Reserve Fund Plan for KENWOOD TOWNES Springfield, Virginia

COMPONENT DATA AND ASSET REPLACEMENT SCHEDULE TABLE 1

2011 Through 2030

Component No.	Component	Quantity	Unit of Measurement	Unit Cost	Total Asset Base	Typical Service or Cycle Life in Yrs	1st Cycle Year	Percentage of Replacement	Cost For 1st Cycle	2nd Cycle Year	Percentage of Replacement	Cost For 2nd Cycle	3rd Cycle Year	Percentage of Replac	Cost Fo
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 ASPHALT COMPONENTS															
1.1	Asphalt Restoration Project	3,339	SY	$14.00	$46,746	20	2018	100%	$57,492	2038	100%	$103,836			
1.2	Asphalt Seal Coat	3,339	SY	$1.20	$4,007	5	2013	100%	$4,251	2023	100%	$5,713	2028	100%	$6,623
1.3	Asphalt Repair Allowance	1	LS	$6,600.00	$6,600	5	2013	75%	$5,251	2018	100%	$8,117	2023	25%	$2,353
2 CONCRETE COMPONENTS															
2.1	Concrete Sidewalks	4,572	SF	$10.50	$48,006	5	2015	3%	$1,621	2020	3%	$1,879	2025	3%	$2,178
2.2	Concrete Curbs & Gutters	2,584	LF	$36.00	$93,024	5	2015	2%	$2,094	2020	2%	$2,428	2025	2%	$2,814
2.3	Driveway Aprons	3,927	SF	$12.50	$49,088	10	2015	8%	$4,420	2025	8%	$5,940	2035	8%	$7,983

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
3 SITE FEATURES															
3.1	Entrance Monuments	2	EA	$6,000.00	$12,000	50	2045	100%	$32,783						
3.2	Modular Block Retaining Walls	3,310	SF	$36.00	$119,160	35	2030	100%	$208,948	2065	100%	$587,950			
3.3	Split Rail Fencing	501	LF	$15.00	$7,515	20	2026	100%	$11,708	2046	100%	$21,146			
3.4	Vinyl Fencing	226	LF	$15.00	$3,390	35	2026	100%	$5,282	2061	100%	$14,861			
3.5	Chain link Fencing	200	LF	$16.00	$3,200	30	2036	100%	$6,700						
3.6	Painted Metal Railing	154	LF	$40.00	$6,160	35	2030	100%	$10,802	2065	100%	$30,394			
3.7	Street and Informational Signage	41	EA	$145.00	$5,945	20	2016	25%	$1,723	2036	25%	$3,112			
3.8	Tot Lots	1	LS	$7,800.00	$7,800	15	2016	100%	$9,042	2031	100%	$14,088			

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
3.9	Mailbox Modules	3	EA	$1,900.00	$5,700	30	2025	100%	$8,622	2055	100%	$20,927			
3.10	Mailbox Module Pavilion	1	LS	$6,000.00	$6,000	30	2025	100%	$9,076	2055	100%	$22,029			
3.11	Storm Water Drainage System Allowance	1	LS	$8,500.00	$8,500	10	2021	100%	$11,423	2031	100%	$15,352			

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This component includes asphalt drivelanes and parking bays. Neither the depth nor the sub-base of the pavement could be visually determined. The pavement appears to be original and is in good condition for its age. Asphalt generally has an eighteen to twenty year service life. We have extended the service life to allow the Association time to generate sufficient funds for a restoration project. The extension is dependant upon crack filling, full-depth repairs, and seal coat projects being accomplished near-term. Restoration includes edgemilling and overlay with 1-½" new compacted asphalt. Core sampling should be used to determine the depth and condition of the sub-base and pavement prior to restoration. Costs include striping, but not replacement of any inadequate sub-base.

The pavement appears to have been seal coated previously. However, the seal coat appears to have achieved its service life and should be re-applied near-term. Seal coating helps prevent water infiltration into the sub-base through micro-cracks. To help extend the service life of the pavement and improve curb appeal, we have scheduled seal coating projects every five years, except in the year of the pavement restoration project. Crack filling and full-depth repairs should be completed prior to application to achieve maximum benefit from the seal coating. Seal coating projects include striping.

A minor amount of alligator cracked or deflected pavement (indicative of sub-base damage) was observed on the community's roads and parking bays. However, a large amount (approximately 1,988 linear feet) of longitudinal and transverse cracking was observed. As the asphalt ages, localized sub-base failure and cracking can be anticipated. Repairs are essential in order to achieve the projected remaining service life of the pavement. Full-depth repairs and crack filling are scheduled every five years throughout the study period, including the year of the asphalt restoration project.

Concrete sidewalks, generally 4' wide, are present both sides of streets. Their thickness could not be visually determined. They are in generally good condition and appear to have been repaired in the past. About 112 square feet (2.5% of the total area) is cracked or settled. In some cases settlement between adjacent sections may create potential tripping hazards. This category includes a 100 square feet concrete slab associated with the mailbox pavilion. We have not scheduled replacement of all sections with lesser surface defects. Severely scaled sections will tend to deteriorate more quickly over time, and should be replaced in each replacement cycle. Cyclic repairs are scheduled, as full replacement at one time is not appropriate or anticipated. Concrete repairs are scheduled to coincide with work on other concrete components to take advantage of economies of scale in packaging concrete restoration work. The Board should be aware that repairs to small quantities of concrete may be more costly because of the difficulty of attracting competitive bids for small projects, which may not meet contractor minimums.

The drivelanes and parking bays are lined with standard-profile, cast-in-place, concrete curbs and gutters. They are in generally good condition for their age. Curb paint appears to be in fair condition, and curbs can be re-painted under the operations budget. Minor chips usually do not justify replacement. Cyclic repairs are scheduled, as full replacement at one time is not appropriate or anticipated. Curb repairs are scheduled to coincide with work on other concrete components to maximize economies of scale. The Board should be aware that repairs to small quantities of concrete may be more costly because of the difficulty of attracting competitive bids for small projects, which may not meet contractor minimums.

Private driveways are accessed via concrete driveway aprons. The aprons measure 6' wide and are either approximately ten or approximately sixteen feet long. The thickness of the concrete could not be visually determined. The aprons appear to be in good condition with some sections exhibiting cracking and scaling. Severely cracked and scaled sections will tend to deteriorate more quickly over time and should be replaced in each replacement cycle. The concrete repairs are scheduled to coincide with work on other concrete components to take advantage of economies of scale in packaging concrete restoration work. The Board should be aware that repairs to small quantities of concrete may be more costly because of the difficulty of attracting competitive bids for small projects, which may not meet contractor minimums.

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Two brick and mortar monuments are constructed at the entrance. The monuments are approximately five feet high with a six foot arch. They are approximately fourteen feet in length. Two ornamental feet are constructed at the base of each monument. The monuments have painted metal community name signs embedded. All brick and mortar appear to be in good condition with no deteriorated mortar, cracked mortar or brick, or spalled brick faces observed. With periodic, diligent maintenance performed under the operations budget, the monument should achieve a long service life.

Five modular block retaining walls are constructed at grade differentials. The walls appear to be in generally good condition. A small amount of deflection was observed in several locations, the worst of which should be repaired near-term under the operations budget. The wall constructed adjacent to the tot lot has a significant amount of deflection in the southernmost ten feet. Additionally, this wall has a metal railing mounted on top via the use of post pockets which have been drilled into the block. At least one of the blocks has cracked as a result of water ingress and subsequent freeze/thaw cycles. Modular block retaining walls may have a very long service life if vegetation is properly controlled to prevent root damage. The walls may be rebuilt when necessary, new geotextile fabric installed, and the undamaged blocks re-used.

Split rail fencing is constructed parallel to Kenwood Avenue. The fencing appears to be in excellent condition with no deficiencies observed. With routine maintenance including straightening out of plumb posts, reattaching loose boards and annual application of a high quality penetrating oil, the fencing should achieve its statistical service life.

White vinyl fencing is constructed parallel to Rolling Road. The fencing, which is three-board and totals approximately 226 linear feet, appears to be in excellent condition with no deficiencies observed.

A 5' high vinyl-coated chain link fence is constructed around the tot lot. The fencing appears to be in excellent condition with no deficiencies observed.

A painted metal safety railing, about 4' high, is attached along the top of the retaining wall adjacent to the tot lot. The railing is in generally good condition, however, some deficiencies were observed. The railing is mounted via the use of post pockets. The post pockets do not appear to have been sealed. Unsealed post pocket allow water ingress, which may rust the posts prematurely causing structural weakness. In some cases bases may become detached resulting in a potential safety hazard. With proper, diligent maintenance, including cleaning of peeling paint, priming, and painting, and repairing deteriorated areas by welding replacement parts, this railing may have a long service life.

Standard metal traffic, parking and access control signs, are mounted on perforated metal posts, pressure-treated 4" by 4" posts, and galvanized metal posts. A total of approximately 41 signs are installed. Posts and signs appear to range in condition from fair to good. At least one sign and post are down, and several posts and signs are out of plumb. Some signs are faded or rusty.

Equipment at the single tot lot consists of pressure-treated 6" by 6" border, measuring 200' in length, a play module consisting of four 6" by 6" pressure-treated wood posts, plastic slides and a metal climbing apparatus, and a wooden bench and trash receptacle. Additionally, there is a 6" by 6" pressure-treated wood swing set. All equipment appears to be in good condition. Frequent, periodic safety checks of all components should be conducted to prevent personal injury. Replacement costs are based on replacement with U.S. Consumer Product Safety Commission (CPSC)-compliant play modules.

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Three mailbox modules with sixteen bays each are installed at the corner of Millwood Drive and Regal Oak Drive. The modules appear to be in excellent condition and are erected under a pavilion, protected from weather. The modules should provide a long service life.
A 10' by 10' pavilion is constructed over the mailbox modules. The shelter is constructed with pressure-treated wood 6" by 6" posts, with a truss system with a 12/12 pitch roof with composite shingles. The pavilion has vinyl soffit and aluminum fascia. The pavilion appears to be in generally good condition. However, some deficiencies were observed. There is a 2 inch hole in the shingles and sheathing, which has allowed water ingress. The leak appears to be responsible for damage to the section of soffit directly under the hole. The shingles and sheathing should be repair to prevent further damage to the structure. The shingles appear to have achieved their statistical half life and may require replacement mid-term. Due to the small size of the pavilion, the shingle replacement and other maintenance related improvements can be accomplished under the operations budget.
Storm water drainage is provided by concrete yard drains, curb drop inlets, surface swales, underground structures, and riprap flumes. All observable components appear to be of adequate size and in good condition. Though storm water drainage systems are a long life components and catastrophic failure is not anticipated, it is prudent to plan for localized repairs and repairs to ancillary damage as the system ages. This category may also be used to address localized erosion issues.