



# ELEVATED

Engineering Services, LLC

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## CONDITION SURVEY REPORT

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**PALMA DEL MAR 5**

**CONDOMINIUM**

**6372 PALMA DEL MAR BLVD. S.**

**ST. PETERSBURG, FL 33715**



May 6, 2022

Scott Fisher  
Resource Property Management  
5901 Sun Boulevard, Suite 103  
St. Petersburg, FL 33715

Subject: Condition Survey Report  
Palma del Mar 5 Condominium  
6372 Palma del Mar Blvd. S.  
St. Petersburg, FL 33715

Mr. Fisher,

As per our February 3, 2022, proposal, Elevated Engineering Services, LLC (Elevated Engineering) is pleased to provide this report of the limited condition survey at Palma del Mar 5 Condominium in St. Petersburg, Florida. The limited condition survey was conducted by Daniel Sapp, PE on Thursday March 31, 2022, and Friday April 1, 2022. The observations conducted at Palma del Mar 5 Condominium were visual in nature and the full scope of the limited condition survey is contained within the February 3, 2022, proposal.

### **Building Description**

Elevated Engineering was not provided with any structural or architectural building plans of the subject structure. Therefore, onsite observations of the structure and knowledge of similar construction were relied upon for the information within this condition survey.

Palma del Mar 5 Condominium property is composed of a 12-story tower structure and (6) 2-story to 3-story villa structures located along the exterior of the tower structure. The tower structure has a parking garage on the 1<sup>st</sup> and 2<sup>nd</sup> floor, common areas on the 1<sup>st</sup> through 3<sup>rd</sup> floors and residential units on the 4<sup>th</sup> through 12<sup>th</sup> floors. The villa structures have residential units on all floor levels. There appears to be a total of approximately 142 residential units and 142 exterior balconies between the tower and villa structures. According to Pinellas County Property Appraiser the subject structures were constructed in 1981. The structures appear to be constructed of cast-in-place reinforced concrete elevated slabs with embedded post tension cables, cast-in-placed reinforced concrete columns, and concrete masonry unit (CMU) walls. The foundation is likely composed of concrete slab-on-grade and pile foundations. The exterior wall surfaces are finished with a painted stucco.

## Balcony Observations

As per the proposal for services, Elevated Engineering was able to observe exterior elevated balconies of tower units 1207, 1204, 1202, 1201, 1106, 1003, 1002, 906, 901, 801, 708, 704, 607, 501, 406, and 403 and villa units 318, 316, 315, 309, 222, 220, 218, 209, 208, 207, and 204 for a total of 27 units (units surveyed were selected by the association). For ease of presentation, this report is broken down by observation type and is presented in bullet point type format. Photographic documentation was taken during the limited condition survey of the balconies and is included in Appendix A of this report. The observations are as follows:

### *Tower Balconies General Observations:*

- The balcony floor surfaces appear to be finished with a painted floor coating or ceramic tile.
- Exterior guardrails appear to be composed aluminum type guardrails with surface mounted slab edge connections (Refer to Figure A-1). The guardrails appear to be constructed with the following components/dimensions:
  - The pickets appear to be  $\frac{3}{4}$ " x  $\frac{3}{4}$ " and appear to be designed to resist a 4-inch sphere, which is the current building code requirement (Refer to Figure A-2).
  - The guardrails appear to be designed to be approximately 42 to 43 inches high, which is above the current building code minimum height requirement of 42 inches (Refer to Figure A-3).
- Areas of peeling paint and/or oxidization were observed on guardrails components (Refer to Figure A-4 through Figure A-7).
- Areas of delaminated and/or cracked floor tile finishes were observed on Units 1201, 1106, 901, 801, and 501.
- Localized areas of unsound concrete/concrete spalls were observed at Unit 1202 and 906 (Refer to Figure A-8).
- Areas of delaminated exterior stucco ceiling finishes were observed at Unit 1106, 906, and 801 (Refer to Figure A-9).
- Ponding water stains were observed along the floor surface of Unit 704 (Refer to Figure A-10).

### *Villa Balconies General Observations:*

- The balcony floor surfaces appear to be finished with a painted floor coating or ceramic tile.
- Exterior guardrails appear to be composed aluminum type guardrails with surface mounted slab edge connections (Refer to Figure A-11). The guardrails appear to be constructed with the following components/dimensions:
  - The pickets appear to be  $\frac{3}{4}$ " x  $\frac{3}{4}$ " and appear to be designed to resist a 4-inch sphere, which is the current building code requirement (Refer to Figure A-12).



- The guardrails appear to be designed to be approximately 43 inches high, which is above the current building code minimum height requirement of 42 inches (Refer to Figure A-13).
- Areas of delaminated floor tile finishes were observed on Units 309, 220, and 208.
- Concrete lintel spall was observed at the south window opening of Unit 204 (Refer to Figure A-14).
- Areas of delaminated exterior stucco ceiling and wall finishes were observed at Unit 318, 220, and 218 (Refer to Figure A-15).

### **Balcony Recommendations**

Based on the onsite observations of structure and knowledge of similar structures, Elevated Engineering believes the exterior elevated balcony elements of the 27 units observed appear to be in adequate condition. Elevated Engineering did not observe any structural conditions of the observed building elements that required immediate attention or represented any sort of serious structural issue at this time. However, although the concrete spalling observed on the balconies does not currently represent an immediate issue, it is an issue and Elevated Engineering would recommend repairing these areas as soon as possible as once concrete spalling starts the rate of additional corrosion and increases rapidly, which leads to further concrete deterioration. Elevated Engineering recommends the following repair and preventative maintenance items should be considered in future projects (please note that reportedly 31 of these balconies have had work completed in 2020 and 2021):

1. Surface preparation and painting of areas of peeling painting and/or oxidization on aluminum guardrail components. It should be noted that painting of these oxidizing railings will be an ongoing maintenance item.
2. Concrete repair for spalls and cracks on concrete surfaces.
3. Repair of delaminated and/or cracked exterior wall stucco finishes.
4. Installation of a pedestrian grade waterproofing deck membrane as preventative maintenance to all elevated balcony concrete slab surfaces to slow further corrosion and concrete deterioration. Waterproofing membrane installation should include the following:
  - a. Removal of all existing elevated balcony floor coatings/finishes.
  - b. Water testing of balcony surfaces to identify potential areas of ponding water and application of a concrete overlay to reduce ponding water where possible.
  - c. Repair concrete slab cracking via routing and sealing with a urethane sealant.
  - d. Removal and replacement and/or installation of urethane sealant at horizontal/vertical interfaces (wall to slab, slab to sliding glass door track, slab to guardrail post, etc.), interfaces between adjoining wall surfaces, and sliding glass door track screw heads.
  - e. Application of a surface applied corrosion inhibitor treatment to all balcony concrete slab surfaces.





- f. Installation of a pedestrian grade waterproofing deck membrane to all elevated balcony concrete slab surfaces.

### **Villa Walkway and Stairway Observations**

As per the proposal for services, Elevated Engineering was able to observe the exterior walkways stairways of the villa structures. For ease of presentation, this report is broken down by observation type and is presented in bullet point type format. Photographic documentation was taken during the limited condition survey of the villa walkways and stairways and is included in Appendix B of this report. The observations are as follows:

- Floor surfaces appear to be finished with a waterproofing membrane throughout the main floor surfaces and ceramic floor tiles at the entryways to the units (Refer to Figure B-1 and Figure B-2).
- Exterior guardrails appear to be composed aluminum type guardrails with surface mounted slab edge connections (Refer to Figure B-3 and Figure B-4). The guardrails appear to be constructed with the following components/dimensions:
  - The pickets appear to be  $\frac{3}{4}$ " x  $\frac{3}{4}$ " and appear to be designed to resist a 4-inch sphere, which is the current building code requirement (Refer to Figure B-5).
  - The guardrails appear to be designed to be approximately 43 to 44 inches high, which is above the current building code minimum height requirement of 42 inches (Refer to Figure B-6).
- Handrails are constructed on both sides of the stairways and appear to be aluminum type with components surface mounted along the exterior walls and guardrail components (Refer to Figure B-7 and Figure B-8). Handrails appear to be designed to be approximately 35 to 36 inches high, which appears to be within the current code requirement for handrails on both sides of the stairway with a minimum height of 34 inches and maximum height of 38 inches.
- Localized areas of peeling paint and/or oxidization were observed on guardrails components (Refer to Figure B-9 and Figure B-10).
- Deteriorated waterproofing membrane top coating were observed on the west end of the walkways and stairways with the east end appearing to have been recently recoated (Refer to Figure B-11).
- Multiple areas of ponding water and/or ponding water stains were observed on the walkways and stairways (Refer to Figure B-12 through Figure B-14).
- Areas of deteriorated and/or failed expansion joints were observed along the walkways with portions having vertical displacement (Refer to Figure B-15 and Figure B-16).
- Loose guardrail bottom rail connections were observed at walkway expansion joints (Refer to Figure B-17 and Figure B-18).
- Localized areas of floor staining were observed along stairways (Refer to Figure B-19).
- Bent guardrail picket was observed on the 2<sup>nd</sup> floor walkway adjacent to the tower entrance (Refer to Figure B-20).



- Localized concrete spalls were observed along the underside of the walkway slabs at guardrail surface mounted connections (Refer to Figure B-21 and Figure B-22).
- Multiple concrete spalls were observed along the underside of the stairway slabs on the 1<sup>st</sup> floor level (Refer to Figure B-23 through Figure B-25).
- Localized areas of blistering exterior paint coatings were observed along the underside of the walkway slabs (Refer to Figure B-26 and Figure B-27).
- Localized areas of delaminated exterior wall stucco finishes were observed.

### **Villa Walkway and Stairway Recommendations**

Based on the onsite observations of structure and knowledge of similar structures, Elevated Engineering believes the exterior walkway and stairway elements of the villas observed appear to be in adequate condition. Elevated Engineering did not observe any structural conditions of the observed building elements that required immediate attention or represented any sort of serious structural issue at this time. However, although the concrete spalling observed on the exterior walkways and stairway elements does not currently represent an immediate issue, it is an issue and Elevated Engineering would recommend repairing these areas as soon as possible as once concrete spalling starts the rate of additional corrosion and increases rapidly, which leads to further concrete deterioration. Elevated Engineering recommends the following repair and preventative maintenance items should be considered in future projects:

1. Surface preparation and painting of areas of peeling painting and/or oxidization on aluminum guardrail components.
2. Surface preparation and painting of areas of blistering exterior paint coatings.
3. Repair of loose guardrail bottom rail connections and bent guardrail picket.
4. Concrete repair for spalls and cracks on concrete surfaces.
5. Repair of delaminated and/or cracked exterior wall stucco finishes.
6. Removal/replacement and/or repair of deteriorated and/or failed expansion joints.
7. Recoating of deteriorated waterproofing membrane top coating on the west end of the walkways and stairways. Please note the condition of existing waterproofing membrane top coating may not be suitable for recoating and should be reviewed by waterproofing membrane product representative prior to application.

### **Tower Stairway Observations**

As per the proposal for services, Elevated Engineering was able to observe the 2 stairways on the interior of the tower structure. For ease of presentation, this report is broken down by observation type and is presented in bullet point type format. Photographic documentation was taken during the limited condition survey of the stairways and is included in Appendix C of this report. The observations are as follows:

- Floor surfaces are finished with a painted floor coating.



- The stairs appear to be concrete filled metal pan stairs with reinforced concrete landings and a concrete masonry unit interior wall separating the runs between stairways (Refer to Figure C-1)
- Handrails are constructed on both sides of the stairways and appear to be aluminum type with components surface mounted along the interior walls (Refer to Figure C-2). Handrails appear to be designed to be approximately 34 to 36 inches high, which appears to be within the current code requirement for handrails on both sides of the stairway with a minimum height of 34 inches and maximum height of 38 inches.
- Interior handrails on the south stairway were observed to be not continuous along landing to stairway transitions, which current code requires interior handrails to be continuous between floor levels (Refer to Figure C-3).
- Multiple handrails were observed with missing end caps (Refer to Figure C-4 and Figure C-5).
- Localized hairline wall and ceiling cracks were observed in the interior wall finishes, but the areas observed would be expected for a structure of this age and construction type (Refer to Figure C-6 and Figure C-7).

### **Tower Stairway Recommendations**

Based on the onsite observations of structure and knowledge of similar structures, Elevated Engineering believes that the 2 tower stairways observed appear to be in adequate condition. Elevated Engineering did not observe any structural conditions of the observed building elements that appear to require immediate attention or represent any sort of serious structural issue. Elevated Engineering recommends the following repair and preventative maintenance items should be considered in future projects:

1. Installation of new handrail end caps at missing end cap locations.
2. Ideally the interior handrails on the south stairway would be modification and/or replaced to allow for continuous interior handrails between floor levels. It should be noted typically if a building element was constructed as per the building code at the time it was constructed, it is "grandfathered" in as far as the Building Department is concerned. Elevated Engineering has not conducted intensive research to determine if the stair handrails were installed as per the prevailing code at the time of construction and therefore Elevated Engineering cannot comment on that aspect. It is possible that the Fire Marshal may require the stairwell handrails to be brought up to current life safety code at any time as it is at their discretion. However, given the existing railing geometry, the Fire Marshal may prefer the grabrails remain as they are without a return as addition of the handrail extensions may create a clearance issue on the landing. This issue would require direct input from the Fire Marshal as it ultimately comes down to their judgement call.



## Parking Garage Observations

As per the proposal for services, Elevated Engineering was able to observe the parking garage on the 1<sup>st</sup> and 2<sup>nd</sup> floors of the tower structure. For ease of presentation, this report is broken down by observation type and is presented in bullet point type format. Photographic documentation was taken during the limited condition survey of the parking garage and are included in Appendix D of this report. The observations are as follows:

- The overall parking garage is shown in Figure D-1 through Figure D-3.
- The 2<sup>nd</sup> floor level and the elevated portion of the entrance/exit ramp appears to be finished with a waterproofing membrane, which was observed especially in heavy traffic areas to be worn/deteriorated (Refer to Figure D-4).
- Localized areas of scraped and/or peeling waterproofing membrane was observed on the 2<sup>nd</sup> floor level (Refer to Figure D-5 and Figure D-6).
- Multiple areas of ponding water were observed on the 2<sup>nd</sup> floor level (Refer to Figure D-7 and Figure D-8).
- Concrete wall/guardrail was observed along the perimeter of the 2<sup>nd</sup> floor level, which appears to be designed to be approximately 43 to 44 inches, which is above the current building code minimum height requirement of 42 inches with exception to the portion of the guardrail on the north end, which is composed of architectural concrete blocks and is approximately 36 inches high (Refer to Figure D-9 and Figure D-10).
- Multiple unadhered parking stops were observed on the 2<sup>nd</sup> floor level (Refer to Figure D-11).
- Drainage scuppers along the perimeter of the 2<sup>nd</sup> floor level appear to be designed 2 to 3 inches above the top surface of the parking deck. This is likely to serve the purpose of emergency overflow (Refer to Figure D-12 and Figure D-13).
- Multiple areas of delaminated exterior stucco finishes were observed along the concrete columns on the 2<sup>nd</sup> floor level.
- Area of exposed rusting metal and delaminated exterior wall stucco finishes were observed along concrete wall on the east end of the 2<sup>nd</sup> floor level (Refer to Figure D-14).
- Concrete spall was observed on the top surface of the 2<sup>nd</sup> floor level concrete slab (Refer to Figure D-15).
- Deteriorated and/or peeling waterproofing membrane was observed along expansion joints on the 2<sup>nd</sup> floor level (Refer to Figure D-16). It is likely that this joint is not a compatible material for the urethane membrane and likely should not have had coating applied to it in the first place.
- Concrete spall with exposed rusting metal was observed on the top surface of the 2<sup>nd</sup> floor level concrete slab (Refer to Figure D-17).
- Multiple slab cracks were observed along the slab on grade portion of the entrance/exit ramp (Refer to Figure D-18).



- Localized areas of exposed rusting reinforcement were observed along the slab on grade portion of the entrance/exit ramp (Refer to Figure D-19).
- Multiple concrete spalls and cracks were observed in the architectural concrete panels along the north end of the 1<sup>st</sup> floor level (Refer to Figure D-20 through Figure D-22).
- Previously repaired stair-step exterior wall crack was observed at the north end of the 1<sup>st</sup> floor level (Refer to Figure D-23).
- Localized concrete spalls were observed along the underside of the 2<sup>nd</sup> floor concrete slab at the north end of the 1<sup>st</sup> floor level (Refer to Figure D-24 and Figure D-25).
- Localized areas of delaminated exterior stucco finishes and peeling/blistering exterior paint coatings were observed on concrete column surfaces on the 1<sup>st</sup> floor level.
- Multiple cracks were observed on the slab on grade slab on the 1<sup>st</sup> floor level, which should be expected for a structure of this age and construction type (Refer to Figure D-26).

### **Parking Garage Recommendations:**

Based on the onsite observations of structure and knowledge of similar structures, Elevated Engineering believes the parking garage elements observed appear to be in adequate condition. Elevated Engineering did not observe any structural conditions of the observed building elements that required immediate attention due to an immediate structural life safety issue. However, although the concrete spalling observed does not currently represent an immediate issue, it is an issue and Elevated Engineering would recommend repairing these areas as soon as possible as once concrete spalling starts the rate of additional corrosion and increases rapidly, which leads to further concrete deterioration. Elevated Engineering recommends the following repair and preventative maintenance items should be considered in future projects:

1. Concrete repair for spalls and cracks.
2. Repair of delaminated and/or spalled exterior wall stucco finishes.
3. Adhere all unadhered parking stops on the 2<sup>nd</sup> floor level.
4. Installation of a new vehicular grade waterproofing deck membrane to all 2<sup>nd</sup> floor parking deck and elevated entrance/exit ramp concrete slab surfaces to prevent further corrosion and concrete deterioration. Waterproofing membrane installation should include the following:
  - a. Removal of all existing waterproofing membrane finishes on the 2<sup>nd</sup> floor parking deck.
  - b. Water testing of 2<sup>nd</sup> floor parking deck surfaces to identify potential areas of ponding water and application of a concrete overlay and/or floor drains to reduce ponding water where possible.
  - c. Repair concrete slab cracking via routing and sealing with a urethane sealant.
  - d. Removal and replacement and/or installation of urethane sealant at horizontal/vertical interfaces (wall to slab, slab to guardrail post, etc.), and interfaces between adjoining wall surfaces.



- e. Application of a surface applied corrosion inhibitor treatment to all 2<sup>nd</sup> floor parking deck concrete slab surfaces.
- f. Installation of a vehicular grade waterproofing deck membrane to all 2<sup>nd</sup> floor parking deck concrete slab surfaces.

Elevated would also recommend planning for installation of new metal guardrail components or modification of existing architectural concrete block guardrail components on the 2<sup>nd</sup> floor parking deck to meet current building code requirements in the future. The existing segment of guardrails composed of architectural concrete block do not meet the current building code requirements for minimum guardrail height. Typically, if a building element was constructed as per the building code at the time it was constructed, it is “grandfathered” in as far as the Building Department is concerned. Elevated Engineering has not conducted intensive research to determine if the guardrails were installed as per the prevailing code at the time of construction and therefore Elevated Engineering cannot comment on that aspect. It is possible that the Fire Marshal may require the guardrails to be brought up to current life safety code at any time as it is at their discretion. Given how low these guardrails are, Elevated Engineering would recommend being proactive and replacing and/or modify the guardrails with elements which meet the current code requirements as soon as possible.

### **Building Exterior Observations**

As per the proposal for services, Elevated Engineering was able to observe the building exteriors of the tower and villa structures. For ease of presentation, this report is broken down by observation type and is presented in bullet point type format. Photographic documentation was taken during the limited condition survey of the building exteriors and are included in Appendix E of this report. The observations are as follows:

#### *Tower Building Exterior:*

- The exterior building elevations are shown in Figure E-1 through Figure E-4.
- Drop-down walls/beams were observed along the area above the 2<sup>nd</sup> floor parking garage and appear to be composed of metal framing finished with exterior stucco finishes embedded in metal wire lath which appears to have been previously painted over (Refer Figure E-5 and Figure E-6).
- Portions of missing soffit ceiling were observed on the 2<sup>nd</sup> floor level adjacent to the lobby entrance (Refer to Figure E-7).
- Storefront windows with deteriorated perimeter sealants were observed along the exterior of the 1<sup>st</sup>/2<sup>nd</sup> floors (Refer to Figure E-8).



*Villas Building Exteriors:*

- The exterior building elevations are shown in Figure E-9 through Figure E-32.
- Concrete windowsill spalls were observed at window openings along the building exteriors at the following locations:
  - West elevation of Unit 102 (Refer Figure E-33).
  - West elevation of Unit 103 (Refer to Figure E-34).
  - West and south elevations of Unit 104 (Refer Figure E-35 and Figure E-36).
  - West elevation of Unit 203 (Refer to Figure E-37 and Figure E-38).
  - West elevation of Unit 204 (Refer to Figure E-39).
  - West elevation of Unit 302.
  - West elevation of Unit 304 (Refer to Figure E-40).
  - East and north elevations of Unit 105 (Refer to Figure E-41 and Figure E-42).
  - North elevation of Unit 108 (Refer to Figure E-43).
  - North elevation of Unit 207 (Refer to Figure E-44).
  - East elevation of Unit 305 (Refer to Figure E-45).
  - North elevation of Unit 109 (Refer to Figure E-46).
  - North elevation of Unit 110 (Refer to Figure E-47).
  - North elevation of Unit 210 (Refer to Figure E-48).
  - West elevation of Unit 113 (Refer to Figure E-49).
  - East elevation of Unit 114 (Refer to Figure E-50).
  - East elevation of Unit 116 (Refer to Figure E-51).
  - East elevation of Unit 120 (Refer to Figure E-52).
  - North elevation of Unit 223 (Refer to Figure E-53).
- Metal flashing was observed over windowsills at window openings throughout the building exteriors with portions having peeling paint and oxidation. It is possible that the metal flashing may be concealing concrete windowsill deterioration/spalls but there is no way to observe the area without removing the flashing (Refer to Figure E-54 through Figure E-59).
- Concrete lintel spalls were observed at window openings along the building exteriors at the following locations:
  - East elevation of Unit 204 (Refer to Figure E-60).
  - West elevation of Unit 303 (Refer to Figure E-61).
  - East elevation of Unit 113 (Refer to Figure E-62).
  - West elevation of Unit 213.
  - West elevation of Unit 120 (Refer to Figure E-63).
- Areas of blistering and/or peeling exterior paint coatings were observed along the exterior surfaces along the building exteriors (Refer E-64 and Figure E-65).
- Multiple areas of wood trim rot were observed along the building exteriors (Refer to Figure E-66 through Figure E-69).
- Balcony concrete slab edge spall was observed at Unit 209 (Refer to Figure E-70).





- Multiple separations were observed along stucco banding along the building exteriors (Refer to Figure E-71 through Figure E-73).

### **Building Exterior Recommendations**

Based on the onsite observations of structure and knowledge of similar structures, Elevated Engineering believes the building exterior elements of the tower and villa structures observed appear to be in adequate condition. Elevated Engineering did not observe any structural conditions of the observed building elements that required immediate attention or represented any sort of serious structural issue. However, although the concrete spalling observed does not currently represent an immediate issue, it is an issue and Elevated Engineering would recommend repairing these areas as soon as possible as once concrete spalling starts the rate of additional corrosion and increases rapidly, which leads to further concrete deterioration. Elevated Engineering recommends the following repair and preventative maintenance items should be considered in future projects:

1. Concrete repair for spalls and cracks on balcony slabs, windowsills, and lintels.
2. Repair of delaminated and/or spalled exterior wall stucco finishes.
3. Removal and replacement of rotten wood trim components
4. Removal and replacement of deteriorated sealants and storefront window components on the tower structure.
5. Installation of missing soffit components above the 2<sup>nd</sup> floor lobby entrance of the tower structure.
6. Surface preparation and painting of all previously painted exterior surfaces (walls, ceilings, columns, beams, etc.). Typically building exterior surface painting is recommended every 7 years. Please note that the current paint job is approximately one year old currently.

### **General Recommendations**

Elevated Engineering completed its visual observation of the structures as per our February 3, 2022, proposal. Elevated Engineering wants to reiterate that this was a visual observation from the ground, stairways, walkways, parking garage, and limited balconies of accessible structural elements and as such it was not an exhaustive review of the structure. It should also be noted that all observations are a snapshot of the structure at the time of observation and as building conditions change with time, additional observations will be warranted.

As Elevated Engineering understands that while ideally all repair and preventative maintenance items listed above would be addressed at one time as it is the least expensive option when a long-term horizon is viewed, sometimes Associations must prioritize items of repair to accomplish them, Elevated Engineering has provided a prioritized list of items. This is particularly important for a structure such as Palma del Mar 5 where the next paint job is not due for at least six years.





Palma del Mar 5 Condominium  
St. Petersburg, Florida

1. Building Exteriors (Villas)
2. Parking Garage
3. Balconies
4. Villa Walkways and Stairways
5. Building Exterior (Tower)
6. Tower Stairways

If requested Elevated Engineering can provide an additional proposal for addressing the recommendations listed above, which would include preparing a project manual with repair specifications, preparing bid documents, soliciting competitive bids from qualified contractors, and providing construction administration services.

Elevated Engineering thanks you for this opportunity to be of service and looks forward to continuing to be of services. Should you have any questions or require additional clarification, please call 727-688-3068.

Elevated Engineering Services, LLC  
CA # 31855

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Brian H. Keiter, PE, SI  
FL PE #57239

*Attachments: Appendix A, Appendix B, Appendix C, Appendix D, and Appendix E*

*This item has been electronically signed and sealed by Brian H Keiter, PE using a Digital Signature on the date included within the digital signature stamp. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.*



# Appendix A

## Exterior Balconies





Figure A- 1 – Typical Tower Guardrail



Figure A- 2 – Typical Tower Guardrail Clear Spacing





Figure A- 3 – Typical Tower Guardrail Height



Figure A- 4 – Typical Tower Guardrail Peeling Paint/Oxidization







Figure A- 5 – Typical Tower Guardrail Peeling Paint/Oxidization



Figure A- 6 – Typical Tower Guardrail Peeling Paint/Oxidization





*Figure A- 7 – Typical Tower Guardrail Peeling Paint/Oxidization*



*Figure A- 8 – Unit 906 Area of Unsound Concrete/Concrete Spall*







*Figure A- 9 – Unit 1106 Delaminated Exterior Stucco Ceiling Finishes*



*Figure A- 10 – Unit 704 Ponding Water Stains*







Figure A- 11 – Typical Villa Guardrail



Figure A- 12 – Typical Villa Guardrail Clear Spacing







*Figure A- 13 – Typical Villa Guardrail Height*



*Figure A- 14 – Unit 204 Concrete Lintel Spall*





*Figure A- 15 – Unit 220 Delaminated Exterior Ceiling Stucco Finishes*



# **Appendix B**

## **Villa Walkways and Stairways**







Figure B- 1 – Typical Floor Finish



Figure B- 2 – Typical Floor Finish







Figure B- 3 – Typical Guardrails



Figure B- 4 – Typical Guardrails





Figure B- 5 – Typical Guardrail Clear Spacing



Figure B- 6 – Typical Guardrail Height







Figure B- 7 – Typical Handrails



Figure B- 8 – Typical Handrails







Figure B- 9 – Typical Guardrail Peeling Paint/Oxidization



Figure B- 10 – Typical Guardrail Peeling Paint







Figure B- 11 – Deteriorated Waterproofing Membrane Top Coating



Figure B- 12 – Ponding Water







Figure B- 13 – Ponding Water



Figure B- 14 – Ponding Water







Figure B- 15 – Deteriorated/Failed Expansion Joint



Figure B- 16 – Deteriorated/Failed Expansion Joint







Figure B- 17 – Loose Bottom Rail Connection



Figure B- 18 – Loose Bottom Rail Connection







Figure B- 19 – Floor Staining



Figure B- 20 – Bent Guardrail Picket





Figure B- 21 – Concrete Spall



Figure B- 22 – Concrete Spall







*Figure B- 23 – Concrete Spall*



*Figure B- 24 – Concrete Spall*





*Figure B- 25 – Concrete Spall*



*Figure B- 26 – Blistering Paint Coatings*







*Figure B- 27 – Blistering Paint Coatings*



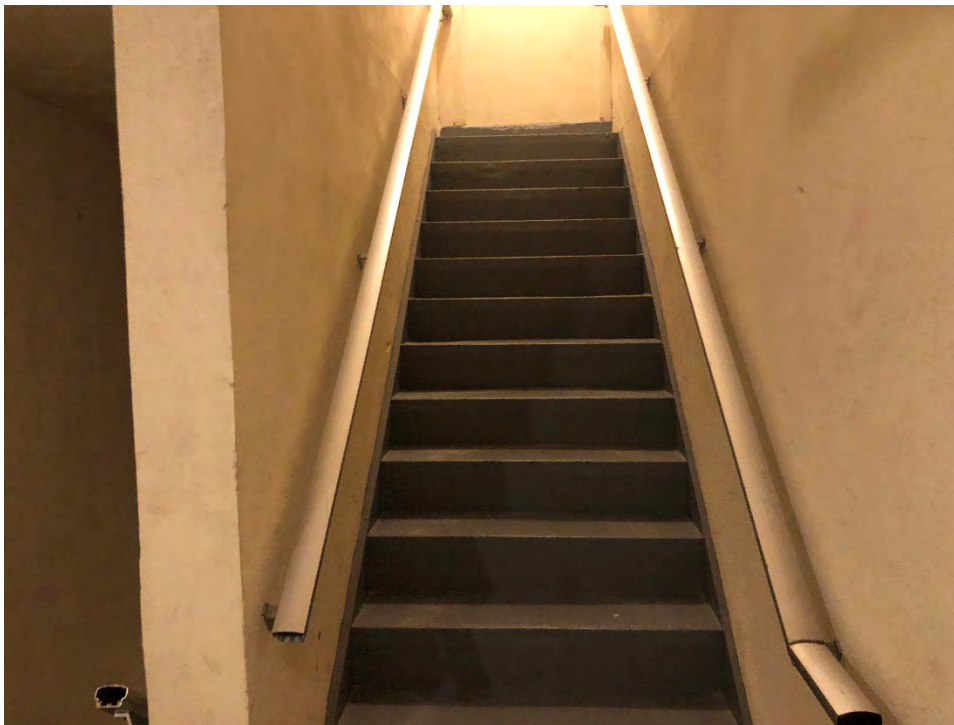
# Appendix C

## Tower Stairways





*Figure C-1 – Typical Stairway*



*Figure C-2 – Typical Handrails*







*Figure C- 3 – Typical Handrails*

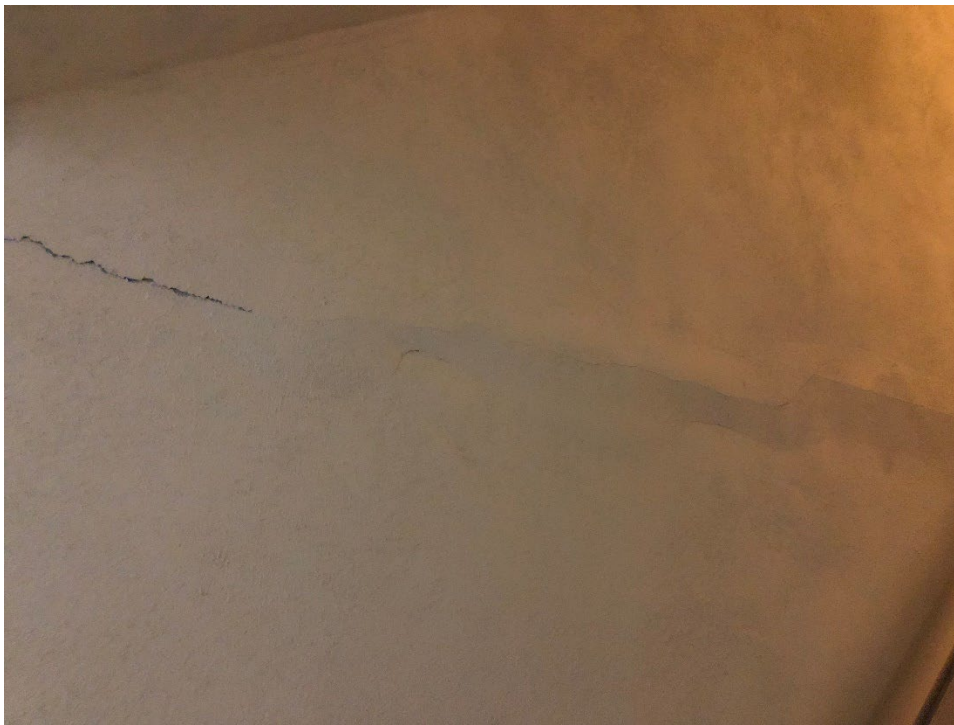


*Figure C- 4 – Missing Handrail End Cap*





*Figure C- 5 – Missing Handrail End Cap*



*Figure C- 6 – Wall Crack*







*Figure C- 7 – Ceiling Crack*





# Appendix D

## Parking Garage





Figure D- 1 – Front Elevation



Figure D- 2 – 2nd Floor Level







*Figure D- 3 – 1<sup>st</sup> Floor Level*



*Figure D- 4 – Worn/Deteriorated Waterproofing Membrane*







Figure D- 5 – Peeling Waterproofing Membrane



Figure D- 6 – Scraped Waterproofing Membrane







Figure D- 7 – Ponding Water



Figure D- 8 – Ponding Water







Figure D- 9 – Typical Concrete Guardrail



Figure D- 10 – Typical Concrete Guardrail







Figure D- 11 – Unadhered Parking Stops



Figure D- 12 – Typical Drainage Scupper







Figure D- 13 – Typical Drainage Scupper



Figure D- 14 – Exposed Rusting Metal and Delaminated Stucco







*Figure D- 15 – Concrete Spall*



*Figure D- 16 – Deteriorated/Peeling Waterproofing Membrane*







*Figure D- 17 – Concrete Spall*



*Figure D- 18 – Concrete Slab Cracks*







Figure D- 19 – Exposed Rusting Reinforcement



Figure D- 20 – Concrete Spall







Figure D- 21 – Concrete Spall



Figure D- 22 – Concrete Spall







*Figure D- 23 – Exterior Wall Crack*



*Figure D- 24 – Concrete Spall*







Figure D- 25 – Concrete Spall



Figure D- 26 – Concrete Slab Cracks



# Appendix E

## Building Exteriors







Figure E- 1 – North Elevation



Figure E- 2 – West Elevation





Figure E- 3 – East Elevation



Figure E- 4 – South Elevation







Figure E- 5 – Drop Down Walls/Beams



Figure E- 6 – Drop Down Walls/Beams





*Figure E- 7 – Missing Soffit*



*Figure E- 8 – Typical Storefront Windows*







Figure E- 9 – West Elevation (Units 01 – 04)



Figure E- 10 – North Elevation (Units 01 – 04)





Figure E- 11 – East Elevation (Units 01 – 04)



Figure E- 12 – South Elevation (Units 01 – 04)







Figure E- 13 – North Elevation (Units 05 – 08)



Figure E- 14 – East Elevation (Units 05 – 08)







Figure E- 15 – South Elevation (Units 05 – 08)



Figure E- 16 – West Elevation (Units 05 – 08)







Figure E- 17 – North Elevation (Units 09 - 12)



Figure E- 18 – East Elevation (Units 09 - 12)







Figure E- 19 – South Elevation (Units 09 - 12)



Figure E- 20 – West Elevation (Units 09 - 12)







Figure E- 21 – West Elevation (Units 13 - 16)



Figure E- 22 – South Elevation (Units 13 - 16)







Figure E- 23 – West Elevation (Units 13 - 16)



Figure E- 24 – North Elevation (Units 13 - 16)







Figure E- 25 – East Elevation (Units 17 - 20)



Figure E- 26 – South Elevation (Units 17 - 20)







Figure E- 27 – West Elevation (Units 17 - 20)



Figure E- 28 – North Elevation (Units 17 - 20)







Figure E- 29 – North Elevation (Units 21 - 24)



Figure E- 30 – West Elevation (Units 21 - 24)







Figure E- 31 – South Elevation (Units 21 - 24)



Figure E- 32 – East Elevation (Units 21 - 24)







*Figure E- 33 – Windowsill Spall (Unit 102)*



*Figure E- 34 – Windowsill Spall (Unit 103)*







Figure E- 35 – Windowsill Spall (Unit 104)



Figure E- 36 – Windowsill Spall (Unit 104)







Figure E- 37 – Windowsill Spall (Unit 203)



Figure E- 38 – Windowsill Spall (Unit 203)







*Figure E- 39 – Windowsill Spall (Unit 204)*



*Figure E- 40 – Windowsill Spall (Unit 304)*







Figure E- 41 – Windowsill Spall (Unit 105)



Figure E- 42 – Windowsill Spall (Unit 105)







Figure E- 43 – Windowsill Spall (Unit 108)



Figure E- 44 – Windowsill Spall (Unit 207)







Figure E- 45 – Windowsill Spall (Unit 305)



Figure E- 46 – Windowsill Spall (Unit 109)





Figure E- 47 – Windowsill Spall (Unit 110)



Figure E- 48 – Windowsill Spall (Unit 210)







Figure E- 49 – Windowsill Spall (Unit 113)



Figure E- 50 – Windowsill Spall (Unit 114)







*Figure E- 51 – Windowsill Spall (Unit 116)*



*Figure E- 52 – Windowsill Spall (Unit 120)*







*Figure E- 53 – Windowsill Spall (Unit 223)*



*Figure E- 54 – Typical Metal Flashing at Windowsill*







Figure E- 55 – Typical Metal Flashing at Windowsill



Figure E- 56 – Typical Metal Flashing at Windowsill







Figure E- 57 – Typical Metal Flashing at Windowsill with Windowsill Spall



Figure E- 58 – Typical Metal Flashing at Windowsill







*Figure E- 59 – Typical Metal Flashing at Windowsill*



*Figure E- 60 – Concrete Lintel Spall (Unit 204)*







Figure E- 61 – Concrete Lintel Spall (Unit 303)



Figure E- 62 – Concrete Lintel Spall (Unit 113)







Figure E- 63 – Concrete Lintel Spall (Unit 120)



Figure E- 64 – Blistering Exterior Paint Coatings







Figure E- 65 – Peeling Exterior Paint Coatings



Figure E- 66 – Typical Wood Trim Rot





*Figure E- 67 – Typical Wood Trim Rot*



*Figure E- 68 – Typical Wood Trim Rot*







Figure E- 69 – Typical Wood Trim Rot



Figure E- 70 – Concrete Spall (Unit 209)





Figure E- 71 – Typical Separation at Stucco Banding



Figure E- 72 – Typical Separation at Stucco Banding







*Figure E- 73 – Typical Separation at Stucco Banding*

