



Structural Integrity Reserve Study
(Project #22-016)
for
Orchid Springs Village, No. 200, Inc.
200 El Camino Drive
Winter Haven, FL 33884

Date: March 21, 2024

Andreas M. Sager, PE 300 S Ramona Ave Lake Alfred, FL 33850 Phone: 863-398-3847 Email: andreas.sager@gmail.com	Andreas M. Sager, State of Florida, Professional Engineer, License No. 54568. This item has been digitally signed and sealed by Andreas M. Sager on the date indicated here. Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies.	Signature:
--	---	------------

Table of Contents

- Abbreviations
- Purpose
- Background
- Florida Statutes
- Report Requirements
- Inflation
- Other Reserve Studies
- Common Elements
- Funding Table Description
- Funding Tables

Abbreviations:

The following are abbreviations associated with this report.

FS – Florida Statute

SIRS – Structural Integrity Reserve Study

MI – Milestone Inspection

SF – Square Feet

LF – Linear Feet

SQ – Square

Purpose:

The purpose of this study is to provide reserve funding information as required by Chapter 718 of the Florida Statutes to Orchid Springs Condo Village No. 200, Inc. (Corporation). This report contains information to act as a guideline to assist in budget preparation for specific components and in no way constitutes a complete budget or any opinion regarding the implication of such and consists of suggested contributions for reserves.

Background

After the collapse of the Champlain Towers South in Miami, the state of Florida established new laws in an effort avoid similar events. As a result, new condominium requirements were incorporated in numerous statutes including Florida Statutes 553 titled Building Construction Standards and Florida Statute 718 titled Condominiums. The laws pertain to all condominium buildings that are three-stories or higher. The law requires mandatory building inspections, obliges structural reserve studies, and spells out how reserve budgets are to be funded.

Florida Statutes:

Chapter 718 of the Florida Statutes provides provisions for condominiums and speaks to the requirements of structural integrity reserve studies (SIRS). The following are applicable to this study.

Section 718.404 of the Florida Statutes states that SIRS means a study of the reserve funds required for future major repairs and replacement of the common areas based on a visual inspection of the common areas.

Section 718.112(2)(g) of the statutes provides additional guidance about SIRS and states:

A Corporation must have a SIRS completed at least every ten years after the condominium's creation for each building on the condominium property that is three stories or higher in height which includes, at a minimum, a study of the following items as related to the structural integrity and safety of the building:

- Roof.
- Structure, including load-bearing walls or other primary structural members.
- Fireproofing and fire protection systems.
- Plumbing.
- Electrical systems.
- Waterproofing and exterior painting.
- Windows and doors.
- Any other item that has a deferred maintenance expense or replacement cost that exceeds \$10,000 and the failure to replace or maintain such item negatively affects the items listed in sub-subparagraphs above, as determined by the inspector performing the visual inspection portion of the structural integrity reserve study.

Report Requirements

This report will:

- Identify the common areas (a.k.a. common elements) being visually inspected,
- State the estimated remaining useful life,
- State the estimated replacement cost or deferred maintenance expense of the common areas being visually inspected, and
- Provide a recommended annual reserve amount that achieves the estimated replacement cost or deferred maintenance expense of each common area being visually inspected by the end of the estimated remaining useful life of each common area.

Inflation

Since F.S. require SIRS be conducted every ten years, it is prudent to include inflation in the calculations to ensure adequate funds are available at the end of a component's useful life. As such, future estimated costs are calculated in this report by adjusting amounts 3% annually.

Other Reserve Studies

Reserve studies authored by another entity were not available for this study.

Common Elements

The following paragraphs and subsequent table(s) present: projects associated with the structural integrity elements of the main building, the year the projects should be conducted, and the recommended annual assessment to be collected for each project.

Roof:

The four-story building has a flat roof with an area of about 25,000 square feet. The roof has a 36 inch high parapet, and the top and exterior side of the parapet are metal. It is understood that the roofing system is a Dura-Last product that was installed in 2005, and the warranty has expired.

A visual inspection, it was noted that the top layer of the roofing system was separating from the main layer at numerous areas on the roof. It appeared numerous areas of the top layer of the roofing system was peeling away or missing. Additionally, many of the mats for foot-traffic have separated from the roofing system and are no longer attached to the roofing system. All the metal hatches appeared to be in good condition. As such, it appears that the roofing system has reached the end of the useful life cycle.

The roof's drainage system includes downspouts that convey the stormwater to the adjacent wetland. It appears the original downspouts have been replaced by large PVC pipes. These pipes are not properly supported and not properly connected to the roofing system. As such, some stormwater is bypassing the PCV pipes. Further, the drainage inlets on the roof do not have vertical screens to ensure debris does not block the follow of water.

The flat roofing system above the metal truss may be deteriorating and should be inspected by the roofer when the roof is replaced to ensure the flat roof is sound.

It is recommended that reserve funds be obtained to replace the roof in 2027 and replace the roof again in 2047.



Access hatch.



Typical roof.



Roof mat separated from the roof system.



Roof mat separated from the roof system.



Typical roof.



Coating separating from the roofing system.



Coating separating from the roofing system.



Coating separating from the roofing system.



Drain to gutter; no screen.



A/C system. Mat separating from the roofing system.



Coating separating from the roofing system.



Coating separating from the roofing system.



Coating separating from the roofing system.



Coating separating from the roofing system.

Structural Integrity Reserve Study
Orchid Springs Village, No. 200, Inc.



Coating separating from the roofing system.



Coating separating from the roofing system.



Typical roof.



Typical roof.



Typical roof.



Attic space near hatch.



A/C system and debris.



A/C pipig and debris.



PVC Downspouts



PVC Downspouts

Structure (Load-Bearing Walls or Other Primary Structural Members):

The building's main structural support system is composed of reinforced concrete walls and concrete floors. The exterior walls visible from the ground and breezeways were inspected, and internal walls visible in common rooms were also inspected. All load-bearing walls and other primary structural members appeared to be in good condition; however, the flat roofing system above the metal truss may be deteriorating and should be inspected by the roofer when the roof is replaced to ensure the flat roof is sound.

--	--

Structural Integrity Reserve Study
Orchid Springs Village, No. 200, Inc.

Typical exterior.	Typical exterior.
Typical balcony.	Typical handrail post.
Typical balcony.	Windowsill with cracks.



Typical exterior with cracks.



Typical exterior with cracks.

Fireproofing and Fire Protection Systems

Fireproofing is the application of fire retardants on metal and concrete structures, and the building does not have fireproofing systems. The building does have a fire protection system which consists of a CP-3000D control panel, numerous hand-pull stations, and numerous audible/visual alarm boxes. The system appeared to be in very good condition.

This report recommends building a reserve fund to update the system in 2039.





Plumbing:

The plumbing systems include a potable water distribution system with water heaters, a sewer collection system, a condensation system, and a natural gas distribution system.

Potable Water:

The Corporation is responsible for the potable water infrastructure located between units and the water meter. The potable water system was replaced within the last ten years and is composed of PVC and CPVC pipes and fittings. The system has two 97-gallon water heaters that operate with natural gas. The water heaters were installed in 2016 and 2022. As such, it is recommended that reserve funds be collected to replace the water heaters in 2040.

Sewer System:

The Corporation is responsible for the sewer collection system that is located between the units and the sewer system operated by others. It is assumed that the Corporation's sewer collection system appears to be composed of cast iron pipes and a limited amount of PVC pipes. Due to the age of the sewer system, it is recommended that sections of the sewer system be cleaned/videoed and a sewer report be generated in 2028. This report recommends reserve funds be collected to repair/replace sewer lines in 2031 (Phase 1) and 2037 (Phase 2) as recommended by the sewer report.

Condensation:

The Corporation is responsible for the condensation collection system located between the units and the discharge points of the system. The condensation system appears to be composed of PVC pipe. Owners have indicated the system is not problematic. As such, the collection of reserve funds for this item is not recommended at this time.

Natural Gas:

The Corporation is responsible for the gas system located between the units and the regulators. The system was composed of galvanized pipe and fittings. Since it appears all the gas pipes between the regulators and the units have been recently replaced, this report does not recommend collecting reserve funds for this item.



Gas water heater.



Natural gas regulator.



PVC Sewer line.

Electrical System:

The Corporation is responsible for the electrical system located between the transformer and the breaker boxes in the units and common areas (except for the meters and meter boxes). The electrical system includes the conductors, switches, breakers, and breaker boxes. The power company is responsible for the conductors that feed the main transformer, the main transformer, and the electrical meters.

An inspection indicates the electrical system is in good condition. It is recommended that operational funds be used to conduct a thermal inspection of critical components (i.e. primary breakers and switches). Thermal inspections will identify components which are likely to fail and should be replaced before equipment failures occur.

Since the electrical systems have an estimated useful life that is not readily ascertainable or has an estimated remaining useful life of greater than 25 years, this report does not recommend annual assessments for the electrical system.



Transformer

Waterproofing and Exterior Painting:

This common element includes preparing, caulking, and painting the exterior of the building. An inspection of the building's exterior surfaces indicates the coating is only in fair condition. It is understood that the coating is over 13 years old.

Most concerning, there are many openings in the exterior surfaces of the building that allow water to flow into the walls of the building. Such openings are adjacent to gas lines, internet cables, potable water lines, and the perimeter of the air conditioning units. Additionally, the exterior walls including exterior windowsills have notable cracks. When water enters the walls of the building, stucco mesh, rebar, and other materials deteriorate and weaken the structure. As such, all openings should be repaired, grouted, and caulked as soon as possible. Thereafter, the exterior of the building should be painted. The project should include exterior metal stairs wells which are corroding.

It is recommended that reserve funds be collected to repair, grout, caulk, and paint the exterior of the building in 2026 and again about 12 years thereafter.

**Structural Integrity Reserve Study
Orchid Springs Village, No. 200, Inc.**



Structural Integrity Reserve Study
Orchid Springs Village, No. 200, Inc.



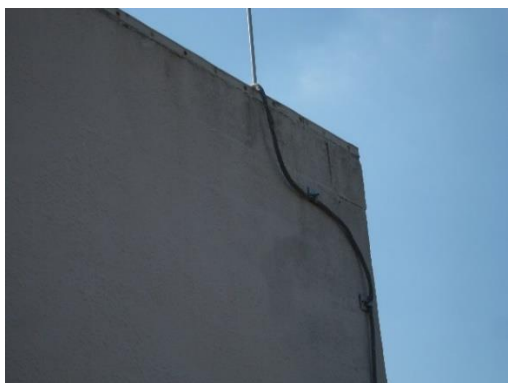
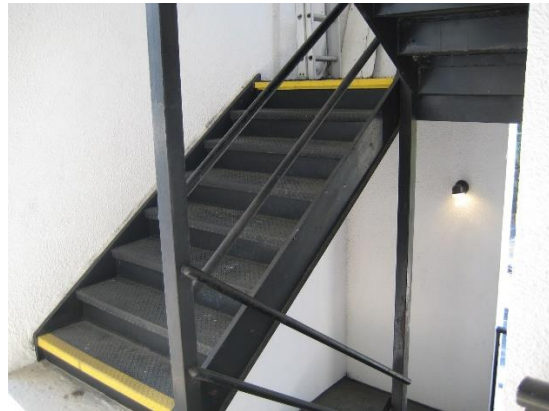
Rebar in breezeway ceiling.



Openings around an air conditioner unit.



Openings around air conditioners.



Cracks around corner block.





Minor cracks on windowsill.



Cracks on windowsill.

Windows and Doors:

It is understood that the Corporation is responsible for maintaining the common doors and windows and that the owners are responsible for all doors and windows associated with their units. The common doors are metal doors and jams, and all are in very good condition. Since the doors are in very good condition, reserve funds for doors are not recommended at this time. The common windows have a single windowpane with aluminum frames and appear to be the original windows.

It is recommended that reserve funds be collected to replace the common windows in 2029. Since the new windows should be effective until the end of the building's lifecycle, additional reserve funds are not recommended at this time.

**Structural Integrity Reserve Study
Orchid Springs Village, No. 200, Inc.**



SIRS Component Funding Table Description

A SIRS Component Funding Table is provided below, and it provides key reserve funding information in table format. The table provides the following information.

Common Elements:

These are the items which are delineated in the Florida Statutes

Component:

These are specific projects; they are a subset of the Common Element. If a Component is scheduled to be completed within the next ten years, the Component may be listed twice in the SIRS Component Funding Table. One is for the first project, and the other is for the second project.

Current Year:

The year of the evaluation; the year of the report.

Estimated Remaining Useful Life:

Number of years remaining before the component should be replaced or maintained.

Replacement or Maintenance Year:

This is the year the item may be replaced or maintained.

Current Estimated Cost:

The cost of the Component Element during the current year.

Future Estimated Cost:

The future estimated cost assuming 3% annual increase; the cost of the Component Element (project) in the future year.

Assigned Reserves:

The reserve funds that are assigned to the component.

Future Estimated Cost Minus Assigned Reserves:

This is the future estimated cost reduced by the amount of reserve funds currently assigned to the Component Element (project).

20XX Assessment:

The proposed annual amount of funds to be collected for each Component Element (project) in 20XX.

Total (bottom row):

This is the total amount of annual funds recommended each year; this is the amount of reserve funds which should be assessed annually.

Funding Table – Projects in Common Element Order

Project #	Common Element	Component	Current Year	Estimated Remaining Useful Life (Years)	Replacement or Maintenance Year	Current Estimated Cost	Future Estimated Cost	Assigned Reserves	Future Estimated Cost Minus Assigned Reserves	2025 Assessment	2026 Assessment	2027 Assessment	2028 Assessment	2029 Assessment	2030 Assessment	2031 Assessment	2032 Assessment	2033 Assessment	2034 Assessment
1	Roof	Replace Roof (1)	2024	2	2027	\$610,000	\$666,563	\$0	\$666,563	\$333,282	\$333,282	Project							
2	Roof	Replace Roof (2)	2024	20	2047	\$375,000	\$740,095	\$0	\$740,095			\$37,005	\$37,005	\$37,005	\$37,005	\$37,005	\$37,005	\$37,005	\$37,005
3	Fireproofing and Fire Protection System	System Upgrade	2024	14	2039	\$12,000	\$18,696	\$0	\$18,696	\$1,335	\$1,335	\$1,335	\$1,335	\$1,335	\$1,335	\$1,335	\$1,335	\$1,335	\$1,335
4	Plumbing	Sewer Video	2024	3	2028	\$9,500	\$10,692	\$0	\$10,692	\$3,564	\$3,564	Project							
5	Plumbing	Sewer Upgrade Phase 1	2024	6	2031	\$50,000	\$61,494	\$0	\$61,494	\$10,249	\$10,249	\$10,249	\$10,249	\$10,249	\$10,249	Project			
6	Plumbing	Sewer Upgrade Phase 2	2024	12	2037	\$50,000	\$73,427	\$0	\$73,427							\$14,685	\$14,685	\$14,685	\$14,685
7	Plumbing	Water Heater Replacement	2024	15	2040	\$14,000	\$22,466	\$0	\$22,466	\$1,498	\$1,498	\$1,498	\$1,498	\$1,498	\$1,498	\$1,498	\$1,498	\$1,498	\$1,498
8	Waterproofing and Exterior Painting	Paint Building (1)	2024	1	2026	\$125,000	\$132,613	\$0	\$132,613	\$132,613	Project								
9	Waterproofing and Exterior Painting	Paint Building (2)	2024	13	2038	\$125,000	\$189,074	\$0	\$189,074		\$15,756	\$15,756	\$15,756	\$15,756	\$15,756	\$15,756	\$15,756	\$15,756	\$15,756
10	Windows and Doors	Window Replacement	2024	5	2029	\$5,500	\$6,376	\$0	\$6,376	\$1,275	\$1,275	\$1,275	\$1,275	Project					
	Total:									\$483,816	\$366,959	\$70,682	\$67,118	\$65,843	\$65,843	\$70,279	\$70,279	\$70,279	\$70,279

Funding Table – Projects in Chronological Order

Project #	Common Element	Component	Current Year	Estimated Remaining Useful Life (Years)	Year	Current Estimated Cost	Future Estimate Cost	Assigned Reserves	Future Estimated Cost Minus Assigned Reserves	2025 Assessment	2026 Assessment	2027 Assessment	2028 Assessment	2029 Assessment	2030 Assessment	2031 Assessment	2032 Assessment	2033 Assessment	2034 Assessment
8	Waterproofing and Exterior Painting	Paint Building (1)	2024	1	2026	\$125,000	\$132,613	\$0	\$132,613	Project									
1	Roof	Replace Roof (1)	2024	2	2027	\$610,000	\$666,563	\$0	\$666,563	\$333,282	Project								
4	Plumbing	Sewer Video	2024	3	2028	\$9,500	\$10,692	\$0	\$10,692	\$3,564	Project								
5	Windows and Doors	Window Replacement	2024	5	2029	\$5,500	\$6,376	\$0	\$6,376	\$1,275	\$1,275	Project							
5	Plumbing	Sewer Upgrade Phase 1	2024	6	2031	\$50,000	\$61,494	\$0	\$61,494	\$10,249	\$10,249	\$10,249	Project						
6	Plumbing	Sewer Upgrade Phase 2	2024	12	2037	\$50,000	\$73,427	\$0	\$73,427						\$14,685	\$14,685	\$14,685	\$14,685	
9	Waterproofing and Exterior Painting	Paint Building (2)	2024	13	2038	\$125,000	\$189,074	\$0	\$189,074	\$15,756	\$15,756	\$15,756	\$15,756	\$15,756	\$15,756	\$15,756	\$15,756	\$15,756	
3	Fireproofing and Fire Protection System	System Upgrade	2024	14	2039	\$12,000	\$18,696	\$0	\$18,696	\$1,335	\$1,335	\$1,335	\$1,335	\$1,335	\$1,335	\$1,335	\$1,335	\$1,335	
7	Plumbing	Water Heater Replacement	2024	15	2040	\$14,000	\$22,466	\$0	\$22,466	\$1,498	\$1,498	\$1,498	\$1,498	\$1,498	\$1,498	\$1,498	\$1,498	\$1,498	
2	Roof	Replace Roof (2)	2024	20	2047	\$375,000	\$740,095	\$0	\$740,095			\$37,005	\$37,005	\$37,005	\$37,005	\$37,005	\$37,005	\$37,005	
Total:									\$483,816	\$366,959	\$70,682	\$67,118	\$65,843	\$65,843	\$70,279	\$70,279	\$70,279	\$70,279	