Reserve (RR) analysis starts here with the starting RR balance reported, or imputed, to have been on hand at the start of Year 1, and current annual RR contributions. The projections below reflect Starting RR Balance (Line A), plus the Total Annual RR Contributions (Line D) and Interest Earnings on RR (Line E), minus Total Annual Capital Costs (Line F), taken from the CNS above. This is expressed arithmetically as (A+D+E)-F=G, Year-End Balances, then carries forward to Line A of the following Year.

		2016 Year 1	2017 Year 2	2018 Year 3	2019 Year 4	2020 Year 5	2021 Year 6	2022 Year 7	2023 Year 8	2024 Year 9	2025 Year 10
(A)	**Reserve Balances**										
	Starting Replacement Reserves	$673,443	$882,763	$827,571	$943,408	$1,076,579	$1,129,195	$1,304,335	$1,364,053	$1,448,815	$1,543,763
(B)	**Annual Funding**										
	Contributions Indexed at 0%	$3,304	$3,304	$3,304	$3,304	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
(C)	Additional Contributions				($1,304)						
		3,304	3,304	3,304	2,000	2,000	2,000	2,000	2,000	2,000	2,000
(D)	Total Annual Reserve Funding	$330,412	$330,412	$330,412	$200,012	$200,012	$200,012	$200,012	$200,012	$200,012	$200,012
(E)	Interest on Reserves at 2%	$16,773	$20,959	$19,856	$20,868	$23,532	$24,584	$28,087	$29,281	$30,976	$32,875
	Total Funds Available	**$1,020,628**	**$1,234,134**	**$1,177,839**	**$1,164,288**	**$1,300,123**	**$1,353,791**	**$1,532,434**	**$1,593,346**	**$1,679,804**	**$1,776,650**
(F)	Total Capital Cost	$433,489	$406,562	$234,431	$87,710	$170,927	$49,456	$168,381	$144,531	$136,041	$37,077
(G)	**Reserve Balances**	**$587,139**	**$827,571**	**$943,408**	**$1,076,579**	**$1,129,195**	**$1,304,335**	**$1,364,053**	**$1,448,815**	**$1,543,763**	**$1,739,573**
	Outside Capital:	$295,624									
	Adjusted Reserve Balances	$882,763	$0	$0	$0	$0	$0	$0	$0	$0	$0

Notes:

1. **Starting replacement reserve balance of $673,443 as of January 1, 2016.**
2. **Remaining second assessment income of $95,624, plus 8 months of third assessment in the amount of $200,000 (total of $295,624) shown in Year 1.**
3. **Remaining four months of third assessment in the amount of $100,000 is *removed.***
4. **Annual contributions to reserves of $330,412 ($3,304 per % of B.I.), *indexed at 0% per year* going forward and *reduced* to $2000 per % of B.I. starting in Year 4.**

*ANNUAL RR CONTRIBUTIONS are shown being indexed for inflation at the % specified above except when Additional Contributions are called for.

Line C, Additional Contributions allows for material adjustments in annual RR funding that would enable the property to meet all projected needs out of reserves through Year 20.

**INTEREST EARNINGS ON RESERVES are calculated on 100% of starting balances and on 50% of the total annual contribution for the year at the rate shown

Reserve Funding In Year 20

Projected replacement reserve balance is **$1,117,961** This is $11,180 per % B.I. in inflated dollars or $11,180 per % B.I. in uninflated dollars

Projected annual funding to reserves is **$200,012** This is $2,000 per % B.I. in inflated dollars or $2,000 per % B.I. in uninflated dollars

2026 Year 11	**2027** Year 12	**2028** Year 13	**2029** Year 14	**2030** Year 15	**2031** Year 16	**2032** Year 17	**2033** Year 18	**2034** Year 19	**2035** Year 20	
										Reserve Balances (A)
$1,739,573	$1,600,081	$1,557,104	$916,169	$1,076,050	$1,246,996	$1,308,690	$1,424,080	$1,588,198	$1,408,340	Starting Replacement Reserves
										Annual Funding (B)
$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	Contributions Indexed at 0%
										Additional Contributions **(C)**
2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	
$200,012	$200,012	$200,012	$200,012	$200,012	$200,012	$200,012	$200,012	$200,012	$200,012	Total Annual Reserve Funding **(D)**
$36,792	$34,002	$33,142	$20,324	$23,521	$26,940	$28,174	$30,482	$33,764	$30,167	Interest on Reserves at 2% **(E)**
$1,976,377	**$1,834,095**	**$1,790,258**	**$1,136,505**	**$1,299,583**	**$1,473,948**	**$1,536,876**	**$1,654,574**	**$1,821,974**	**$1,638,519**	**Total Funds Available**
$376,296	$276,991	$874,089	$60,455	$52,588	$165,258	$112,796	$66,376	$413,634	$520,557	Total Capital Cost **(F)**
$1,600,081	**$1,557,104**	**$916,169**	**$1,076,050**	**$1,246,996**	**$1,308,690**	**$1,424,080**	**$1,588,198**	**$1,408,340**	**$1,117,961**	**Reserve Balances (G)**
										Outside Capital
$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	Additional Capital

Bay Square Condominium

SITE SYSTEMS

(Expected Useful life)

Replacement Items	Quantity		Cost per unit in 2016 $$	Total Cost in 2016 $$	AGE (Years)	EUL (Years)	Replacement Schedule Year of action AND duration of project	Notes
SURFACE								
Loading Dock Entry and Platform	1,508	sf	7.00	$10,556	28	25	1 in 1 Year	Reinforced poured concrete. Age and use replaced surface deterioration. Costs to repair and resurface entry drive and loading dock platform.
Loading Dock Platform - Epoxy	650	sf	5.50	$3,575	28	10	1 /11 in 1 Year	Periodic costs to apply protective epoxy coating to loading dock platform.
Loading Dock Walkway	140	sf	15.00	$2,100	28	25	1 in 1 Year	Damaged, deteriorated concrete walkway along loading dock entry drive. Costs to remove and re-pour complete length of walkway.
	925	ttl sf						Poured concrete rear elevation courtyard. Generally good conditions.
Rear Courtyard Concrete	93	sf	7.00	$648	28	25	1 /6 /11 /16 in 1 Year	Some localized surface deterioration. Sectional repair/resurfacing allowances.
Rear Courtyard Brick Platform	215	sf		$0	3	30		Dry-laid brick platform at rear elevation courtyard. Recently rebuilt. Good observable conditions. Future as-needed reset/repair from Operating.
	2173	ttl sf						Poured concrete pool deck. Surface deterioration visible under building
Pool Deck Concrete	217	sf	7.00	$1,521	28	25	1 /6 /11 in 1 Year	overhang. Costs for periodic as/needed sectional repairs and resurfacing.
Pool Deck Caulk	373	lf	5.00	$1,865	>10	10	1 /11 in 1 Year	Aging caulk around pool and along pool deck perimeter. Replacement cycles and costs based on 10-year EUL.
	7	total						Large brick wall planters with stone caps and membrane liners. One rebuilt.
Brick & Stone Planters	1	ls	150000.00	$105,000	Varies	25	3 over 3 Years	Costs to gradually rebuild remaining six over 3 years to mitigate garage leaking.
	2600	ttl sf						Poured concrete front elevation walkways Generally good conditions.
Front Elevation Walkways	260	sf	7.00	$1,820	28	25	1 /6 /11 /16 in 1 Year	Some localized surface deterioration. Sectional repair/resurfacing allowances.
Fencing - Metal	700	sf	3.00	$2,100	28	15	1 /16 in 1 Year	Painted metal fence around front elevation park. General paint failure along entire length. Costs to scrape, prime, paint all.
Fencing - PVC - Rear Courtyard	115	lf		$0	4	25		Azek 6-foot high PVC fencing and gate at rear courtyard and pool area. Newly installed in 2012. Monitor and maintain from Operating.
Fencing - PVC - Green Street	110	lf	30.00	$3,300	6	25	19 in 1 Year	Azek PVC privacy fencing at Green Street townhouse units. All newly installed in 2010. Future replacement based on 25-year EUL.
Pergola	1	ea		$0	7	30		Azek PVC framed pergola at rear courtyard building entrance. Installed 2009. Good conditions. Monitor and maintain from Operating.
Site Lighting - Bollards	7	ea	650.00	$4,550	28	30	2 in 1 Year	Original bollard lights at front elevation courtyard and walkway. No reported problems. Future replacement with LED bollard fixtures.
Site Lighting - Pier Lights	2	ea	500.00	$1,000	28	30	2 in 1 Year	Original painted metal lantern-style pier lights at Mass Ave entry gate. No reported problems. Future replacement with LED lantern fixtures.
Pool Surface	1	ls	15000.00	$15,000	11	15	4 /19 in 1 Year	Gunite pool surface. Last resurfaced in 2005. No reported issues. Future resurfacing cycles and costs based on 15-year EUL.
Spa Surface	1	ls	8000.00	$8,000	6	15	9 in 1 Year	Gunite spa surface. Last resurfaced in 2010. No reported issues. Future resurfacing costs based on 15-year EUL.
Pool Cover	1	ea	3850.00	$3,850	1	10	9 /19 in 1 Year	Mesh safety pool cover with anchor attachment. Newly replaced in 2015. Future replacement cycles and costs based on 10-year EUL.
Pool Mechanicals	1	ea	5000.00	$5,000	1	5	1 /6 /11 /16 in 1 Year	Various pool mechanicals - Sand filters, separators, chlorinators, pumps. Periodic allowances for as-needed repairs and replacements.
SITE DISTRIBUTION SYSTEMS								
Gas Lines	1	lf		$0	28	60		Utility supplied service. No observed or reported problems. Monitor.
Sanitary Lines	1	lf		$0	28	60		Municipally supplied service. No observed or reported problems. Monitor.
Cold Water Lines	1	lf		$0	28	60		Municipally supplied service. No observed or reported problems. Monitor.
Electric Distribution	1	lf		$0	28	60		Utility supplied service. No observed or reported problems. Monitor.

Costs inflated at 3%

SITE SYSTEMS

Replacement Items	Year 1 2016	Year 2 2017	Year 3 2018	Year 4 2019	Year 5 2020	Year 6 2021	Year 7 2022	Year 8 2023	Year 9 2024	Year 10 2025	Year 11 2026	Year 12 2027	Year 13 2028	Year 14 2029	Year 15 2030	Year 16 2031	Year 17 2032	Year 18 2033	Year 19 2034	Year 20 2035
SURFACE																				
Loading Dock Entry and Platform	$10,556	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Loading Dock Platform - Epoxy	$3,575	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,805	$0	$0	$0	$0	$0	$0	$0	$0	$0
Loading Dock Walkway	$2,100	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Rear Courtyard Concrete	$648	$0	$0	$0	$0	$751	$0	$0	$0	$0	$870	$0	$0	$0	$0	$1,009	$0	$0	$0	$0
Rear Courtyard Brick Platform	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pool Deck Concrete	$1,521	$0	$0	$0	$0	$1,763	$0	$0	$0	$0	$2,044	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pool Deck Caulk	$1,865	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,506	$0	$0	$0	$0	$0	$0	$0	$0	$0
Brick & Stone Planters	$0	$0	$37,132	$38,245	$39,393	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Front Elevation Walkways	$1,820	$0	$0	$0	$0	$2,110	$0	$0	$0	$0	$2,446	$0	$0	$0	$0	$2,836	$0	$0	$0	$0
Fencing - Metal	$2,100	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,272	$0	$0	$0	$0
Fencing - PVC - Rear Courtyard	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Fencing - PVC - Green Street	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,618	$0
Pergola	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Site Lighting - Bollards	$0	$4,687	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Site Lighting - Pier Lights	$0	$1,030	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pool Surface	$0	$0	$0	$16,391	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$25,536	$0
Spa Surface	$0	$0	$0	$0	$0	$0	$0	$0	$10,134	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pool Cover	$0	$0	$0	$0	$0	$0	$0	$0	$4,877	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,554	$0
Pool Mechanicals	$5,000	$0	$0	$0	$0	$5,796	$0	$0	$0	$0	$6,720	$0	$0	$0	$0	$7,790	$0	$0	$0	$0
SITE DISTRIBUTION SYSTEMS																				
Gas Lines	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sanitary Lines	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cold Water Lines	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Electric Distribution	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Bay Square Condominium

MECHANICAL ROOM

(Expected Useful life)

Replacement Items	Quantity	Cost per unit in 2016 $$	Total Cost in 2016 $$	AGE (Years)	EUL (Years)	Replacement Schedule Year of action AND duration of project	Notes
BOILERS							
Boilers - Main	1 ea	200000.00	$200,000	28	30	2 in 1 Year	H.B. Smith sectional cast iron natural gas-fired boiler. 3,825 MBH input. Future costs to replace with high-efficiency condensing boilers.
Boilers - Pool/Spa	2 ea	8000.00	$16,000	8	25	17 in 1 Year	Dedicated RayPak 399 MBH natural gas-fired pool water heaters. Replaced in 2008. No reported issues. Future replacement costs.
Expansion Tank	1 ea		$0	4	25		Expansion tank. Replaced in 2012. No reported issues. Monitor and maintain from Operating.
Heat Exchanger	1 ea	5000.00	$5,000	28	5	1 /6 /11 /16 in 1 Year	Alfa-Laval A15-BFG, 4600 sf, 150 PSI, plate and frame heat exchanger. Periodic allowances to open, clean, check, and replace gaskets as-needed.
Controls	1 ea		$0	28	15		Original boiler controls. No reported problems or issues. Future integrated controls on each boiler included with Boiler replacement.
Service Loop Pumps	2 total 1 ea	5000.00	$5,000	Varies	15	2 /9 /17 in 1 Year	40-hp, base-mounted service loop circulating pumps on Teco VFD's Periodic rebuild allowances based on 15-year EUL.
Service Loop Pump Motors	2 ea	9000.00	$18,000	5	20	15 in 1 Year	Leeson WattSaver 40-hp service loop pump motors on Teco VFD's. Both replaced in 2011. Future rebuild costs based on 20-year EUL.
Service Loop Pump VFD's	2 ea	10000.00	$20,000	2	15	13 in 1 Year	Teco MA7200 variable frequency drive (VFD) on each service loop pump. Newly installed in 2014. Future replacement based on 15-year EUL.
Cooling Tower Loop Pumps	2 total 1 ea	4500.00	$4,500	Varies	15	1 /8 /15 in 1 Year	20-hp, base-mounted cooling tower loop circulating pumps. Periodic rebuild allowances based on 15-year EUL.
Cooling Tower Loop Motors	2 total 1 ea	7500.00	$7,500	Varies	15	3 /10 /17 in 1 Year	20-hp service loop pump motors. Periodic rebuild allowances based on 15-year EUL.
Boiler Water Pump - Newer	1 ea	5250.00	$5,250	1	20	19 in 1 Year	Newer 5-hp boiler water circulation pump. No observed issues. Replaced in 2015. Future replacement in Yr 19, based on 20-year EUL
Boiler Water Pump - Original	1 ea	5250.00	$5,250	28	20	1 in 1 Year	Original 5-hp boiler water circulation pump. No observed issues. Replace in Year 1, based on 20-year EUL
Flue Exhaust	1 ea		$0	28	25		Sheet metal flues. Good observable conditions. No damaged sections noted. Monitor. Future replacement included with Boiler replacement (above).
BOILER ROOM SYSTEMS							
Boiler Room Piping/Valves	1 ls		$0	28	25		No observed or reported leaking or significant corrosion noted. Monitor and maintain from Operating.
Cooling Tower	1 ea	185000.00	$185,000	4	25	20 in 1 Year	Evapco AT-112, induced-draft, counterflow cooling tower located on rooftop. Installed 2012. No observed or reported issues. Future replacement costs.
Domestic Hot Water Generation	2 ea	22500.00	$45,000	8	20	12 in 1 Year	Power-Fin PFN0502 500 MBH high-efficiency natural gas-fired DHW boilers. No observed or reported issues. Future replacement based on 20-year EUL.
Domestic Hot Water Storage	1 ea	3000.00	$3,000	8	10	2 /12 in 1 Year	Lochinvar 1,000 gallon indirect-fired storage tank. Last re-lined in 2008. Periodic allowances for inspection, cleaning, and cement coat re-lining.
Domestic Hot Water Pumps	3 total 1 ea	1850.00	$1,850	Varies	15	1 /6 /11 /16 in 1 Year	Bell & Gossett PL130B, 2/5-horseopwer DHW circulation pumps. No observed or reported issues. As-needed replacement allowances.
Boiler Room Piping Insulation	1 ls		$0	28	25		Good amount of piping insulation observed throughout. No missing or damaged sections noted. Monitor and maintain from Operating.
Fuel Oil Storage	1 ea		$0	3	40		Above-ground generator diesel fuel tank located in parking garage. Newly installed in 2013. No observed or reported issues. Monitor.
Fuel Oil Transfer System	1 ls		$0	3	25		Dual pump fuel oil transfer system. Delivers fuel to the 7th floor generator day tank. No reported issues. Monitor and maintain from Operating.

Costs inflated at 3%

Replacement Items	Year 1 2016	Year 2 2017	Year 3 2018	Year 4 2019	Year 5 2020	Year 6 2021	Year 7 2022	Year 8 2023	Year 9 2024	Year 10 2025	Year 11 2026	Year 12 2027	Year 13 2028	Year 14 2029	Year 15 2030	Year 16 2031	Year 17 2032	Year 18 2033	Year 19 2034	Year 20 2035
BOILERS																				
Boilers - Main	$0	$206,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Boilers - Pool/Spa	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$25,675	$0	$0	$0
Expansion Tank	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Heat Exchanger	$5,000	$0	$0	$0	$0	$5,796	$0	$0	$0	$0	$6,720	$0	$0	$0	$0	$7,790	$0	$0	$0	$0
Controls	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Service Loop Pumps	$0	$5,150	$0	$0	$0	$0	$0	$0	$6,334	$0	$0	$0	$0	$0	$0	$0	$8,024	$0	$0	$0
Service Loop Pump Motors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$27,227	$0	$0	$0	$0	$0
Service Loop Pump VFD's	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$28,515	$0	$0	$0	$0	$0	$0	$0
Cooling Tower Loop Pumps	$4,500	$0	$0	$0	$0	$0	$0	$5,534	$0	$0	$0	$0	$0	$0	$6,807	$0	$0	$0	$0	$0
Cooling Tower Loop Motors	$0	$0	$7,957	$0	$0	$0	$0	$0	$0	$9,786	$0	$0	$0	$0	$0	$0	$12,035	$0	$0	$0
Boiler Water Pump - Newer	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,938	$0
Boiler Water Pump - Original	$5,250	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Flue Exhaust	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
BOILER ROOM SYSTEMS																				
Boiler Room Piping/Valves	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cooling Tower	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$324,399
Domestic Hot Water Generation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$62,291	$0	$0	$0	$0	$0	$0	$0	$0
Domestic Hot Water Storage	$0	$3,090	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,153	$0	$0	$0	$0	$0	$0	$0	$0
Domestic Hot Water Pumps	$1,850	$0	$0	$0	$0	$2,145	$0	$0	$0	$0	$2,486	$0	$0	$0	$0	$2,882	$0	$0	$0	$0
Boiler Room Piping Insulation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Fuel Oil Storage	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Fuel Oil Transfer System	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Bay Square Condominium

BUILDING MECHANICAL AND ELECTRICAL

(Expected Useful life)

Replacement Items	Quantity	Cost per unit in 2016 $$	Total Cost in 2016 $$	AGE (Years)	EUL (Years)	Replacement Schedule Year of action AND duration of project	Notes
BUILDING MECHANICAL							
Trash Compactors	1 ea	15000.00	$15,000	28	30	2 in 1 Year	Shoot-fed, forward-feed, hydraulic dumpster with two 2-cy rolling containers. Original equipment. Future replacement based on 30-year EUL.
Trash Containers	2 total 1 ea	4000.00	$4,000	Varies	10	2 /7 /12 /17 in 1 Year	Two 2-cubic yard rolling trach containers. Sees hard use from waste disposal company. Allowances to replace one container every 5 years.
Building Fire Suppression - Wet	1 ls	8500.00	$8,500	28	50	18 in 1 Year	Wet-pipe building fire suppression system with 75-hp fire pump, and 2-hp jockey pump. Fire pump and controller recently overhauled. Future overhaul.
Wet Fire System Jockey Pump	1 ea	3000.00	$3,000	28	25	1 in 1 Year	Grundfos 2-horsepower jockey pump. Original equipment. Significant corrosion at flange and base. Replace in Year 1.
Garage Fire Suppression - Dry	1 ea	1500.00	$1,500	15	25	10 in 1 Year	Dry-pipe parking garage fire suppression system with all new galvanized steel piping and 3/4-hp Leeson compressor. Future costs to replace compressor.
Garage CO Detection	1 ls	7500.00	$7,500	12	20	8 in 1 Year	ToxAlert parking garage CO detection system with 9 wall-mounted monitors. Future costs to replace all monitors and upgrade panel based on 20-year EUL.
Hot/Cold Water & Nat. Gas Distr.	1 ls		$0	28	75		Distribution piping for domestic hot and cold water and natural gas. No reported issues. Monitor.
Building Sanitary Waste & Vent.	1 ls	40000.00	$40,000	Varies	75	1 over 20 Years	Aging sanitary waste and vent distribution piping. Annual allowances for on-going as-needed sectional repairs/replacements.
Hallway Air Conditioning	2 ea	6875.00	$13,750	11	20	9 in 1 Year	Carrier WeatherMaster, 4-ton, energy-efficient (13 SEER) single-package rooftop units serving hallways. No reported issues. Future replacement.
Common Space HVAC	4 ea	11000.00	$44,000	1-6	20+	17 over 4 Years	Carrier ceiling-mounted water-source heat pumps at lobby, front desk, rear ground floor, fitness room. Varying ages. Future gradual replacement.
Stairwell Ventilation & Exhaust	3 ea	3500.00	$10,500	28	30	2 in 1 Year	Large rooftop stairwell smoke ventilation fans. No reported issues. Future replacement based on 30-year EUL.
Building/Unit Vent. & Exhaust	44 ea	*Average costs* 500.00	$22,000	Varies	20	1 over 20 Years	Various rooftop centrifugal down-blast exhaust fans serving common area and resident bathrooms, kitchens, laundry, trash chutes. Replacement allowances.
Garage Ventilation & Exhaust	4 ea	3000.00	$12,000	28	10	5 /15 over 2 Years	Large wall-mounted CO monitoring system controlled fans.2 intake, 2 exhaust. No reported operating issues. Periodic motor, belt, controls overhauling.
Cold Water Booster Pumps	1 ea	13000.00	$13,000	1	15	14 in 1 Year	SyncroFlo cold water booster system with two 5-hp pumps. Newly installed in 2015. Future costs to replace pumps and upgrade panel.
BUILDING ELECTRICAL							
Building Power Wiring	1 ls	12000.00	$12,000	28	99	1 /6 /11 /16 in 1 Year	GE switchgear, panels, sub-panels, and main disconnect. Allowances for periodic Infrared, Megger, DLRO, and injection testing and maintenance.
Emergency Generator	1 ea	112500.00	$112,500	28	35	7 in 1 Year	300 kW interior-mounted Caterpillar diesel-fired generator. Tested regularly. No reported problems. Future replacement costs based on 35-year EUL.
Generator Starter Batteries	2 ea	1000.00	$2,000	3	5	2 /7 /12 /17 in 1 Year	Heavy duty generator starter batteries. No reported issues. Periodic replacement based on 5-year EUL.
Smoke / Fire Detection	1 ls	84750.00	$84,750	7	20	13 in 1 Year	Simplex 4100U addressable panel with command center, wireless transmitter, and elevator recall. Future replacement incl. peripherals based on 20-yr EUL.
Security / Communication	1 ls	5000.00	$5,000	Varies	5	3 /8 /13 /18 in 1 Year	Front lobby intercom panel, magnetic key-card entry at front, rear, & garages, surveillance system with 11 cameras and DVR. Periodic upgrade allowances.
BUILDING ELEVATORS							
Shafts and Doorways	2 ea		$0	2	35		North and south elevators with 25-hp overhead traction machines. All new machines, cables, rollers, governors, etc. in 2014. Full-service maint. contract.
Cabs	2 ea	12000.00	$24,000	11	15	4 /19 in 1 Year	Wood-laminate panels, brass trim, carpet. New door operators in 2005 Periodic costs to refurbish/upgrade cab interior finishes and door operators.
Controller/Dispatcher	2 ea		$0	2	30+		Solid state controller/dispatchers with Magnetek HPV-900 AC drives. Newly installed in 2014. No reported issues. Monitor.
Machine Room Equipment	2 ea	10000.00	$20,000	2	16	14 in 1 Year	Imperial 25-horsepower overhead traction machines. Newly installed in 2014. Future allowance to overhaul both machines.

Costs inflated at 3%

Replacement Items	Year 1 2016	Year 2 2017	Year 3 2018	Year 4 2019	Year 5 2020	Year 6 2021	Year 7 2022	Year 8 2023	Year 9 2024	Year 10 2025	Year 11 2026	Year 12 2027	Year 13 2028	Year 14 2029	Year 15 2030	Year 16 2031	Year 17 2032	Year 18 2033	Year 19 2034	Year 20 2035
BUILDING MECHANICAL																				
Trash Compactors	$0	$15,450	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Trash Containers	$0	$4,120	$0	$0	$0	$0	$4,776	$0	$0	$0	$0	$5,537	$0	$0	$0	$0	$6,419	$0	$0	$0
Building Fire Suppression - Wet	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$14,049	$0	$0
Wet Fire System Jockey Pump	$3,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Garage Fire Suppression - Dry	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,957	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Garage CO Detection	$0	$0	$0	$0	$0	$0	$0	$9,224	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Hot/Cold Water & Nat. Gas Distr.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Building Sanitary Waste & Vent.	$2,000	$2,060	$2,122	$2,185	$2,251	$2,319	$2,388	$2,460	$2,534	$2,610	$2,688	$2,768	$2,852	$2,937	$3,025	$3,116	$3,209	$3,306	$3,405	$3,507
Hallway Air Conditioning	$0	$0	$0	$0	$0	$0	$0	$0	$17,418	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Common Space HVAC	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$17,652	$18,181	$18,727	$19,289
Stairwell Ventilation & Exhaust	$0	$10,815	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Building/Unit Vent. & Exhaust	$1,100	$1,133	$1,167	$1,202	$1,238	$1,275	$1,313	$1,353	$1,393	$1,435	$1,478	$1,523	$1,568	$1,615	$1,664	$1,714	$1,765	$1,818	$1,873	$1,929
Garage Ventilation & Exhaust	$0	$0	$0	$0	$6,753	$6,956	$0	$0	$0	$0	$0	$0	$0	$0	$9,076	$9,348	$0	$0	$0	$0
Cold Water Booster Pumps	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$19,091	$0	$0	$0	$0	$0	$0
BUILDING ELECTRICAL																				
Building Power Wiring	$12,000	$0	$0	$0	$0	$13,911	$0	$0	$0	$0	$16,127	$0	$0	$0	$0	$18,696	$0	$0	$0	$0
Emergency Generator	$0	$0	$0	$0	$0	$0	$134,331	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Generator Starter Batteries	$0	$2,060	$0	$0	$0	$0	$2,388	$0	$0	$0	$0	$2,768	$0	$0	$0	$0	$3,209	$0	$0	$0
Smoke / Fire Detection	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$120,833	$0	$0	$0	$0	$0	$0	$0
Security / Communication	$0	$0	$5,305	$0	$0	$0	$0	$6,149	$0	$0	$0	$0	$7,129	$0	$0	$0	$0	$8,264	$0	$0
BUILDING ELEVATORS																				
Shafts and Doorways	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cabs	$0	$0	$0	$26,225	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$40,858	$0
Controller/Dispatcher	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Machine Room Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$29,371	$0	$0	$0	$0	$0	$0

Bay Square Condominium

BUILDING ARCHITECTURE

(Expected Useful life)

Replacement Items	Quantity		Cost per unit in 2016 $$	Total Cost in 2016 $$	AGE (Years)	EUL (Years)	Replacement Schedule Year of action AND duration of project	Notes
STRUCTURE								
Foundation	855	lf		$0	28	50		Reinforced poured concrete building and garage foundation. No observed or reported issues. Monitor.
Framing	1	ls		$0	28	70		Steel and poured concrete slab framing. No observed or reported issues. Monitor.
Upper Garage Floor	25,425	sf	5.50	$139,838	9	10	2 /12 in 1 Year	Epoxy coated concrete surface. Age and use related coating wear noted. Costs to wash, prepare, and re-coat entire floor based on 10-year EUL.
Upper Garage Ceiling	25,425	sf		$0	Varies	10		Suspended acoustic tile ceiling. Good observable conditions. As-needed spot ceiling tile replacements handled from Operating accounts.
			10.00	$259,100		10	1 in 1 Year	Bare concrete floor. Localized surface wear from salt and use. Year 1 costs to
Lower Garage Floor	25,910	sf	5.50	$142,505	28	10	11 in 1 Year	resurface where needed, etch, and apply epoxy coating. Future recoat in Yr 11.
BUILDING EXTERIOR								
	2	total						Aluminum-framed double-leaf front entrance and vestibule glass doors.
Aluminum/Glass Double Doors	210	sf	45.00	$9,450	28	35	8 in 1 Year	Future replacement of both door sets including surrounding glazing.
	10	total						Aluminum-framed single-leaf common area and commercial unit glass doors.
Aluminum/Glass Single Doors	1,005	sf	40.00	$40,200	28	35	8 in 1 Year	Future replacement of all door sets including surrounding glazing.
Garage Vestibule Doors	2	ea	2150.00	$4,300	28	35	7 in 1 Year	Aluminum-framed single-leaf garage vestibule glass doors. Future replacement of doors only.
Power Door Openers	2	ea	1850.00	$3,700	3	10	7 /17 in 1 Year	Power door openers at parking garage elevator vestibules. Installed in 2013. No reported issues. Future replacement cycles and costs.
Double-Leaf Service Doors	1	ea	1250.00	$1,250	28	35	1 in 1 Year	Flush-metal double-leaf service door at loading dock. Age, use, and weather related wear and corrosion. Rusted through at base. Replace in Year 1.
Single-Leaf Service Doors	8	ea	950.00	$7,600	28	35	7 over 4 Years	Flush-metal single-leaf service and egress doors at loading dock, rear patio, Green St, and Bay St. Good observable conditions. Future gradual replacement.
Glass Sliding Doors	106	ea		$0	Varies	35		Unit balcony and terrace sliding glass doors. Being gradually replaced at unit owner decision and costs. No costs shown.
Overhead Garage Doors	5	ea	2250.00	$11,250	10	20	10 in 1 Year	Segmented panel insulated fiberglass overhead garage doors on power hoists. No observed or reported problems. Future replacement based on 20-yr EUL.
	5	total		$1,900			2 /5 /8 /11 in 1 Year	PowerMaster J-53, 1/2-hp garage overhead door wall-mounted power opener
Overhead Garage Door Openers	1	ea	1900.00	$1,900	Varies	15	14 /17 /20 in 1 Year	Varying ages from 1-13 years old. Future replacements based on 15-year EUL.
	56,800	total						Face-brick cladding. Good observable conditions from the ground. Sectional
Exterior Walls - Brick	5,680	sf	15.00	$85,200	Varies	15	5 /20 in 1 Year	as-needed brick repair/repointing last performed in 2005. Future allowances.
	56,800	total						Visible efflorescence noted at pool area, southwest (Bay/Green St) corner
Exterior Walls - Efflorescence	3,408	sf	0.75	$2,556	Varies	5	1 /6 /11 /16 in 1 Year	and along Green Street. Costs for periodic power-washing to remove salts.
Trim, Soffit & Fascia	1,710	lf		$0	28	5		Cast stone trim bands at 6th floor. Good observable conditions. Review and as-needed repointing included with Exterior Walls (above).
Caulk	5,755	lf	10.00	$57,550	Varies	15	1 /16 in 1 Year	Aging corner and control joint caulking. Cohesion failure visible from ground. Spot replacement last performed 2005. Costs for complete replacement.
Window Frames - Residences	363	ea		$0	1	35		Fiberglass slider-type residence unit windows with insulating glass units (IGU's). All newly replaced in 2015. No observed or reported issues. Monitor.
Window Frames - Fixed Panel	1,080	sf	35.00	$37,800	28	35	8 in 1 Year	Aluminum-framed, double-glazed, fixed window panels at all common areas and commercial units. Future replacement based on 35-year EUL.
Juliet Balcony Railings	84	ea	2075.00	$174,300	6	25	19 in 1 Year	All Juliet balcony railings painted with RhinoShield ceramic coating in 2010. Future re-painting costs in Year 19, based on 25-year warranty.
Terrace & Mansard Balcony Railings	511	lf	3.00	$1,533	>10	10	1 /11 in 1 Year	Painted square metal railings. Painted with standard metal primer and paint. Paint failure and pealing note overall. Costs to sand, prime, and paint all.
	6	total						Cast stone 7th Floor Mansard balcony capstones. One recently replaced.
Mansard Balcony Cap Stones	5	ea	1000.00	$5,000	28	25+	1 over 3 Years	Costs to gradually replace the remaining five.
			Average costs					Mix of wall-mounted and recessed, HID and fluorescent fixtures at all
Building Mounted Lighting	35	ea	500.00	$17,500	Varies	15	1 /16 over 15 Years	elevations. Varying ages. Annual allowance for as-needed replacements.

Costs inflated at 3%

Replacement Items	Year 1 2016	Year 2 2017	Year 3 2018	Year 4 2019	Year 5 2020	Year 6 2021	Year 7 2022	Year 8 2023	Year 9 2024	Year 10 2025	Year 11 2026	Year 12 2027	Year 13 2028	Year 14 2029	Year 15 2030	Year 16 2031	Year 17 2032	Year 18 2033	Year 19 2034	Year 20 2035
STRUCTURE																				
Foundation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Framing	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Upper Garage Floor	$0	$144,033	$0	$0	$0	$0	$0	$0	$0	$0	$0	$193,568	$0	$0	$0	$0	$0	$0	$0	$0
Upper Garage Ceiling	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Lower Garage Floor	$259,100	$0	$0	$0	$0	$0	$0	$0	$0	$0	$191,515	$0	$0	$0	$0	$0	$0	$0	$0	$0
BUILDING EXTERIOR																				
Aluminum/Glass Double Doors	$0	$0	$0	$0	$0	$0	$0	$11,622	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Aluminum/Glass Single Doors	$0	$0	$0	$0	$0	$0	$0	$49,441	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Garage Vestibule Doors	$0	$0	$0	$0	$0	$0	$5,134	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Power Door Openers	$0	$0	$0	$0	$0	$0	$4,418	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,937	$0	$0	$0
Double-Leaf Service Doors	$1,250	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Single-Leaf Service Doors	$0	$0	$0	$0	$0	$0	$2,269	$2,337	$2,407	$2,479	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Glass Sliding Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Overhead Garage Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$14,679	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Overhead Garage Door Openers	$0	$1,957	$0	$0	$2,138	$0	$0	$2,337	$0	$0	$2,553	$0	$0	$2,790	$0	$0	$3,049	$0	$0	$3,332
Exterior Walls - Brick	$0	$0	$0	$0	$95,893	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$149,399
Exterior Walls - Efflorescence	$2,556	$0	$0	$0	$0	$2,963	$0	$0	$0	$0	$3,435	$0	$0	$0	$0	$3,982	$0	$0	$0	$0
Trim, Soffit & Fascia	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Caulk	$57,550	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$89,661	$0	$0	$0	$0
Window Frames - Residences	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Window Frames - Fixed Panel	$0	$0	$0	$0	$0	$0	$0	$46,489	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Juliet Balcony Railings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$296,734	$0
Terrace & Mansard Balcony Railings	$1,533	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,060	$0	$0	$0	$0	$0	$0	$0	$0	$0
Mansard Balcony Cap Stones	$1,667	$1,717	$1,768	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Building Mounted Lighting	$1,167	$1,202	$1,238	$1,275	$1,313	$1,352	$1,393	$1,435	$1,478	$1,522	$1,568	$1,615	$1,663	$1,713	$1,765	$1,818	$1,872	$1,928	$1,986	$2,046

Replacement Items	Quantity	Cost per unit in 2016 $$	Total Cost in 2016 $$	AGE (Years)	EUL (Years) (Expected Useful life)	Replacement Schedule Year of action AND duration of project	Notes
ROOF SYSTEMS							
Structure	850 sf		$0	28	40		
Roof Covering - Main Structure	10,626 sf	28.00	$297,528	7	20	13 in 1 Year	Adhered light/heat reflecting polyvinyl chloride (PVC) main structure roof. Installed 2009. No reported issues or significant ponding. Future replacement.
Roof Covering - Mansard Balconies	485 sf	25.00	$12,125	7	20	13 in 1 Year	PVC membrane under the 7th-Floor Mansard balconies. Installed in 2009. Costs to remove pavers, replace PVC membranes, and replace pavers.
Roof Covering - Lower Roofs	4,180 sf	22.00	$91,960	9	20	11 in 1 Year	Adhered light/heat reflecting polyvinyl chloride (PVC) membrane lower roofs. Installed 2007. No reported issues or significant ponding. Future replacement.
Roof Covering - SW Private Terrace	2,050 sf	25.00	$51,250	17	20	3 in 1 Year	EPDM membranes under the southwest private terrace pavers. Installed 1999. Costs to remove pavers, install durable PVC membrane, and replace pavers.
Roof Covering - Various Terraces	2,445 sf	25.00	$61,125	11	20	9 in 1 Year	EPDM membranes under the front 6th-Floor private terrace, terraces over front entrance, garage entrance, and east first floor private terrace. Replace w/PVC
Roof Covering - Mansard Roof	8100 sf 1 ls	7500.00	$7,500	28	40	1 /5 /9 /13 /17 /20 in 1 Year	Fiber-cement faux-slate shingles over Mansard roof. Some age-related surface wear. No missing shingles noted. Allowances for as-needed spot repairs.
Roof Drainage	1 ls		$0	28	20		Internal drains. No observed or reported issues noted. Monitor, clean, and maintain from Operating.
Skylights	40 ea		$0	1	30		Skylights at penthouse unit Mansard and flat roofs. All replaced in 2015. No reported issues. Monitor.
Penthouses	2 ea		$0	28	20		Brick clad elevator machine room penthouses. Good conditions. Future roof replacement included above. As-need repair/repoint included w/Exterior Walls.
Access Doors & Hatches	3 ea	950.00	$2,850	28	35	7 in 1 Year	Flush metal service doors to elevator machine rooms and stairwell. Good conditions. Future gradual replacement based on 35-year EUL.
HALLS							
Hallway Walls	32,975 sf	0.65	$21,433	15	10	3 /13 in 1 Year	Painted drywall walls. Generally good conditions. Spot-painted where/when needed from Operating. Complete re-painting cycles and costs (per mangmt).
Hallway Ceilings	10,001 sf	0.65	$6,500	15	10	3 /13 in 1 Year	Painted drywall ceilings Generally good conditions. Spot-painted where/when needed from Operating. Complete re-painting cycles and costs (per mangmt).
Hallway Floors	10,001 sf	6.50	$65,004	15	10	3 /13 in 1 Year	Aging hallway carpet. Visible age/use-related wear and staining throughout. Costs to replace with 35-40 oz. carpet tile, per discussion with management.
Hallway Doors	1 ls		$0	28	40+		Metal stairwell, service closet, and trach chute doors. No observed or reported problems. Monitor and maintain from Operating.
Hallway Interior Lighting	1 ls	75000.00	$75,000	28	30+	13 in 1 Year	Frosted glass wall sconces with CFL bulbs. Costs for future lighting upgrade initiative, concurrent with wall painting.
STAIRS							
Stair Walls and Ceilings	5,925 sf		$0	28	15		Painted drywall wall and ceiling surfaces. Good observable conditions. As-needed re-painting from Operating.
Stair Floors	1,300 sf		$0	28	50+		Bare, unpainted concrete treads and landings. Good observable conditions. Monitor and maintain from Operating.
Stair Doors	1 ls		$0	28	40+		Flush metal stair doors. Good observable conditions. Monitor and maintain from Operating.
Stair Railings	1 ls		$0	28	50+		Painted steel stringers and railings. Good observable conditions. As-needed re-painting from Operating.

Costs inflated at 3%

Replacement Items	Year 1 2016	Year 2 2017	Year 3 2018	Year 4 2019	Year 5 2020	Year 6 2021	Year 7 2022	Year 8 2023	Year 9 2024	Year 10 2025	Year 11 2026	Year 12 2027	Year 13 2028	Year 14 2029	Year 15 2030	Year 16 2031	Year 17 2032	Year 18 2033	Year 19 2034	Year 20 2035
ROOF SYSTEMS																				
Structure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Roof Covering - Main Structure	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$424,204	$0	$0	$0	$0	$0	$0	$0
Roof Covering - Mansard Balconies	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$17,287	$0	$0	$0	$0	$0	$0	$0
Roof Covering - Lower Roofs	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$123,587	$0	$0	$0	$0	$0	$0	$0	$0	$0
Roof Covering - SW Private Terrace	$0	$0	$54,371	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Roof Covering - Various Terraces	$0	$0	$0	$0	$0	$0	$0	$0	$77,431	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Roof Covering - Mansard Roof	$7,500	$0	$0	$0	$8,441	$0	$0	$0	$9,501	$0	$0	$0	$10,693	$0	$0	$0	$12,035	$0	$0	$13,151
Roof Drainage	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Skylights	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Penthouses	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Access Doors & Hatches	$0	$0	$0	$0	$0	$0	$3,403	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
HALLS																				
Hallway Walls	$0	$0	$22,739	$0	$0	$0	$0	$0	$0	$0	$0	$0	$30,559	$0	$0	$0	$0	$0	$0	$0
Hallway Ceilings	$0	$0	$6,896	$0	$0	$0	$0	$0	$0	$0	$0	$0	$9,268	$0	$0	$0	$0	$0	$0	$0
Hallway Floors	$0	$0	$68,963	$0	$0	$0	$0	$0	$0	$0	$0	$0	$92,680	$0	$0	$0	$0	$0	$0	$0
Hallway Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Hallway Interior Lighting	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$106,932	$0	$0	$0	$0	$0	$0	$0
STAIRS																				
Stair Walls and Ceilings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Stair Floors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Stair Doors	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Stair Railings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Replacement Items	Quantity		Cost per unit in 2016 $$	Total Cost in 2016 $$	AGE (Years)	EUL (Years) (Expected Useful life)	Replacement Schedule Year of action AND duration of project	Notes
LOBBIES & MAIL FACILITIES								
Lobby Walls & Ceilings	5,525	sf	1.00	$5,525	15	10	3 /13 in 1 Year	Painted drywall wall and ceiling surfaces. Good observable conditions. Re-painting cycles and costs concurrent with hallway painting.
Lobby Floors - Stone Tile	1,385	sf		$0	15	50		Stone tile flooring. Installed in 2001. Good observable conditions. No cracked or missing tiles notes. Monitor and maintain from Operating.
Lobby Floors - Carpet	575	sf	8.00	$4,596	15	10	3 /13 in 1 Year	Carpet in lobby lounge area. Age/use related wear. Replace in Year 3, concurrent with hallway carpet replacement.
Mail Facilities	113	ea	48.00	$5,424	28	45	17 in 1 Year	Recessed aluminum mailbox cluster panels. Generally good conditions. Future replacement costs.
Furnishings & Artwork	1	ls	10000.00	$10,000	15	20	5 in 1 Year	Lobby lounge furniture and wall art. Couches, chairs, tables. Future allowance for upgrades and replacements.
FITNESS CENTER / KITCHENETTE / GARAGE VESTIBULES								
Walls and Ceilings	3,782	sf	0.65	$2,458	12	15	3 /18 in 1 Year	Painted drywall wall and ceiling surfaces. Generally good conditions. Re-painting cycles and costs.
Floor Covering - Rolled Rubber	925	sf	7.50	$6,934	12	15	3 /18 in 1 Year	Rolled rubber gym flooring. Some age/use related surface wear evident. Future replacement based on 15-year EUL.
Floor Covering - VCT	183	sf	5.00	$915	28	15	1 /16 in 1 Year	Vinyl composition tiles (VCT) at kitchenette and garage elevator lobbies. Original. Age and use related wear evident. Replacement cycles and costs.
Kitchenette Cabinetry/Appliances	1	ls	3500.00	$3,500	28	35	7 in 1 Year	Compact kitchen unit with sink, two burners, and mini-fridge unit. Upper cabinet with rangehood. Plastic laminate counter. Future replacement.
Exercise Equipment	1	ls	40000.00	$40,000	Varies	10	1 over 20 Years	Various commercial-grade resistance and cardio machines, dumbbells, and TVs Varying ages and conditions. Annual allowances for as-needed replacements.
LIBRARY / MEETING ROOM								
Walls and Ceilings	560	sf	1.00	$560	15	10	3 /13 in 1 Year	Painted drywall wall and ceiling surfaces. Generally good conditions. Re-painting cycles and costs.
Floor Covering	160	sf	8.00	$1,280	15	10	3 /13 in 1 Year	Carpet. Generally good condition. Replace in Year 3, concurrent with hallway & lobby carpet replacement.
Furnishings	1	ls		$0	15	20		Table, chairs, racks, etc. Future as-needed replacements from Operating.
PUBLIC LAUNDRIES								
Walls and Ceilings	1,900	sf	0.65	$1,235	28	15	1 /16 in 1 Year	Painted drywall walls and ceilings. Paint in Year 1 following VCT replacement. Future re-painting in Year 16.
Floor Covering	360	sf	5.00	$1,800	28	15	1 /16 in 1 Year	VCT floors. Age and use related wear, staining. Replacement cycles and costs concurrent with kitchenette and garage lobbies.
Laundry Equipment	1	ls		$0	28	20		Coin operating washers and dryers. Leased equipment. No costs shown.
LOCKER ROOMS								
Walls and Ceilings	2,050	sf	0.65	$1,333	12	15	1 /16 in 1 Year	Painted drywall walls and ceilings. Paint in Year 1 following renovations. Future re-painting in Year 16.
Floor Covering	725	sf		$0	28	10		Ceramic tile in wet areas. Monitor and maintain from Operating. Carpet in dry areas. Future as-needed replacement from Operating.
Fixtures/Accessories	1	ls		$0	28	20		Standard fixtures, dispensers, receptacles, metal lockers. Replacements included in Renovation costs shown below. Future from Oper.
Locker Room Renovations	1	ls	30000.00	$30,000	28	20	1 in 1 Year	Renovations to both locker rooms to include new ceramic tile and carpet flooring, new fixtures, sink counters, and dividers. Budgeted renovation costs.
Sauna Heating Elements	2	ea	1500.00	$3,000	7	15	8 in 1 Year	Sauna heating elements. One in each locker room. No reported operating issues. Future replacement based on 15-year EUL.

Costs inflated at 3%

Replacement Items	Year 1 2016	Year 2 2017	Year 3 2018	Year 4 2019	Year 5 2020	Year 6 2021	Year 7 2022	Year 8 2023	Year 9 2024	Year 10 2025	Year 11 2026	Year 12 2027	Year 13 2028	Year 14 2029	Year 15 2030	Year 16 2031	Year 17 2032	Year 18 2033	Year 19 2034	Year 20 2035
LOBBIES & MAIL FACILITIES																				
Lobby Walls & Ceilings	$0	$0	$5,861	$0	$0	$0	$0	$0	$0	$0	$0	$0	$7,877	$0	$0	$0	$0	$0	$0	$0
Lobby Floors - Stone Tile	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Lobby Floors - Carpet	$0	$0	$4,876	$0	$0	$0	$0	$0	$0	$0	$0	$0	$6,553	$0	$0	$0	$0	$0	$0	$0
Mail Facilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,704	$0	$0	$0
Furnishings & Artwork	$0	$0	$0	$0	$11,255	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
FITNESS CENTER / KITCHENETTE / GARAGE VESTIBULES																				
Walls and Ceilings	$0	$0	$2,608	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,063	$0	$0
Floor Covering - Rolled Rubber	$0	$0	$7,356	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$11,460	$0	$0
Floor Covering - VCT	$915	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,426	$0	$0	$0	$0
Kitchenette Cabinetry/Appliances	$0	$0	$0	$0	$0	$0	$4,179	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Exercise Equipment	$2,000	$2,060	$2,122	$2,185	$2,251	$2,319	$2,388	$2,460	$2,534	$2,610	$2,688	$2,768	$2,852	$2,937	$3,025	$3,116	$3,209	$3,306	$3,405	$3,507
LIBRARY / MEETING ROOM																				
Walls and Ceilings	$0	$0	$594	$0	$0	$0	$0	$0	$0	$0	$0	$0	$798	$0	$0	$0	$0	$0	$0	$0
Floor Covering	$0	$0	$1,358	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,825	$0	$0	$0	$0	$0	$0	$0
Furnishings	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
PUBLIC LAUNDRIES																				
Walls and Ceilings	$1,235	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,924	$0	$0	$0	$0
Floor Covering	$1,800	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,804	$0	$0	$0	$0
Laundry Equipment	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
LOCKER ROOMS																				
Walls and Ceilings	$1,333	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,076	$0	$0	$0	$0
Floor Covering	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Fixtures/Accessories	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Locker Room Renovations	$30,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sauna Heating Elements	$0	$0	$0	$0	$0	$0	$0	$3,690	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Appendix A: Statement of Delivery

Our Capital Needs Assessment (the "CNA" or the "Report") on the subject property is delivered subject to the following terms and conditions:

1. The report and analysis may be relied upon by you as a description of the observed current conditions of the building and site improvements, only as of the date of this report, and with the knowledge that certain limitations and exceptions within the report that are the reflective of the scope of services as defined in our contract. Although care has been taken in the performance of this assessment, ON-SITE INSIGHT, Inc. (and/or its representatives) makes no representations regarding latent or concealed defects that may exist and no warranty or guarantee is expressed or implied. This report is made only in the best exercise of our ability and judgment. Conclusions reached in this report assume current and continuing responsible ownership and competent property management.

2. We have undertaken no formal evaluation of environmental concerns, including but not limited to asbestos containing materials (ACMs), lead-based paint, chlorofluorocarbons (CFCs), polychlorinated biphenyls (PCBs), and mildew/mold.

3. Conclusions in this report are based on estimates of the age and normal working life of various items of equipment and/or statistical comparisons. Actual conditions can alter the useful life of any item. When an item needs immediate replacement depends on many factors, including previous use/misuse, irregularity of servicing, faulty manufacture, unfavorable conditions, Acts of God and unforeseen circumstances. Certain components that may be working when we made our inspection might deteriorate or break in the future without notice.

4. To prepare this report, we used historic data on capital activities and costs, blueprints (when available), and current prices for capital actions. We have not independently verified this information, have assumed that it is reliable, but assume no responsibility for its accuracy.

5. Unless otherwise noted in the report, we assume that all building components meet code requirements in force when the property was built.

6. If accessibility issues are referenced in the report, the site elements, common areas, and dwelling units at the development were examined for compliance with the requirements of the Uniform Federal Accessibility Standards (UFAS), and for Massachusetts properties, the Massachusetts Architectural Accessibility Board (AAB). The methodology employed in undertaking this examination is adapted from a Technical Assistance Guide (TAG-88-11) titled "Supplemental Information About the Section 504 Transition Plan Requirements" published by the Coordination and Review section of the U.S. Department of Justice Civil Rights Division, and the AAB Rules and Regulations, 521 CMR effective July 10, 1987. The Guide also incorporates the requirements of UFAS, published April 1, 1988 by the General Services Administration, the Department of Defense, the Department of Housing and Urban Development, and the U.S. Postal Service. Changes in legislation and/or regulations may make some observations moot.

7. Response Actions and estimated costs of responses were developed by ON-SITE INSIGHT, Inc. If additional structural work is necessary, costs for some Response Actions may exceed estimates. Whenever the Response Action is to remove, reposition, or modify walls, a competent structural engineer should be retained before any work is done, because such investigation may disclose that a Response Action is either more costly than estimated, or is not possible.

8. Conclusions reached in this report assume current and continuing responsible ownership and competent property management. Any unauthorized reliance on or use of the report, including any of its information or conclusions, will be at the third party's sole risk. For the same reasons, no warranties or representation, express or implied in this report, are made to any such third party. Reliance on the report by the client and all authorized parties will be subject to the terms, conditions and limitations stated in the contract Terms and Conditions. The limitation of liability defined in the Terms and Conditions is the aggregate limit of ON-SITE INSIGHT's liability to the client and all relying parties.

9. Regular updates of this plan are recommended to ensure careful monitoring of major building systems and to adjust the program to accommodate unanticipated circumstances surrounding the buildings, operations, and/or occupants.