Westview Grande Condominium Association

19710 Gulf Blvd., Indian Shores, FL

Milestone Structural Assessment

October 17, 2023

Prepared by:

THE FALCON GROUP

Engineering, Architecture & Energy Consultants
1211 1st Avenue, N., Suite 106

St. Petersburg, FL 33705

Phone: (813) 438-3568

www.thefalcongroup.us
info@thefalcongroup.us

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1. INTRODUCTION

Westview Grande Condominium Association retained the Falcon Group (Falcon) to perform a Milestone Structural Inspection - Phase One (nondestructive) at the above-referenced property located at 19710 Gulf Blvd., Indian Shores, FL, and prepare an Assessment Report with Falcon's findings and recommendations.

The purpose of the visual Milestone Inspection is to render an opinion regarding the life safety and adequacy of the structural components of the building and, to the extent reasonably possible, determine the general structural condition of the building as it affects the safety of such building, including a determination of any necessary maintenance, repair, or replacement of any structural component(s) of the building.

This report describes the work performed, Falcon's evaluations and findings, and the associated recommendations based on such findings. The inspections were conducted pursuant to Florida Statutes, Section 553.899 and standard engineering principles. The purpose of such inspections is not to determine if the building is in compliance with the current Florida Building Code or the Fire Safety Code but, rather, is focused on life safety and structural adequacy of the building elements.

For your reference, the following definitions may clarify the ratings stated in this report:

- Excellent: Recently installed building system or site component with no repair or maintenance required. The full remaining useful life of this system/component is assumed.
- Good: A building system or site component exhibiting evidence of normal aging, and which appears capable of achieving its typical useful life. It may, however, need typical repair or maintenance work.
- Fair: A building system or site component that is approaching the end of its useful life or requires more than normal maintenance and repair to extend its remaining useful life.
- Poor: A building system or site component no longer functioning as designed and/or represents a safety concern. Replacement or major repair is recommended in the near term.

The ratings noted above (excellent, good, fair, poor) are determined by comparison to other buildings of similar age and construction type based on our professional experience.

2. DESCRIPTION OF STRUCTURE

The information reflected in this section was extrapolated from the property record drawings provided to Falcon by the Association, as listed in Section 6 of this report. As-built conditions may vary.

2.1. General

The Association is comprised of one (1) 5-story building containing twenty (20) residential units. The physical components of the community are approximately twenty-five (25) years of age, built circa August 1998.

The Association is responsible for exterior building components, building envelope[1], decks/balconies, roadways, parking lots, parking garage, sidewalks, entrance gates, entrance monuments, signage, site lighting, common area lobby, hallways, stairwells, elevator, swimming pool, mailboxes, and irrigation system.

The condominium amenities, pool, spa, and pool deck, are located at the ground level on the west patio of the building. Access to the beach is provided at the pool deck.

2.2. Exterior Envelope

The building roof is composed of a low slope, post-tensed concrete slab. The roof system consists of a spray foam covering the entire roof area over a modified bitumen sheet laid over a rigid, tapered insulation and terminated under a mechanically anchored metal counter-flashing strip and stucco-covered concrete parapet wall. The top of the parapet was covered with a flashing cap to avoid water intrusion. The main, flat roof drainage was observed with a positive slope toward four roof drains at the roof geometry center.

The exterior walls are comprised of 8'' concrete masonry units (CMU) with painted stucco cladding.

The fenestration system of the building is comprised of the following:

- East façade – Double-hung aluminum windows with colonial grids, aluminum frames, and upward/downward sliding action. Original construction drawings identified the residential unit front doors as 6-panel, solid core hardwood, however 6-panel, metal doors were observed. Some units also had storm doors.
- North and South facades - Single and double-hung aluminum glass windows with colonial grids, aluminum frame, and upward/downward sliding action.
- West façade – The balcony doors consist of four-panel aluminum sliding glass doors, of which two panels are fixed, one on each side of the sliding doors.
- Common area doors such as stairwells, trash rooms, and storage rooms are hollow metal doors with metal door frames.

The building also includes exterior balconies in the West façade at each residential unit level with aluminum railing. Based on the Architectural drawings reviewed, a liquid-applied waterproof membrane over the balcony concrete was required. A similar requirement was observed for the front corridor floor finish.

[1] Building envelope – the enclosure of the building that protects the building's interior from the outside elements, namely the exterior walls, roofs, trim, and soffit areas.

2.3. Building Framing

Based on the Architectural and Structural drawings reviewed, the building framing consists of a post-tensioned concrete slab at each floor level, supported by reinforced concrete columns, beams, and shear walls, over deep foundation piles.

3. QUALIFICATIONS

Falcon is a full-service Engineering and Architectural Consulting firm primarily evaluating existing facilities/building systems, providing analysis and recommendations, and performing engineering observations during remediation/construction.

Qualified inspectors of Falcon possess the education and experience to act as delegated representatives of the Professional Engineer in Charge (EIC). Falcon's EIC for the Tampa Bay region is Mr. Juan Rivera, P.E. Mr. Rivera holds a bachelor's (BSCE) and a Master of Science in Civil Engineering (MSCE) from the Polytechnic University of Puerto Rico, and is a Licensed Professional Engineer in the State of Florida. Areas of expertise include building envelope systems and structural and civil engineering. Mr. Rivera manages all structural inspections for the Falcon Group's Tampa Bay region.

4. METHODOLOGY

To arrive at the findings and formulate the opinions stated in this report, Falcon performed the following:

1. Preliminary assessment - provides the initial analytical data for estimating the structural adequacy of an existing building and for establishing the need and priority for a more detailed analysis. The basic steps include:[2]
    a) Available documents review.
    b) Site inspections.
    c) Preliminary findings and recommendations.
2. Visual inspections of the areas of work described below to document and assess the current conditions of the structural elements and identify signs of cracking, spalling, rust, discoloration stains, misalignment, and or overall indications of structural failure.
3. Sounding of readily accessible areas (as accessible without scaffolds, ladders, and other equipment) of stucco and concrete elements to discover any hollow areas that would indicate hidden damage, detachment, or voids, to identify deficiencies in the structural components.
4. Sound testing was performed on stucco and concrete surfaces with metal tools. The sounding encompassed masonry walls, ceilings, and bare concrete floors.
5. Visual observation of exposed structural elements (concrete and masonry).
6. Analyzed and cross-referenced the documents and records provided and compared them against the findings of the visual inspections.
7. Issuance of report with preliminary findings and recommendations.

The findings and recommendations included in this report are based on limited documents evaluated and the information provided and available during the review. The Falcon Group makes no guarantee

[2] ASCE 11-99 §2.3 Preliminary Assessment.

that all possible deficiencies or probable causes of the deficiencies were identified. We reserve the right to modify our findings and recommendations based on any new information as it becomes available.

5. SCOPE OF INVESTIGATION

The scope of work included visual, non-invasive inspections of the following elements:

1. Accessible & above-ground Structural Support Elements (exposed columns, beams, shear walls, load-bearing walls, slabs, etc.) at accessible common areas of the building.
2. Visual inspection of approximately 50% of the residential units (10 units total) to evaluate the condition of the exterior façade and accessible structural elements. Units were randomly selected to encompass different exposures and layouts of the balconies.
3. Envelope cladding of the building – Paint coating, waterproofing, and stucco.
4. Exterior side of windows and doors (as accessible).
5. Exterior sealants around the windows, railings, and other wall protrusions.
6. Residential units' balconies and front corridor railing.
7. Roof & roof structures
8. Visual assessment of pool, spa, and pool deck.
9. Foundations, to the extent that they can be observed without excavation, including utility penetrations.

Figure 1: Aerial Image Overview of the Property – *Aerial Photography from Google Earth*

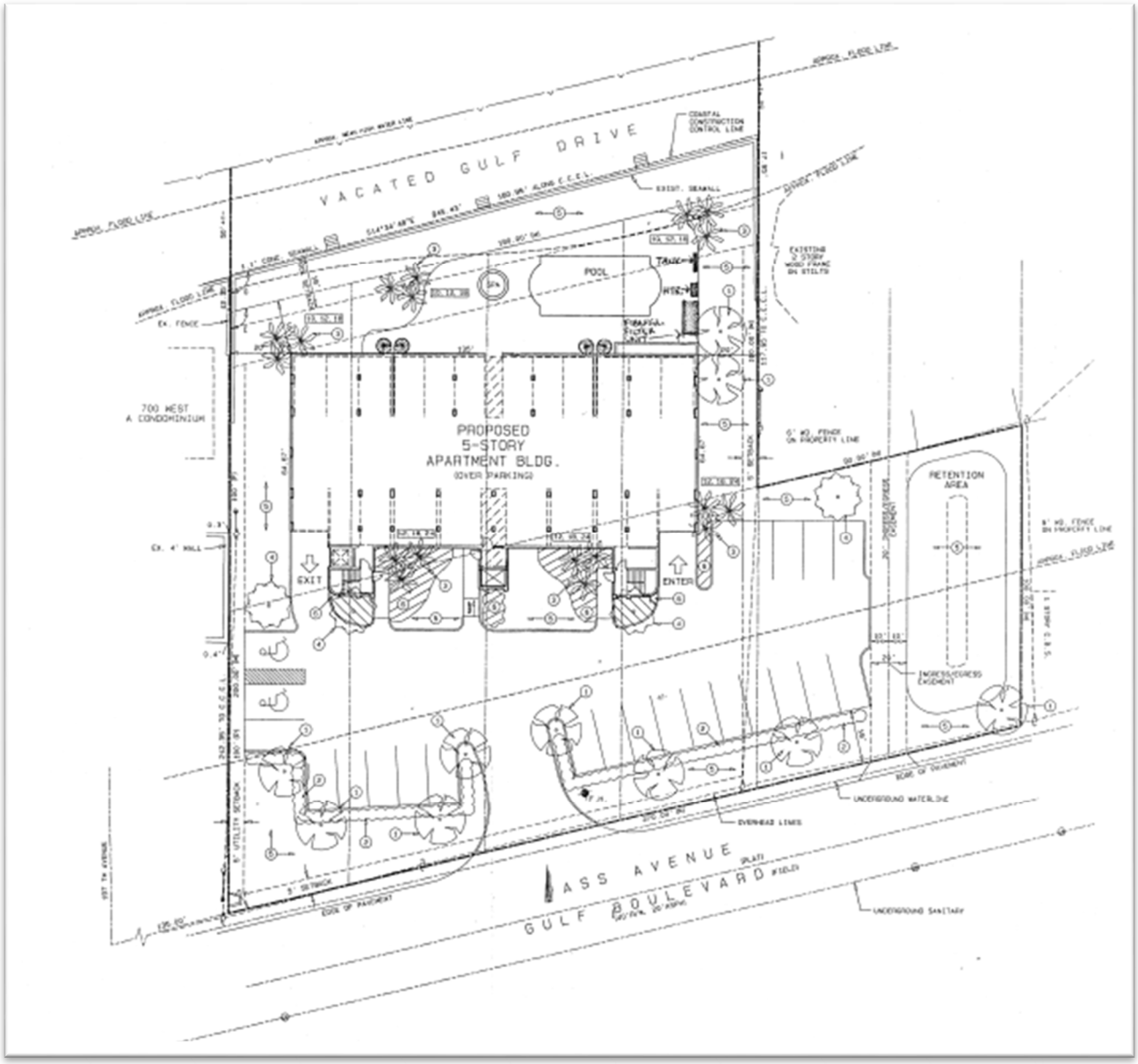

Figure 2: Landscape Plan with Building Footprint – *Excerpt from sheet L1.1 Landscaping Plan (10/20/1997).*

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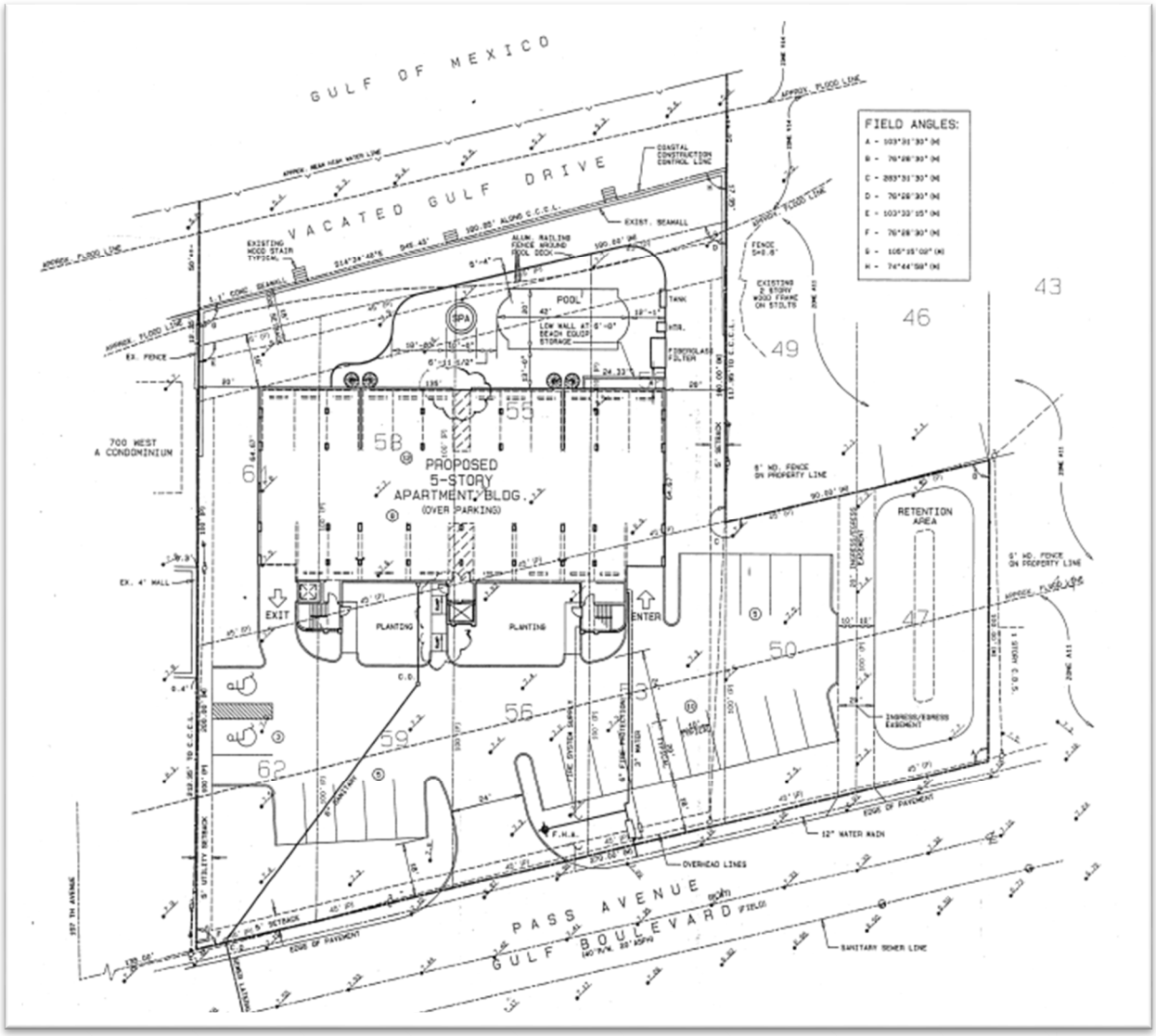

Figure 3: Building Site Plan – *Excerpt from sheet A1.1 Site Plan (10/20/1997).*

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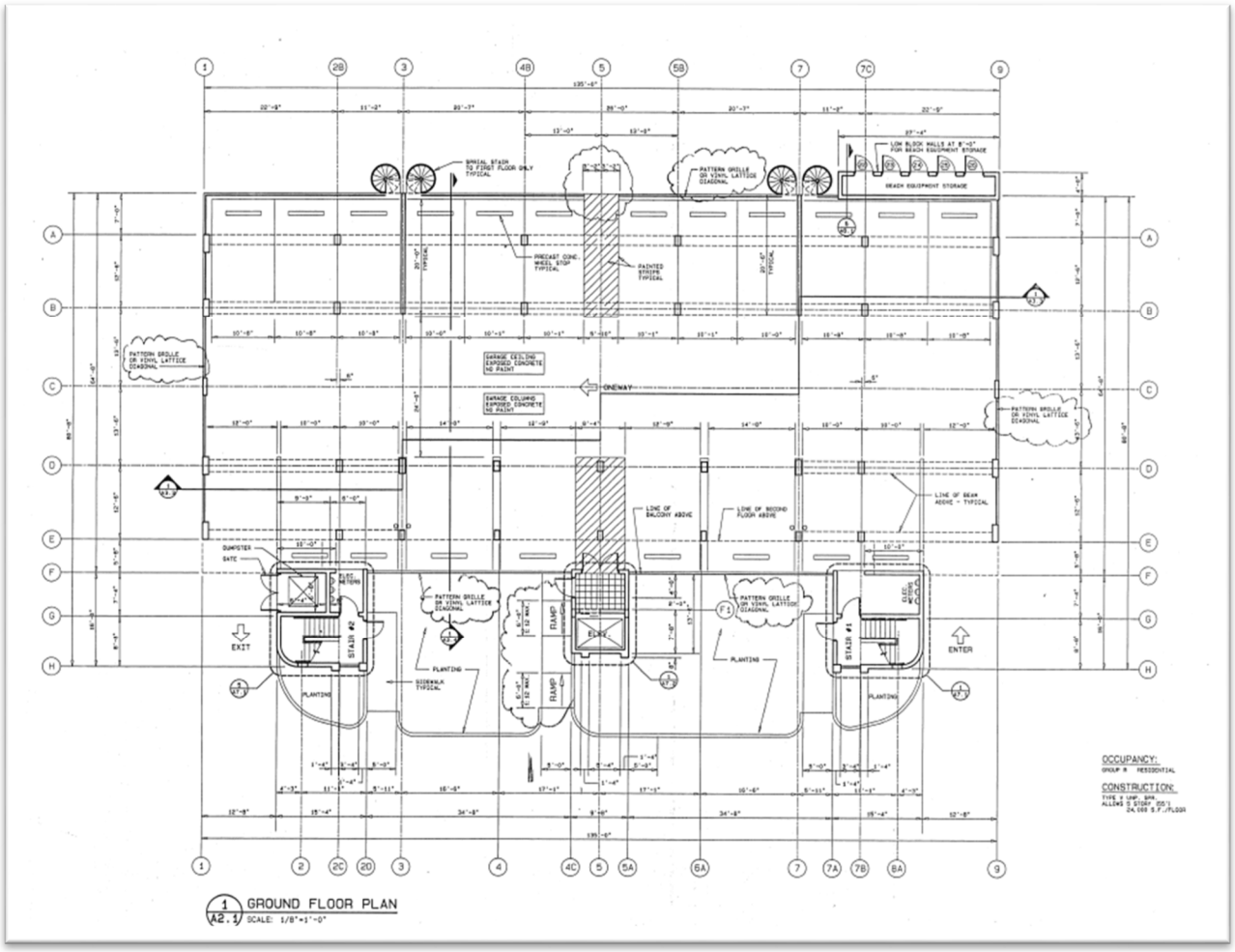

Figure 4: Building Ground Floor Plan – *Excerpt from sheet A2.1 Ground Floor Plan (10/20/1997).*

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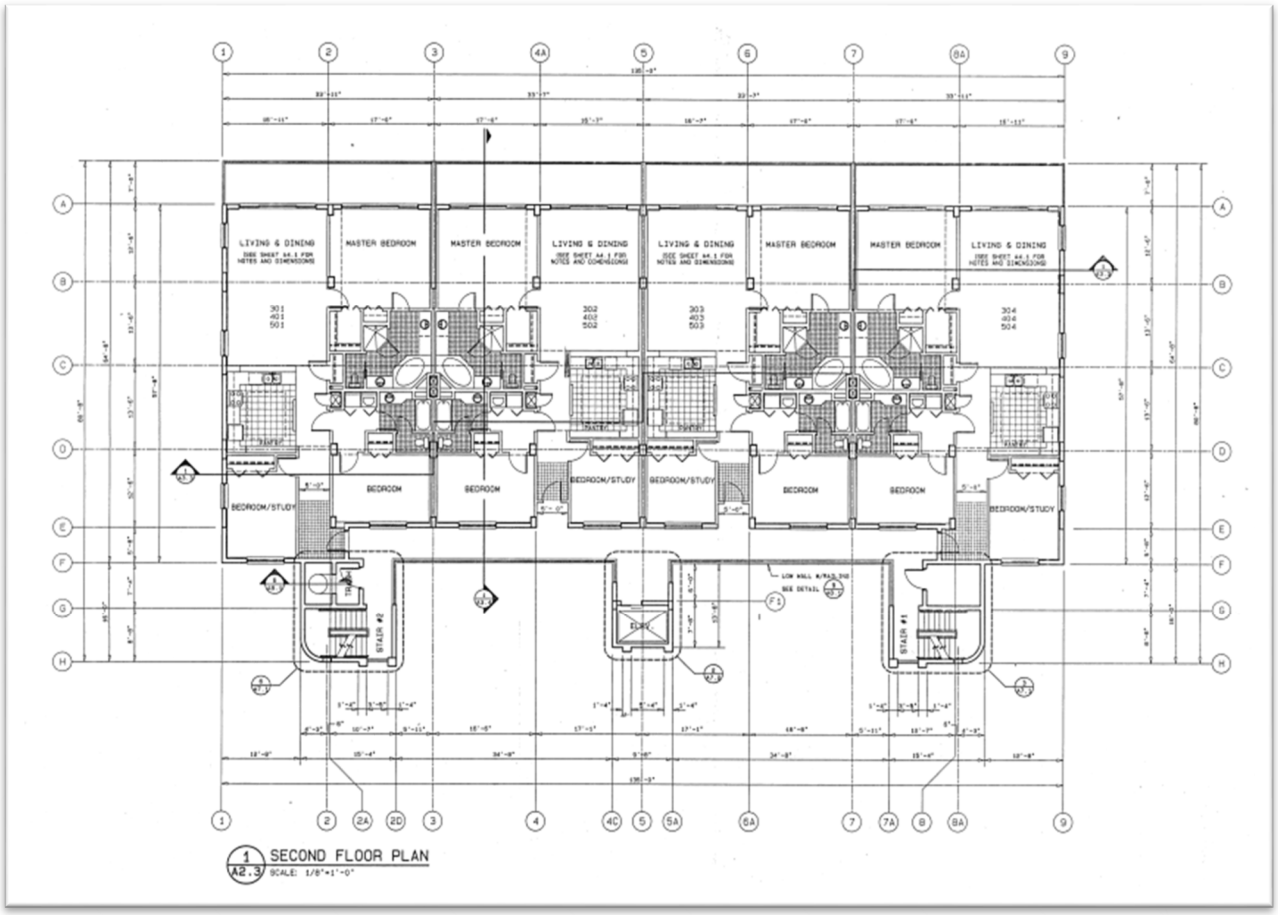

Figure 5: Building Typical Floor Plan – *Excerpt from sheet A2.3 Second Floor Plan (11/24/1997).*

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6. MATERIALS REVIEWED

The following documents were reviewed:

1) Westview Grande Architectural plans prepared by Wedding, Stephenson & Ibargüen Architects Inc. (Approved 9/5/1998).
    a. Sheet A0.01 Legends, Schedules, Notes, and Details.
    b. A1.1 Site Plan.
    c. A 2.1 Ground Floor Plan.
    d. A2.2, A2.3, A2.4 First, Second, and Typical Floor Plans.
    e. A2.5 Roof Plan.
    f. A3.1 East and West Elevations.
    g. A3.2 North and South Elevations.
    h. A3.3, A3.4 Building Sections.
    i. A4.1 Enlarged Units Plans.
    j. A5.1 Interior Elevations.
    k. A7.1 Enlarged Stairs Plans and Sections.
    l. A7.2 Enlarged Elevator Plan and Section.
    m. A8.1 Details.
2) Westview Grande Structural plans prepared by Wedding, Stephon & Ibargüen Architects Inc. (Approved 9/5/1998).
    a. S2.1 Foundation Plan.
    b. S2.2 First Floor Framing Plan.
    c. S2.3 Second to Fifth Floor Framing Plan.
    d. S2.4 Roof Framing Plan.
    e. S3.1 Schedules, Details.
    f. S3.2 Sections & Details.
    g. S3.3 Stair Details & Wall Sections.
    h. S3.4 Schedules, Details, and General Notes.
3) Westview Grande community questionnaire.
4) Falcon's visual inspection photos.
5) ASTM C926-06 Standard Specification for Application of Portland Cement-Based Plaster.
6) ASTM D4580-12 (Reapproved 2018) Standard Practice for Measuring Delamination in Concrete Bridge Decks by Sounding.
7) ASTM E2018-15 Standard Guide for Property Condition Assessment, Baseline Property Condition Assessment Process.
8) ASCE 11-99 Guideline for Structural Condition Assessment of Existing Buildings.

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7. OBSERVATIONS

7.1. Structural Components (Support Elements)

ASCE 11-99, §1.5, defines a structural component as:

> *"A portion of a building that, for the purposes of evaluation, can be isolated from the remainder of the building and which possesses a capability to support, resist, or transfer loads. These components include, for example, roof decks, floors, walls, elevator cores, stair shafts, frames, foundation structures, piles, and piers."*

Based on the Architectural and Structural drawings reviewed, the building framing consists of a post-tensioned concrete slab at each floor level, supported by reinforced concrete columns, beams, and shear walls, over a deep pile foundation system.

a. Concrete Observations

The condition of the concrete elements were found to be in good condition overall.

Localized and minimal instances of cracks, delamination and or spalling, particularly at the garage level, were observed. Locations include the underside of the post tense concrete slab and the lower part of one column. These deficiencies must be addressed to avoid deterioration of the structural elements.

Concrete spalling is the most common type of concrete damage resulting from corrosion of the steel reinforcement (rebar). Corrosion of rebar causes internal stresses in concrete that result in concrete cracking and subsequent detachment of concrete pieces, exposing more rebar to weather and further corrosion. It is normal for the concrete elements to deteriorate over time as a result of exposure to the weather.

Weather in Florida (wind, salt, and moisture) is highly harmful to concrete. Therefore, concrete protection (waterproofing and painting) is essential for the longevity of concrete structures. Typical concrete repairs include the removal of all deteriorated concrete with chipping hammers, removing and replacing damaged steel, applying bonding agents to the old concrete, and patching or pouring the area back with special materials.

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Photo 7.1.a.1 – Garage Level - Overview of the primary structural elements observed in good condition.

Photo 7.1.a.2 – Garage Level - Overview of the primary structural elements observed in good condition.

Photo 7.1.a.3 – Level 4th Front Corridor – Sounding of the post-tense concrete slab did not reveal delaminated areas.

Photo 7.1.a.4 – Level 2nd Front Corridor – Sounding of the post-tense concrete slab did not reveal delaminated areas.

Photo 7.1.a.5 – Garage Level – Delaminated area observed at the ceiling slab.

Photo 7.1.a.6 – Garage Level – Cracked and spalled concrete in the lower part of one column.

b. Rust Spots

Localized rust spots were noted on the different structural elements on the garage's interior, the roof, the staircase, railing pockets, and some balconies. Rust spots on the exterior indicate that embedded ferrous material in the concrete or stucco is exposed to the weather. Corroded metals embedded in the concrete present a structural concern because this condition could lead to local concrete damage or spalling.

All observed rust spots or exposed ferrous materials should be removed and resulting voids adequately patched.

Photo 7.1.b.1 – Garage Level – Sprinkler system insert at the ceiling.

Photo 7.1.b.2 – Garage Level – Embedded rust metal at the slab on grade.

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7.2. Envelope Cladding

a. Paint Coating Deficiencies

Visual assessment of the building façade did not reveal paint coating distress such as blistering and chalking. However, in some areas, exterior paint fading was noted. Based on the document review, the current building paint age is nine years, and the useful life of the paint was estimated as ten years. This is consistent with the normal aging process.

Hairline stucco cracks telegraphing in the paint coating were noted in some areas. Small cracks may be susceptible to water penetration due to wind-driven rain.

Evidence of efflorescence was observed in the interior side of the garage level and stairwells and some areas of the exterior walls. This indicates water intrusion and must be addressed in the following paint project.

Overall, the paint coating was found to be in fair condition. Based on the 2023 Westview Grande Condominium Association, Inc. Reserves Budget Plan issued on December 3, 2022, the building paint project is being scheduled.

Photo 7.2.a.1 – Overview of North façade.

Photo 7.2.a.2 – Overview of South façade.

Photo 7.2.a.3 – Overview of East façade.

Photo 7.2.a.4 – Overview of West façade.

Photo 7.2.a.5 – North façade hairline cracks and evidence of efflorescence.

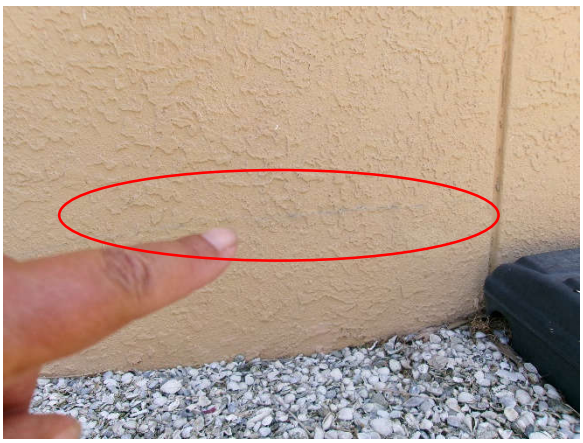

Photo 7.2.a.6 – North façade hairline cracks and evidence of efflorescence.

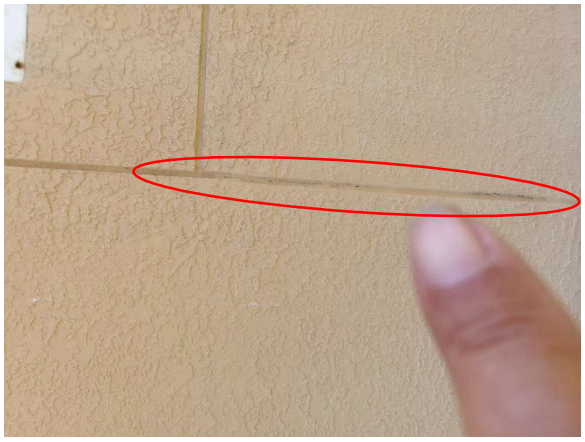

Photo 7.2.a.7 – North façade crack at sealant in the horizontal joint.

Photo 7.2.a.8 – North façade crack at sealant in the horizontal joint.

Photo 7.2.a.9 – East façade typical stucco cracked routed and sealed. The repair was observed to be in good condition.

Photo 7.2.a.10 – East façade weathering paint observed.

Photo 7.2.a.11 – West façade evidence of efflorescence observed at the balcony's slab edges.

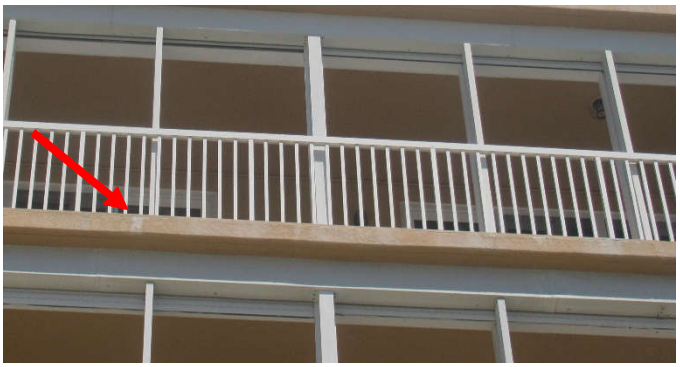

Photo 7.2.a.12 – West façade evidence of efflorescence observed at the balcony's slab edges.

b. Waterproofing Deficiencies

Visual assessment of ten (10) residential units showed that some balconies were finished with tile; therefore, the waterproofing below the tiles was not accessible for observations. In one instance, the sounding of the tile revealed a hollow sound that may be indicative of the tile debonding from the concrete substrate.

The balcony's liquid-applied waterproofing membrane varies from good to fair condition in some areas where the waterproofing membrane was peeling off or delaminating. Evidence of moisture was not observed at the ceilings of the balconies.

The front corridor and stairwells waterproofing varied from fair to poor condition in some areas where the membrane was peeling off, de-bonding, and adhesive failure to the substrate. Evidence of moisture was not observed in the ceilings of the corridor below and sounding of the ceilings in the corridors did not reveal hollow sounds indicative of stucco debonding.

In areas where the liquid-applied waterproofing membrane was classified as poor, the system will no longer function as designed or intended. Therefore, replacing the liquid-applied waterproofing membrane should be considered in the short term.

Based on the 2023 Westview Grande Condominium Association, Inc. Reserves Budget Plan issued on December 3, 2022, the building roof and waterproofing systems have met their estimated useful life. Therefore, the liquid-applied waterproofing membrane replacement should be scheduled before the end of 2024.

Photo 7.2.b.1 – Stairwell #2 –Waterproofing membrane peeling between 2nd and 3rd level

Photo 7.2.b.2 – Stairwell #1 – Evidence of ponding between the 3rd and 2nd levels.

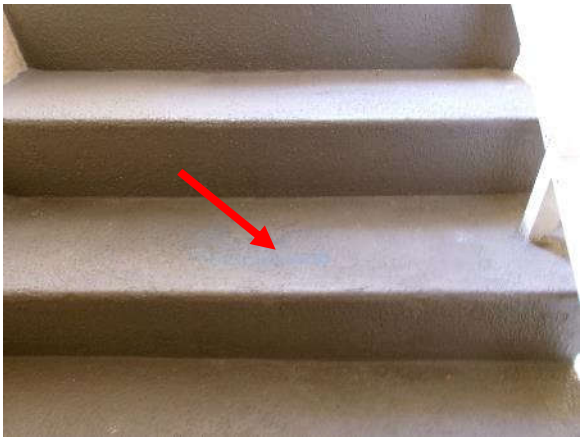

Photo 7.2.b.3– Stairwell #1 – Waterproofing membrane between 2nd and 1st level.

Photo 7.2.b.4 – Stairwell #1 – Evidence of efflorescence between the roof and the 4th levels.

Photo 7.2.b.5 – Garage level – Evidence of efflorescence.

Photo 7.2.b.6 – Garage level – Evidence of efflorescence.

	
Photo 7.2.b.7 – Front corridor level 4th – De-bonding waterproofing membrane.	**Photo 7.2.b.8 – Front corridor level 4th – Delaminated waterproofing membrane.**
	
Photo 7.2.b.9 – Front corridor level 3rd – De-bonding waterproofing membrane.	**Photo 7.2.b.10 – Front corridor level 3rd – De-bonding and peeling off the waterproofing membrane.**
	
Photo 7.2.b.11 – Front corridor level 2nd – De-bonding and peeling off the waterproofing membrane.	**Photo 7.2.b.12 – Front corridor level 2nd – De-bonding waterproofing membrane.**

	
Photo 7.2.b.11 – Front corridor level 1st – De-bonding and peeling off the waterproofing membrane.	**Photo 7.2.b.12 – Front corridor level 1st – De-bonding waterproofing membrane.**

c. Stucco Deficiencies

Readily accessible structural elements were tapped using a golf club to identify de-bonded stucco by Falcon. Hairline stucco cracks were found at localized areas of the building façade – particularly at parapet walls and overhangs, and stairwell walls.

Cracks in buildings and building materials normally result from restrained movement. This movement may originate within the material, as with volume changes due to moisture loss or acquisition, temperature expansion or contraction, or may result from movements of adjacent or supporting materials, such as deflection of beams or slabs. Based on the documents reviewed and visual assessment, the observed cracks can be classified as anticipated cracks caused by normal building movement.[3]

Observed stucco cracks are mostly aesthetic in nature and do not jeopardize the structural stability of the building. They are a consequence of normal wear and tear in the building. It should be noted that the stucco layer contributes to the water tightness of the building envelope, and the deficiencies noted are potential sources of water intrusion. As previously discussed in this report, evidence of efflorescence revealed moisture intrusion within the concrete block wall cavities.

Tapping the stucco with a golf club revealed dull or hollow sounds in some areas. This might be indicative of stucco de-bonding or separation from the substrate. Spalling, loose plaster, or rust stains were not observed. However, these areas should be identified and repaired in the next façade and paint restoration project.

All visible cracks on the building façade should be properly repaired to prevent moisture and water intrusion, causing future stucco delamination and concrete spalling.

[3] National Concrete Masonry Association NCMA TEK 10-1A

Where cracking exists, and stucco surfacing has de-bonded, such stucco areas would be removed and replaced. All these repairs should be performed in accordance with a Professional Engineer's specifications.

The stucco cladding appears in good condition with localized deficiencies, as previously mentioned.

Photo 7.2.c.1 – West façade 1st level repaired stucco crack.

Photo 7.2.c.2 – West façade 1st level stucco hairline crack.

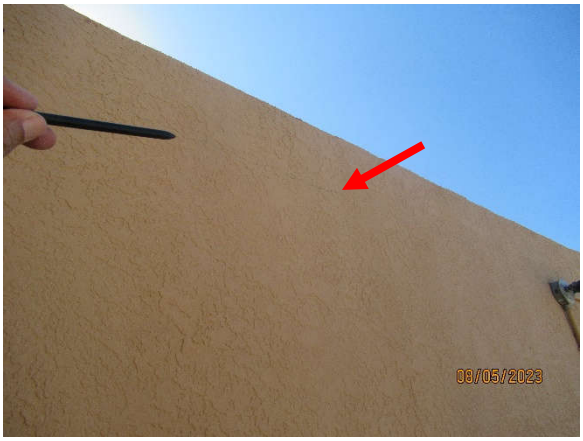

Photo 7.2.c.3 – Roof level stairwell #1 stucco horizontal crack.

Photo 7.2.c.4 – Roof level stairwell #1 stucco horizontal crack.

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Photo 7.2.c.5 – Stairwell #2 stucco hairline crack.

Photo 7.2.c.6 – Stairwell #2 stucco hairline crack.

Photo 7.2.c.7 – Roof level vent shaft southeast corner – Stucco crack and de-bonded.

Photo 7.2.c.8 – Roof level vent shaft southeast corner – Stucco crack and de-bonded.

Photo 7.2.c.9 – Stairwell I#1 Level 2nd – Tapping revealed a hollow sound in the stucco.

Photo 7.2.c.10 – Stairwell I#1 Level 2nd – Tapping revealed a hollow sound in the stucco.

7.3. Windows and Door Deficiencies

a. Fenestration Systems

The fenestration system of the building is impact rated and comprised of double-hung glass windows with colonial grids, aluminum frames, and upward/downward sliding action. Original construction drawings identified the residential unit front doors as 6-panel, solid core hardwood, however 6-panel, metal doors were observed. Some units also had storm doors. Balconies doors consisted of four, panel sliding doors, of which two panels are fixed, one on each side of the sliding doors. Storm shutters are installed to protect windows and doors. Common area doors such as stairwells, trash rooms, and storage rooms are hollow metal doors with metal door frames.

Overall, the fenestration systems appear in good condition with some localized deficiencies, specifically minimal corrosion of some of the door's components due to weathering, aging, and exposure to the coastal environment.

Photo 7.3.a.1 – Level 3rd trash room door.

Photo 7.3.a.2 – Level 3rd trash room door.

Photo 7.3.a.3 – Level 2nd trash room paint crack and peeling off.

Photo 7.3.a.4 – Level 2nd trash room paint peeling off.

Photo 7.3.a.5 – Level 2nd trash room corroded fastener at the door threshold.

Photo 7.3.a.6 – Level 2nd trash room corroded fastener at the door threshold.

Photo 7.3.a.7 – Front corridor (East Façade) typical unit window observed in good condition.

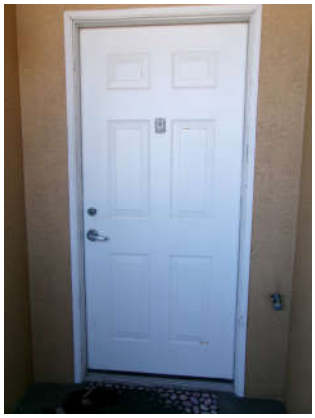

Photo 7.3.a.8 – Front corridor (East Façade) typical unit door observed in good condition.

Photo 7.3.a.9 – Front corridor (East Façade) level 3rd unit door showing rust stains, paint cracks, and peeling off.

Photo 7.3.a.10 Front corridor (East Façade) level 3rd unit door showing rust stains, paint cracks, and peeling off.

	
Photo 7.3.a.11 – West façade (Unit 202) typical sliding glass door observed in good condition.	**Photo 7.3.a.12 – West façade (Unit 503) typical sliding glass door observed in good condition.**

b. Sealant Deficiencies

In general, sealants were installed at the perimeter of the sliding glass doors on balconies and windows of all elevations. Initial sealant failures, such as frame or substrate separation, were observed in some instances. Based on the visual assessment, the sealants and gaskets appear in good condition except for localized areas.

To maintain the watertight integrity of the building envelope around windows and doors where premature sealant failures were noted, sealant replacements can be scheduled and completed in the forthcoming paint project.

The sealants around the top railing base in the front corridor were noted to be in fair to poor condition. Sealant separation in the bottom of the railing in the pocket areas allows water intrusion into the concrete block. This water can potentially cause corrosion in the railing post and concrete block reinforcement.

The sealant at the base of the railing post in the pocket area must be addressed in the short term.

	
Photo 7.3.b.1 – Front corridor (East Façade) Level 4th window perimeter sealant showing substrate and window frame separation	**Photo 7.3.b.2 – West façade (Unit 503) typical sliding glass door observed in good condition.**

	
Photo 7.3.b.3 – Front corridor (East Façade) Sealant separation in the base of the railing in the pocket.	**Photo 7.3.b.4 – Front corridor (East Façade) Sealant separation in the base of the railing in the pocket**

7.4. Railing Deficiencies

The building includes exterior balconies in the West façade at each residential unit level with aluminum railing. The aluminum railing is secured to the balcony's structure through the posts embedded into the core-drilled concrete slab and at the ends of the top rails with anchor and end brackets (See Figure 6).

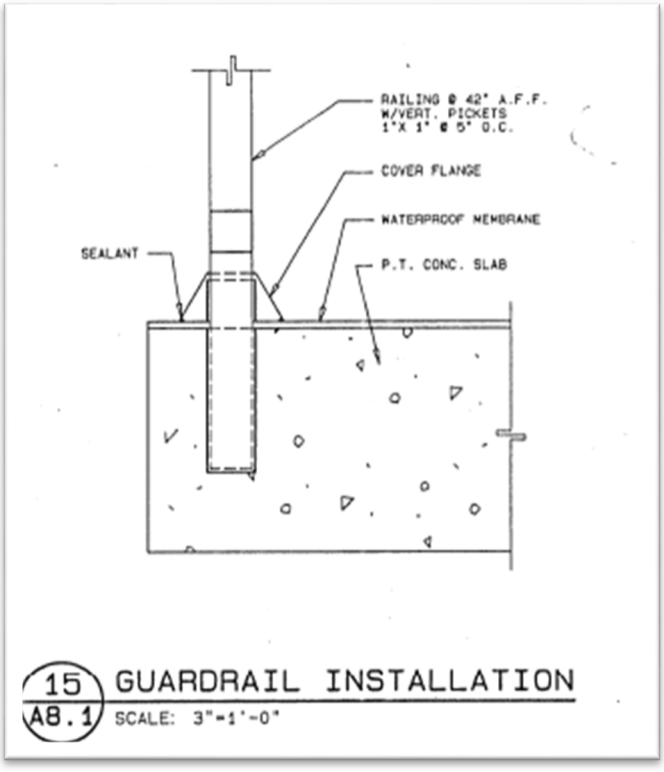

Figure 6: Guardrail Installation – *Excerpt from sheet A8.1 (10/31/1997).*

The exterior hallway located at the building front (East façade) is protected by a corridor railing comprised of a CMU low wall with stucco and painted finish with a 2" diameter pipe railing installed on top of the CMU wall (Figure 7).

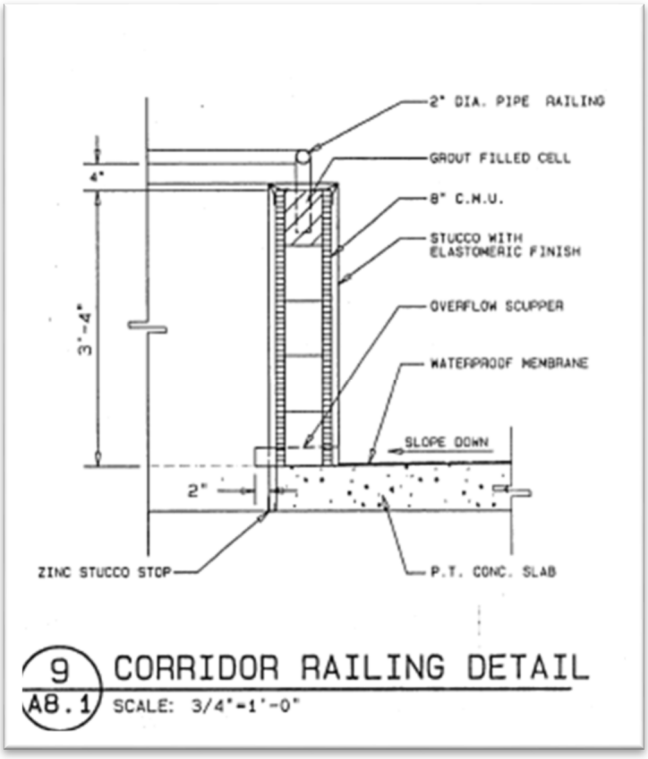

Figure 7: Corridor Railing Detail– *Excerpt from sheet A8.1 (10/31/1997).*

Based on the 2023 Westview Grande Condominium Association, Inc. Reserves Budget Plan issued on December 3, 2022, the balcony railing's current age is 25 years, and the useful life was estimated as 26 years. Overall, the paint coating was found to be in fair condition. At a minimum, replacing corroded elements that show cross-section loss and painting is recommended.

Stairwell #1 provides access to the roof level. This area is closed to residents; access is only for maintenance staff. It was noted that an aluminum metal railing was installed on top of the roof parapet for safety reasons. A vertical picket was observed with deflection in this railing and vertical post anchors were loosed. This compromises the ability of the railing to resist out-of-plane forces. The anchors of the railing system must be repaired immediately.

In the pool deck, the railing system was found to be in fair condition. Paint showing deficiencies such as waring, cracks and peeling were observed. In addition, mild corrosion was observed in some of the railing elements. At a minimum, replacing corroded elements that show cross-section loss and painting is recommended.

Photo 7.4.1 – Unit 503 - Handrail Balcony paint failure and mild corrosion.

Photo 7.4.2 – Unit 101 - Handrail Balcony paint failure and mild corrosion.

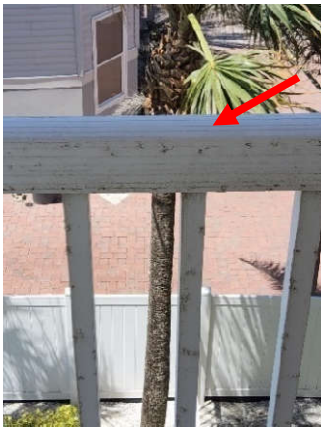

Photo 7.4.3 – Unit 204 - Handrail Balcony with mild corrosion.

Photo 7.4.4 – Front corridor (East Façade) corrosion in the base of the railing.

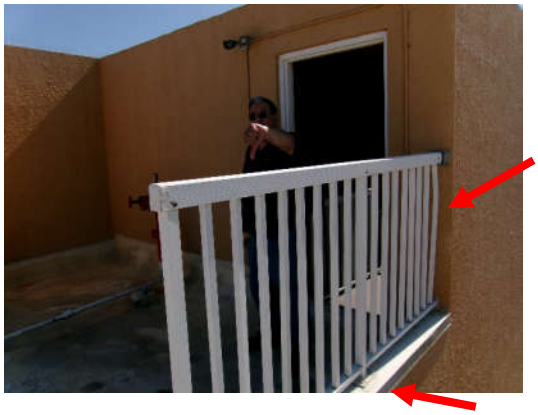

Photo 7.4.5 – Roof level - a vertical picket was observed with deflection, and vertical post anchors were loosed.

Photo 7.4.6 – Roof level - a vertical picket was observed with deflection, and vertical post anchors were loosed.

Photo 7.4.7 – Pool deck railing with paint weathered and mild corrosion.

Photo 7.4.8 – Pool deck railing with paint weathered and mild corrosion.

7.5. Joints

The visual assessment showed the presence of joints in the front corridor at all residential levels. A review of the architectural and structural drawings failed to provide this joint's details. Based on the structural drawings, the roof and floor construction are an 8" thick post-tensioned two-way slab. Therefore, it is likely that the observed joint in the corridor is related to installing a cementitious topping or installing the waterproofing membrane. These joints were observed to be in good condition.

Construction joints were observed in the slab-on-grade in the pool deck area. Visual assessment of the pool deck joint showed deficiencies such as cracks and de-bonding of the sealant material from the substrate. These joints can also function as an expansion or isolation joint to accommodate movement or provide separation.

Isolation joints were observed at the garage level. The isolation joint is a formed or assembled joint specifically intended to separate and prevent the bonding of one structural element to another and to have little or no transference of movement or vibration across the joint.

An isolation joint may be composed of sheet material or a preformed joint material separating two adjacent concrete elements; one example is where a slab abuts a wall. The joint material should extend the full depth of the slab or slightly below its bottom to ensure complete separation. Where the joint filler would be visually undesirable, the top of the preformed filler can be removed, and the joint caulked with an elastomeric sealant. In general, the joints were observed to be in good condition.

The saw-cut contraction joints were observed in good condition at the garage level.

Photo 7.5.1 – Front corridor – Observed joint likely related to installing a cementitious topping or installing the waterproofing membrane. These joints were observed to be in good condition.

Photo 7.5.2 – Pool Deck - Visual assessment showed joint construction deficiencies such as cracks and de-bonding.

Photo 7.5.3 – Pool Deck - Visual assessment showed construction joint deficiencies such as cracks and de-bonding.

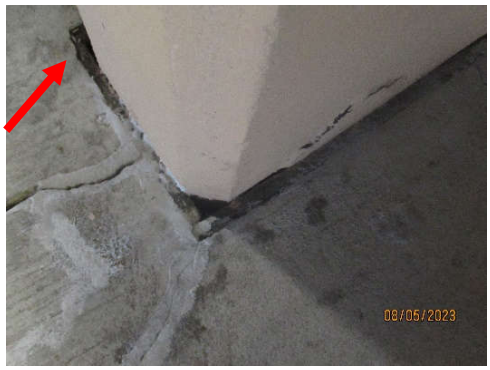

Photo 7.5.4 – Garage level isolation joint. In good condition.

Photo 7.5.5 – Garage level isolation joint. In good to fair condition.

Photo 7.5.6 – Garage level saw cut contraction joint in good condition.

7.6. Roof and Roof Structures

The building's roof is composed of a low slope, post-tensed concrete slab. The roofing system consists of a spray foam covering the entire roof area over a modified bitumen sheet laid over rigid tapered insulation and terminated under a mechanically anchored metal counter-flashing strip and stucco-covered concrete parapet wall. The top of the roof parapet was covered with a flashing cap to avoid water intrusion.

The roof surfaces were penetrated by mechanical equipment stands, ventilation fans, and plumbing vents, and primary roof drainage is provided by four (4) roof drains with a grated dome. Access to the roof area is provided through the North staircase.

Though the main flat roof drainage was observed with a positive roof slope toward four roof drains located at the roof geometry center, aging of the roof protective coat had created an uneven surface. This condition allows for temporary water ponding, evidenced by sediments or darker spots in the exterior roof membrane, although because of the size of this uneven surface, we understand that this accumulation of water will dry in less than 48 hours.

Multiple roof patch repairs were observed exhibiting continuous roof maintenance, and most of the roof patches were in good condition. That said, in some areas, the roof patch repairs were observed to be detached and peeled off.

Failure or loss of adhesion of the top bituminous membrane was observed in some areas. This was noted by walking the roof, and identifying bulging or spongy areas. Other observations included a rusted fastener in the cap flashing and rooftop structure support; rust spots in the protective roofing membrane; and a loose roof drain dome grate.

Overall, the roof covering[4] was found to be in fair condition. Based on the 2023 Westview Grande Condominium Association, Inc. Reserves Budget Plan issued on December 3, 2022, the roof system age matches the useful service life of 11 years. It should be noted that water intrusion was not documented or reported for the residential units and balconies on the fourth level. Therefore, the roof assembly's waterproof protection has not yet been compromised.

Based on the visual assessment and maintenance records, Falcon understands that the most cost-effective approach to maintaining the watertight integrity of the building roof will be an entire roof covering replacement. Continuous roof covering maintenance should continue in order to extend the roof's useful life and address any deficiency that could lead to water intrusion issues. This project should be scheduled in the short term.

[4] FBC 2020 Building 7th Edition §1502.1 Roof Covering - The covering applied to the roof deck for weather resistance, fire classification or appearance.

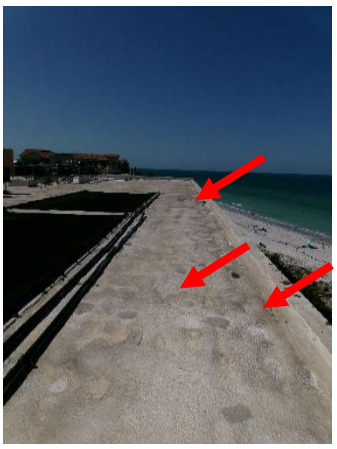

Photo 7.6.1 – Roof level – Uneven surface and evidence of temporary water ponding.

Photo 7.6.2 – Roof level – Uneven surface and evidence of temporary water ponding.

Photo 7.6.3 – Roof level – Uneven surface and evidence of temporary water ponding.

Photo 7.6.4 – Roof level – Roof patch repairs were observed to be detached and peeled off.

Photo 7.6.5 – Roof level – Repair patch in good condition.

Photo 7.6.6 – Roof level – Rust spots observed.

Photo 7.6.7 – Roof level – Corrosion in the cap flashing fastener.

Photo 7.6.8 – Roof level – Rooftop equipment with corroded fasteners and steel angles.

Photo 7.6.9 – Roof level – Roof drain dome gate loose.

Photo 7.6.10 – Roof drain dome gate loss.

Photo 7.6.11 – Roof level – Peeled off the coating in the rooftop structure base.

Photo 7.6.12 – Peeled off the coating in the rooftop structure base.

Photo 7.6.13 – Roof level – Rooftop equipment with corroded fastener and concrete base damaged.

Photo 7.6.14 – Rooftop equipment with corroded fastener and concrete base damaged.

7.7. Pool & Pool Deck Area

The Pool Deck is located behind the building at the West elevation of the property. It includes one pool and one spa. The pool and spa construction are inground, and the deck is a slab-on-grade.

The slab-on-grade has an average thickness of 5 inches. Construction joints in the slab on grade were observed to be 8', 10', 13', 18', and 19' apart. Based on the measured slab thickness, joint contraction spacing should be at or about 12 ft.

Visual assessment of the pool deck joints showed deficiencies such as cracks and de-bonding of the sealant material from the substrate. The slab-on-grade has a coating system, however concrete cracks have breached the coating system, allowing water to infiltrate the concrete slab. Like other construction materials, concrete contracts and expands with changes in moisture and temperature. The condition of the slab-on-grade was found to be good to fair with localized cracks, which must be addressed to avoid deterioration of the concrete.

The pool and spa surfaces were found to be in good condition. Inspection of the pool and the wet spa surface did not show a cracked surface. There were no visual signs of leaking from the pool or spa during the evaluation.

Photo 7.7.1 – Pool area - Concrete crack in the pool slab on grade.

Photo 7.7.2 – Pool area - Concrete crack in the pool slab on grade.

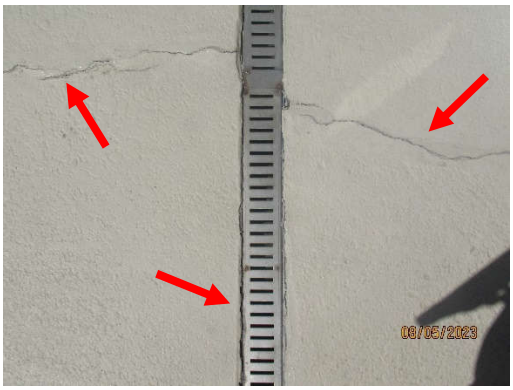

Photo 7.7.3 – Pool area - Concrete crack in the pool slab on grade.

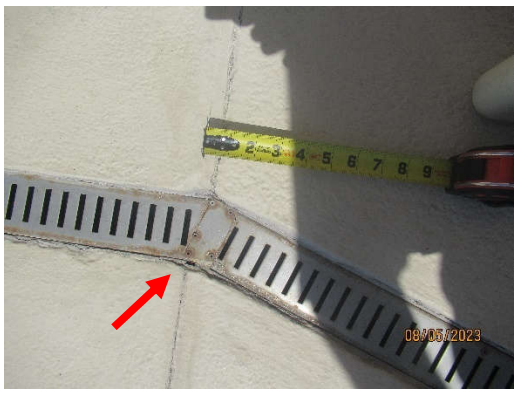

Photo 7.7.4 – Pool area – Failure of sealant.

Photo 7.7.5 – Pool area - Concrete crack in the pool slab on grade. Concrete cracks in the spa curb.

Photo 7.7.6 – Pool area – Concrete crack in the pool slab on grade. Likely between the slab on the grade and the pool wall.

7.8. Garage & Foundations

The garage level is located on the ground floor. The building framing consists of the post-tensioned concrete slab (First Level), supported by reinforced concrete columns, beams, and shear walls, over a deep pile foundation system.

There were no significant visible structural cracks at the slab foundation or columns. No signs of settlement and displacement were observed at the visible structural members.

Overall, the condition of the concrete elements were found to be in good condition with localized instances of cracks or spalling, specifically at the garage level, where the concrete was observed to be delaminated or cracked in the underside of the post tense concrete slab and the lower part of one column. These deficiencies must be addressed to avoid deterioration of the structural elements. Photos of these observations were included in Section 7.1 of this report.

Based on the document review, the slab-on-grade and the concrete block wall at the perimeter of the garage level, identified as breakaway walls, are not part of the building's structural framing system.

The ASCE 11-99 §1.5 defines a Nonstructural component as:

> *"A component whose original primary function was other than to support vertical or lateral loads that the building may impose except its mass…."*

a. Concrete Observations

Concrete cracks were observed in the slab-on-grade at the garage level; however these cracks are unrelated to building structural damage or resulting from load transfers from the structural components.

The slab-on-grade at the ground floor was specified as a 5" thick concrete slab reinforced with welded wire fabric cast over a 6-mm polyethylene vapor barrier. A slab-on-grade is continuously supported by ground whose total loading, when uniformly distributed, would impart pressure to the grade or soil below.[5]

Like other construction materials, concrete contracts and expands with changes in moisture and temperature. Also, concrete deflects depending on load and support conditions. A common cause of cracking in concrete is restrained drying shrinkage. Drying shrinkage is the long-term change in the volume of concrete caused by the loss of moisture from the cement paste constituent. Sometimes, a cementitious material is used to repair and seal the crack.

In addition, plastic shrinkage cracks were observed in the slab-on-grade in the Southwest corner at the garage level. These cracks appear mostly on horizontal surfaces. They are usually parallel to each other on the order of 1 to 3 feet apart, relatively shallow, and

[5] ACI 116R- Cement and Concrete Terminology, page 60

generally do not intersect the slab's perimeter. Plastic shrinkage cracking is prevalent when high evaporation rates cause the concrete surface to dry before it has set.[6]

Weather in Florida (wind, salt, and moisture) is extremely harmful to concrete. Therefore, concrete protection is essential for the longevity of concrete structures. Using thin polymer resin to fill the cracks and form a polymer plug that seals out water, salts, and other aggressive elements will refurbish the adequate concrete protection.

The primary objective of this repair is to fill the crack and structurally bond the concrete on both sides of the crack. This repair is to seal cracks that are not moving—for example, shrinkage cracks, and settlement cracks that have stabilized. By penetrating and filling the cracks, the resin is able to form a polymer plug that seals the crack, keeping out water, chlorides, carbon dioxide, sulfates, and other aggressive liquids and gases. This repair method is, therefore, a way to reduce possible future deterioration caused by steel corrosion, and chemical attack of the concrete.[7]

Overall, the condition of the concrete elements was found to be good to fair with localized instances of cracks of the slab-on-grade, which must be addressed to avoid deterioration of the concrete.

Photo 7.8.a.1 – Garage Level – Drying shrinkage cracks observed at the slab on grade.

Photo 7.8.a.2 – Garage Level - Drying shrinkage cracks observed at the slab on grade.

[6] National Ready Mixed Concrete Association Concrete in Practice CIP 5 – Plastic Shrinkage Cracking.
[7] ACI Field Guide to Concrete Repair Application Procedures RAP Bulletin 2 Crack Repair by Gravity Feed with Resin.

Photo 7.8.a.3 – Garage Level – Drying shrinkage cracks observed at the slab on grade. The application of cementitious material to repair and seal the crack was observed.

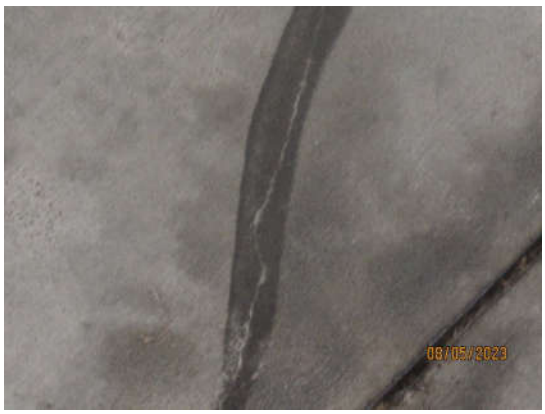

Photo 7.8.a.4 – Garage Level - Drying shrinkage cracks observed at the slab on grade. The application of cementitious material to repair and seal the crack was observed.

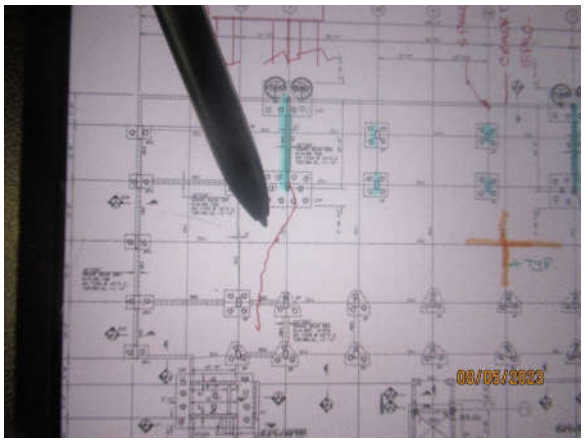

Photo 7.8.a.5 – Garage Level – Drying shrinkage cracks observed at the slab on grade.

Photo 7.8.a.6 – Garage Level - Drying shrinkage cracks observed at the slab on grade.

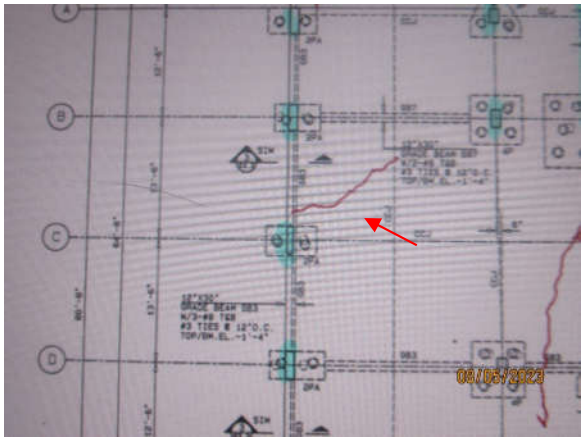

Photo 7.8.a.7 – Garage Level – Plastic shrinkage cracks observed at the slab on grade.

Photo 7.8.a.8 – Garage Level - Drying shrinkage cracks observed at the slab on grade.

b. CMU Wall

Stair-step cracks were noted in the concrete masonry unit (CMU) west wall of the garage level. In addition, a typical observation included horizontal and vertical cracks at the CMU abutting the structural components (Concrete Frames and post-tension slab) at the garage level. However, these cracks were unrelated to building structural damage or resulted from load transfer from the structural components.

The CMU walls at the garage level between the ground floor and the underside of the first-floor structure, except elevator enclosures, were identified as breakaway walls. For reference, the breakaway definition is provided below:

> *"A wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system. Any walls below the lowest floor in a building in a V Zone should give way under wind and water loads without causing collapse, displacement, or other damage to the elevated portion of the building or the supporting pilings or columns."*[8]

Note 5 ON sheet S2.1 Foundation Plan reads:

> *"ALL 8" BLOCK WALLS SHOWN ON PLAN ARE "BREAKAWAY WALLS" BETWEEN GROUND FLOOR AND UNDERSIDE OF FIRST FLOOR STRUCTURE EXCEPT ELEVATOR ENCLOSURE WALLS. PROVIDE ½" HORIZONTAL AND VERTICAL JOINT SEPARATION BETWEEN BREAKAWAY WALLS AND SUPERSTRUCTURE."*

Based on the documents reviewed, cracks on the breakaway walls can be classified as anticipated cracks caused by normal building movement.

Cracks in buildings and building materials normally result from restrained movement. This movement may originate within the material, as with volume changes due to moisture loss or acquisition, temperature expansion or contraction, or may result from movements of adjacent or supporting materials, such as deflection of beams or slabs. In many cases, movement is inevitable and must be accommodated or controlled.[9]

Typically, concrete masonry walls are restrained along the bottom of the wall (mainly by the foundation) with partial restraint along the top of the wall. Further, shrinkage cracks manifest themselves at areas of weakness within the wall (e.g., openings for windows or doors), or adjacent to internally stiffened elements such as filled cells. Anticipated cracking typically manifests in stair step, horizontal and/or vertical configurations.[10]

Figure 6 on the next page shows the slab edge at the masonry wall detail used at the ground level. A review of this detail shows that the concrete block walls at the garage level between the ground floor and the underside of the first-floor structure were designed as a breakaway wall.

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[8] Breakaway Wall | FEMA.gov
[9] National Concrete Masonry Association NCMA TEK 10-1A
[10] Structural Engineering Forensic Evaluation of Misdiagnosed Concrete Masonry wall Cracking, Bracken W.C., Vol 11, No.5, 2017, page 573.

For the concrete masonry to structurally perform as intended, the walls must be restrained to the base or slab-on-grade. Further, filled cells provide additional restraint within the division. These restraints also prevent or restrict concrete masonry assemblies from expanding or contracting, thereby resulting in the buildup of internal stresses. Relief of these internal stresses leads to cracking or separations within and between the assembly's constituent parts (i.e., between the concrete masonry units, adjacent to internally filled cells, and adjacent to the mortar to hold the masonry in place). While this cracking and separation may constitute distress, it does not typically compromise the wall's structural integrity.[11]

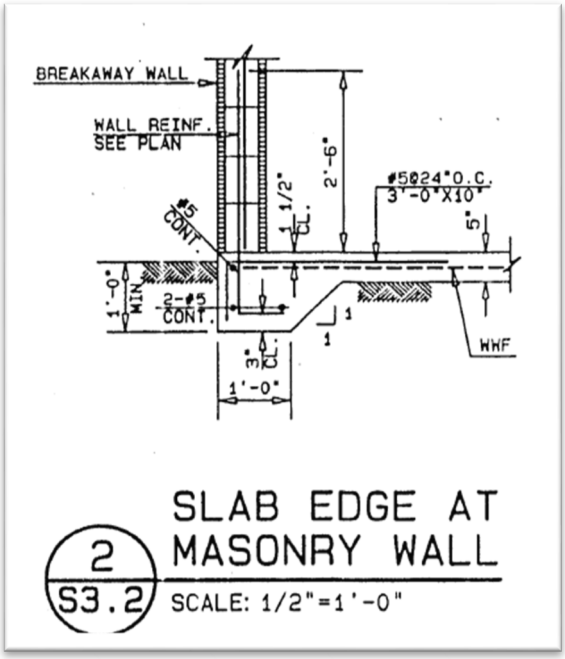


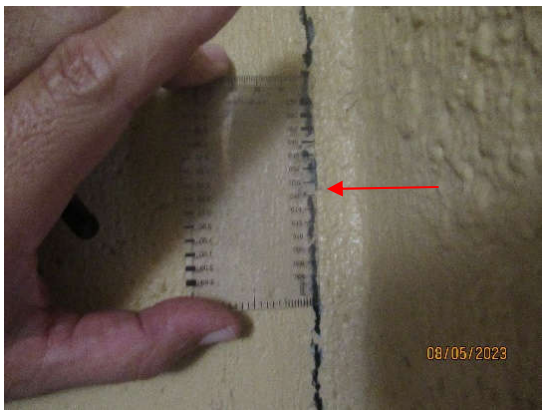
Figure 6: Slab Edge at Masonry Wall – *Excerpt from sheet A3.2 Sections & Details, Detail 2 S3.2 (8/11/1997).*

The observed cracks noted in this report are not structurally concerning. Cracks, if left unattended could lead to more extensive damage, water intrusion, and/or potentially local failure of elements in extreme situations.

Evidence of efflorescence was observed through some of the walls at the garage level. This indicates water intrusion or moisture within the masonry cavity walls. Therefore, repairs to seal the masonry wall crack must be performed.

Overall, the limited areas observed with exposed masonry were in good to fair condition. Falcon recommends routing and sealing of repair of the ½" horizontal and vertical joint separation between the breakaway walls and the superstructure. In addition, for minimal cracking confined primarily to the mortar's joints, and relatively stable in width, it can be readily repaired by conventional tuckpointing (also called repointing) methods.

[11] Structural Engineering Forensic Evaluation of Misdiagnosed Concrete Masonry wall Cracking, Bracken W.C., Vol 11, No.5, 2017, page 573.

	
Photo 7.8.b.1 – Garage Level – Anticipated building cracks usually result from restrained movement in buildings and building materials.	**Photo 7.8.b.2 – Garage Level – Anticipated cracks in buildings and building materials typically result from restrained movement.**
	
Photo 7.8.b.3 – Garage Level – Anticipated cracks in buildings and building materials typically result from restrained movement.	**Photo 7.8.b.4 – Garage Level – Anticipated cracks in buildings and building materials typically result from restrained movement.**
	
Photo 7.8.b.5 – Garage Level – Evidence of efflorescence was observed through some of the walls in the garage level.	**Photo 7.8.b.6 – Garage Level – Evidence of efflorescence was observed through some of the walls in the garage level.**

8. CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations are based upon, and limited by, the data provided and the visually observable conditions.

During the investigation, we found structural elements with normal wear and tear due to age and exposure to the weather of the building. The deficiencies in the structural elements observed are considered **"Less than Substantial" and require minor structural repairs to bring the building back to its original pre-damage condition.** As such, Falcon has not found any indications of the existence of significant deficiencies in the structural frame of the building at this time and considers the building to be a **safe structure**.

Compared to similar properties we have been involved with, with similar age, proximity to the ocean, and weather conditions, the building generally seems well maintained.

Based on the information available, observations performed, and our knowledge of the property, the structural members' deficiencies are minor and considered "Less than Substantial." As such, Falcon did not observe any visual conditions or indications that would be regarded as a significant structural concern and would render the building unfit for its present use or occupancy. Thus, given the visual conditions observed, we have no reason to believe additional destructive or geotechnical (soil) investigations are necessary.

Falcon recommends that the Association and property management continue to monitor and maintain all structural elements. However, the conditions listed in the report should be addressed as soon as possible to bring the building back to its original pre-damage condition. If any changes in conditions such as cracks, settlements, sinkholes, or any other notable concerns are identified, the Association should notify us immediately so that we may assess and address the condition(s).

Based on our observations, Falcon recommends the following work:

1. Garage level – Concrete repair where the concrete was observed to be delaminated or cracked in the underside of the post-tensioned concrete slab and the lower part of one column.
2. All observed rust spots or ferrous materials should be removed and resulting voids adequately patched.
3. To extend the useful life of the painting, repair unsealed stucco cracks on the exterior façade and garage level. Spot painting the outer envelope of the buildings once all localized concrete/stucco/masonry deficiencies have been corrected.
    a. Alternatively, because the paint coating was found to be in fair condition and the paint coating system remaining useful life is at or about one year, a building façade restoration and paint project should be scheduled for the year 2024.
4. Waterproofing Membrane.
    a. Evidence of moisture was not observed at ceilings of the balconies. However, in some of the residential balconies, the waterproofing membrane was peeling off or delaminating. In these areas, the waterproof membrane should be repaired or patched.
    b. Replacement of the liquid-applied waterproofing membrane in the front corridor.

c. Repair and patch the liquid-applied waterproofing membrane in the stairwells.

5. Tapping the stucco with a golf club revealed dull or hollow sounds in some areas. This might be indicative of stucco de-bonding or separation from the substrate. Spalling, loose plaster, or rust stains were not observed, however, these areas should be identified and repaired in the next façade and paint restoration project.
6. Overall, the fenestration systems appear in good condition with some localized deficiencies, particularly minimal corrosion of some of the door's components due to weathering, aging, and exposure to the coastal environment. These minor deficiencies should be addressed in the following paint project.
7. Replacement of the roof door, metal frame, and hardware at the roof level in stairwell #1.
8. To maintain the watertight integrity around windows and doors in areas where premature sealant failures were noted, a replacement can be scheduled and completed in the forthcoming paint project.
9. The sealant separation at the base of the railing post in the pocket area must be addressed in the short term.
10. The balcony railing's current age is 25 years, and its useful life was estimated as 26 years. At a minimum, replacing corroded elements that show cross-section loss and painting is recommended.
11. Roof level, parapet railing - a vertical picket was observed with a deflection in this railing and anchors were loose. This compromises the ability of the railing to resist out-of-plane forces. The anchors of the railing system must be repaired immediately.
12. Pool deck railing system – observed to be in fair condition. Paint showing deficiencies such as worn, cracked, and peeling was observed. In addition, mild corrosion was observed in some of the railing elements. At a minimum, replacing corroded elements that show cross-section loss and painting is recommended.
13. An entire roof covering replacement is recommended to maintain the watertight integrity of the building roof.
    a. Corroded fasteners and steel angles were observed in the rooftop air conditioning unit mounting bases. These conditions compromise the mechanical equipment by potentially becoming loose or missile hazards during hurricane events. These conditions must be addressed immediately to prevent incidental roof membrane damage or penetration.
14. Concrete cracks observed in the garage level and pool deck area should be sealed using thin polymer resin to fill the cracks and form a polymer plug that seals out water, salts, and other aggressive elements.

Falcon recommends that the building have an updated inspection every 8-10 years. An updated inspection should also be performed in the event of a hurricane, flood, or other significant disaster upon or around the building.

This report was prepared for the benefit of the **Westview Grande Condominium Association** and represents The Falcon Group's Milestone assessment of the existing conditions of the building and garage. It should be noted that Falcon's assessment is based on visual observations and nondestructive investigations. Our opinions are based in part upon information provided by the client and accordingly, the opinions in this report are valid to the extent that the information provided was accurate and complete. The possibility of hidden/latent deficiencies may exist in concealed structural elements of the building.

Should new information or additional documentation become available, Falcon reserves the right to amend or revise their opinions and recommendations. No other warranty or guarantee, expressed or implied, is made as to the findings presented in this report.

Should you have any questions in reference to this report, please do not hesitate to contact The Falcon Group at (813) 438-3568.

Sincerely,

Prepared by

Jorge Conesa

Jorge Conesa
Project Manager

Reviewed by

Juan G. Rivera

Juan G. Rivera, P.E., MSCE
Director; Tampa Bay Region