KEYSTONE
ENGINEERING &
CONSULTING, INC.

Four Seasons Condominium

3799 S Banana River Blvd
Cocoa Beach, FL 32931

Condition Survey Report

Buildings 1, 2, 3, 4, 5, 6, & 7

TOMAS PONCE
LICENSE
No. 50068
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

Prepared By

Tomas Ponce, P.E., MSCE
Florida Registered
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August 11, 2023

This item has been digitally signed and sealed by [Tomas Ponce PE, FL # 0050068], on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

KEYSTONE
ENGINEERING &
CONSULTING, INC.

Four Seasons Condominium
Condition Survey Report

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KEYSTONE
ENGINEERING &
CONSULTING, INC.

August 8, 2023

Four Seasons Condominium Association, Inc.
3799 S Banana River Blvd
Cocoa Beach, FL 32931

Re: Buildings 1-7 Structural Condition Survey Report

EXECUTIVE SUMMARY

This is intended to serve as a Phase II SB-4D Milestone Inspection Report.

Keystone Engineering and Consulting, Inc. (Keystone) was contracted to provide an engineering inspection of the balconies, walkways and exterior elements of the two story buildings (buildings 1 through 7) of Four Seasons Condominium. The inspection took place on October 4th, 6th, and 11th, 2022. The inspection was performed by a professional engineer of Keystone and trained assistants.

The community consists of 10 different buildings built in phases from 1978 to 1980. For the purpose of this report, Keystone inspected the (7) two story buildings. In 2022 American Custom Restoration completely removed and replaced the balconies of units 208, 302, 308, and 310. New coatings were applied to the deck and new screen enclosures were installed.

The inspection revealed a modest amount of concrete spalling on the balconies, and walkways and also on the walkway and stir railing caps and posts. The concrete spalling is due to reinforcing steel corrosion induced by water and chloride (salt) intrusion. The damage was found throughout the inspected elements.

The screened enclosures are also allowing substantial saltwater intrusion as well as showing signs of deterioration and paint finish peeling. The concrete railings on the walkways and stairs are showing cracks and signs of advanced spalling. It is recommended to complete all needed structural concrete repairs and improve the protection of the structure by installing appropriate floor coatings. The newer style screen enclosures that have pickets can be removed and reinstalled. There are (2) that have the non-picket style screens, those should be completely replaced. The existing railings on the walkways are causing damage to the concrete structure and after 40 years of service, have little remaining life. The concrete railings on the walkway surface and stairs should be removed and replaced with new decorative panel aluminum railings. For the purpose of this report, Keystone generated conceptual budgets for considering a comprehensive restoration and rehabilitation project, as well as a budget for a short-term repair approach. The budgets consider all known and anticipated project activities.

The existing balcony and walkway floor finishes can be greatly improved and will need to be stripped (including tile) to bare concrete to achieve a successful, long-term coating system. The balcony screen enclosures will also need to be removed to fully strip the old coatings and install the new coating system.

The following report provides additional details, as well as the described budgets, estimated quantities, and example photos.

KEYSTONE
ENGINEERING &
CONSULTING, INC.

August 11, 2023

Four Seasons Condominium Association, Inc.
3799 S Banana River Blvd
Cocoa Beach, FL 32931

Re: Buildings 1-7 Structural Condition Survey Report

Dear Board and Association Members:

Keystone Engineering and Consulting, Inc. (Keystone) was contracted to provide an engineering inspection of the balconies, walkways and exterior elements of the two story buildings (buildings 1 through 7) of Four Seasons Condominium. The inspection took place on October 4th, 6th, and 11th, 2022. The inspection was performed by a professional engineer of Keystone and trained assistants.

Within this report, you will find a description of our inspection process, our findings, and recommendations, as well as budget estimates and options for the completion of a restoration project. Once reviewed, Keystone can meet with the Association, provide more depth of information, and facilitate a dialogue of the specific project issues and options.

Facility Description

The community consists of 10 different buildings built in phases from 1978 to 1980. For the purpose of this report, Keystone inspected the (7) two story buildings (buildings 1 through 7). The buildings are of exterior bearing walls of concrete block construction. The floors are conventionally formed and poured concrete.

Access to all units is by exterior walkways and stairs.

The poured in place concrete horizontal slabs were constructed conventionally and are cantilevered. They are supported by structural load bearing walls and columns. Exterior walls are concrete block with a stucco finish. All balconies have screen enclosures. There are (2) units that have the old style non picket screen enclosures and (1) unit has a glass enclosure. All the rest have the picket style screens. The walkways have concrete balustrade and cap style railings from original construction.

Project History

There has been some balcony repairs conducted in 2022 on buildings 2 and 3 by American Custom Restoration. Balconies in units 208, 302, 308, and 310 were completely removed and replaced. New coatings applied to deck and new screen enclosures installed. Keystone was the engineer of record and certified the work was completed in accordance with industry standards set forth by the International Concrete Repair Institute (ICRI). American restoration has also nearly completed the comprehensive restoration of the three mid-rise buildings 8, 9, and 10.

The present timing is appropriate to initiate a structural concrete restoration project including the improvement of protective measures involving the railings, floor finishes, and screen enclosures. This work should be completed before, or as part of, an exterior painting project.

Investigation Methodology

The inspection process was completed on a visual, acoustical, and hands-on basis by the undersigned Florida Registered Professional Engineer #50068, with trained assistants. Generally, the inspection of a coastal condominium focuses on the existing and potential for future concrete damage that occurs due to chloride-induced reinforcing steel corrosion. This electrochemical phenomenon is normally the driving force in coastal building maintenance and repair efforts. As a result of the actual and potential concrete damage, affected building components such as floor finishes, safety railings, glass doors, windows and storm shutters are also evaluated as applicable.

The inspection process was completed in a non-destructive manner by the project engineer. The concrete damage evaluation was achieved by visual inspection, chain-drag, and hammer sounding. These devices, when utilized by personnel with appropriate experience, have proven to be a cost-effective means of evaluating corrosion induced concrete damage and the overall condition of the structure. The inspection process described and completed are acceptable means in accordance with the International Concrete Repair Institute (ICRI) and the American Concrete Institute (ACI). The concrete evaluation performed is generally in accordance with:

ACI 201.1R-92 Guide for Making a Condition Survey of Concrete in Service

ACI 364.1R-07 Guide for Evaluation of Concrete Structures Before Rehabilitation

The results of the inspection and evaluation will generate an anticipated and recommended scope of work. It must be considered and understood that many work items identified are interrelated and therefore not easily or cost-effectively

addressed separately. For example, in order to repair and/or protect the balcony concrete slab edges and surfaces, the railings, floor finishes, and shutters will be affected and therefore must be considered as part of the repair process.

It should also be well understood that portions of the work anticipated are estimated quantities, while other items are fixed quantities. In general, all of the concrete repair work is an estimated quantity due to the number of variables involved and the high likelihood for hidden damage. Therefore, the concrete work is typically bid on a unit cost basis since we can establish the necessary concrete repair task items accurately but cannot estimate the exact quantities. Unit cost basis provides the fairest basis for both owner and contractor, as the contractor is paid only for the number of each units completed at the unit rate bid, whether the quantities are higher or lower than the engineer's estimate. The remainder of the bid items will generally be at fixed cost, as they are directly measurable quantities and known scope of work. Railing work, waterproofing/coating of walls and floors, window replacement and door replacement are examples of fixed items as both the task and quantities can be generally established accurately in advance.

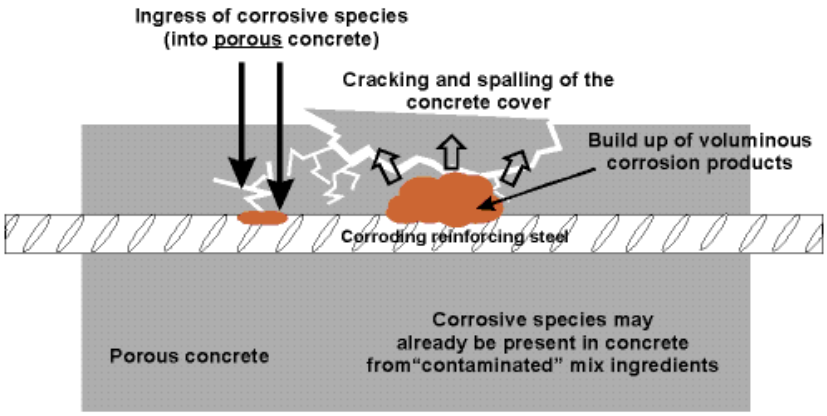
It should also be clear that the estimates provided are for budgetary purposes only. Actual bids will need to be solicited for cost purposes. Also, there is a high likelihood for additional damage and hidden conditions to be found during the work that will increase the units of work and the project budget. Proper contingency estimates need to be considered and factored into the project budget estimate.

Concrete Damage General Discussion

Four Seasons is currently experiencing a moderate amount of corrosion induced concrete spalling damage on the balconies and the walkways. Generally, this damage is in line with what we would expect on buildings of this age (40 years), history, location and construction type. The concrete damage, caused by chloride induced reinforcing steel corrosion, could be attributable to some variables from original construction, such as the quality of the concrete and the depth of concrete cover over the reinforcing steel. There are also conditions that exist that are known to lead to and exacerbate spalling as the building ages. These undesirable conditions include the screen enclosures on the balconies, the precast concrete railings on the walkways, the overall poor waterproofing and coatings protection of the structure from the elements, as well as areas with blocked drainage. All of these conditions can be improved to various degrees depending on the budget parameters.

Concrete spalling is due to the long-term exposure to the coastal salt air, whereby chlorides will migrate through the concrete and reach the reinforcing steel. Once the chlorides accumulate at the steel level within the slab, the corrosion process will accelerate in an exponential fashion, resulting in

expanding steel reinforcement due to corrosion activity, internal delamination of the reinforced concrete, cracking and spalling of the surrounding concrete. Left unabated, this process will lead to increasingly costly building repair projects.



One of the most significant factors in the time and magnitude of reinforcing steel corrosion induced concrete damage is the ease of access for the chlorides to enter the concrete. Properly sealing and waterproofing the building, including all openings, penetrations, achieving positive drainage, and using properly installed stainless-steel anchors, will greatly minimize chloride intrusion and corrosion. As part of a restoration project for an aged building, both existing and future chloride contamination must be considered and reduced. Initial concrete spalling typically becomes noticeable as the building approaches 15-20 years of age, grows exponentially, and then cyclically thereafter depending on the level and quality of repairs and protective measures.

Quality, long lasting repairs are crucial in controlling future maintenance costs. Additionally, the control of the corrosion rate is the primary factor in reducing the rate and magnitude of future repair projects and costs. Proper structural concrete repairs should not become cyclic type repairs and should last for 20 to 30 years or longer depending upon the level of protection from the elements employed afterward. Original cyclic structural repairs to areas of the structure outside of past repairs can be managed and reduced by maximizing protection from the elements, providing drainage, improving railing and shutter installations, upgrading sliding glass doors, and installing protective coating systems. These solutions can be designed and managed for maximizing ease in future cyclic (7 to 10 years) repair cycles.

Taking steps to reduce the cyclic nature of corrosion induced structural concrete damage has proven to be a good investment of maintenance dollars. Eliminating the redundancy of repairs to the same area can be achieved by ensuring proper industry standard structural repairs are accomplished during the restoration project. Protecting the newly repaired areas and slowing/mitigating the corrosion in the surrounding areas will greatly reduce future maintenance costs, increase the time between repair cycles and lessen the magnitude of each repair cycle.

From a cost perspective, the structural concrete repairs alone are significant. However, additional costs need to be considered, and strategically avoided as best possible, including the many collateral building components and aspects of a restoration project. The engineering costs, access to the building via scaffolding/staging, building permits, storage, equipment, and manpower mobilization all add to the actual costs of accomplishing concrete repairs. Additionally, floor finishes, railings, glass doors and shutters can be impacted during a restoration project, including the removal, reinstallation and/or replacement of these elements. The removal of these items to complete concrete repairs may require the owner to upgrade to newer models that are compliant with current building codes.

In severe cases of concrete damage occurring under and due to the door/window assemblies, they may need to be removed and a temporary barricade installed to accomplish the structural repairs. This type of repair can also affect the interior flooring and finishes of the unit. Lastly, a concrete restoration project causes a disruption to the quality of living at the facility, loss of use and rental income. Noise, vibration, dust and limited balcony access and view can all be expected.

Because of these direct structural issues, collateral and lifestyle issues and substantial costs, a restoration project should be given due consideration to implement the most cost-effective use of skilled labor, proper materials, and methods along with technology to extend the time between repair projects and reduce the magnitude of the corrosion induced damage in the future. Poorly executed restoration projects, with improper repairs and inadequate consideration for future protection will inevitably cost the Association significantly more in terms of dollars, inconvenience, and time.

General Industry Methodology

There are several basic aspects to concrete spalling and restoration that must be understood and accepted to allow for the findings and recommendations to be discussed productively. The following represents some basic industry positions that dictate the consultants thought process:

Spalling-Concrete spalling is delamination of the concrete from the expansive effects of reinforcing steel corrosion. Spalling occurs when chlorides migrate to the reinforcing steel, which changes the chemistry of the concrete and creates a corrosive environment. Spalling can be detected visually and/or acoustically and

requires an experienced eye to distinguish between spalling and non-spalling and to extrapolate findings into estimated quantities. Cored railings, inadequate protective floor coatings and inhibited positive drainage exacerbate spalling.

Contractor Selection-Concrete restoration is a small, specialized, yet mature industry. While the work must be performed by a licensed general contractor under the supervision of an experienced professional engineer, not all general contractors are experienced in concrete restoration of an existing occupied building. **Even less have experience in the potentially dangerous structural restoration involving post tension cables**. There is a relatively short, but high-quality list of local qualified restoration contractors. Restoration contractors generally perform best in their local region.

Repair Methods-Concrete restoration methods and materials are well established over the last 30 years, and the procedures and repairs followed in the industry follow the International Concrete Repair Institute (ICRI) standards and have proven to be both reliable and durable. There are no magic, short cut or permanent solutions. Concrete restoration/experience is learned “on the job”. By utilizing experienced restoration contractors, you will avoid having an unexperienced team “practice” on your building. These are structural repairs that if left unchecked can eventually affect the building viability and habitability.

Cyclic Nature-Spalling will be cyclic on an older building (more than 15-20 years old) and should be planned for accordingly. Repaired areas should be semi-permanent repairs (repairs will have an extended life if protective measures are implemented and maintained), as the chlorides have been removed in that area, and future spalling will occur in other areas where chlorides remain. A recommended repair cycle is 7 to 10 years to coordinate with painting cycles. A cycle of this period will keep spalling damage manageable. Proper railings and floor coatings greatly minimize cyclic spalling volume and make cyclic projects easier to execute.

Corrosion is Exponential-Once initiated on a building, spalling will worsen exponentially with time, with an acceleration after a 10-year cycle. Taking care of spalling on a 7 to 10-year cycle, coordinated with painting, and using maintenance friendly balcony finishes, has proven to be a cost-effective time frame and procedure. Allowing the spalling to continue beyond the 7 to 10-year time frame will result in accelerated damage and project costs. . Cored railings, poor floor coatings, older sliding glass doors and improperly installed shutters will increase the magnitude of spalling over time.

Project Timing-Project timing will be dictated by the decision-making process and contractor availability. However, the lowest cost project is one that is done today, as a single-phase project. Unnecessarily delaying a project or doing it in multiple phases will increase the project costs due to increased corrosion damage and rate, inflation of costs, and mobilization costs. Financing is available

to allow for payments over time, while getting the work done in a single, lower cost, lower impact project.

Balcony Floor Finishes-Exposed balcony (and walkway/stair) floor finishes should be a protective coating system that is aesthetically pleasing and easy to repair and renew during future repair cycles. **Coating over older, failing coating systems is generally not successful or recommended. Stripping the older coatings to the concrete surface and applying a new system is both effective and able to be warranted.**

Ten balconies (24% of the elevated balcony square footage) at Four Seasons have tiled balconies. Tile is an improper choice for exposed balconies. Tile does not provide protection from saltwater, keeps the balcony wetter, does not allow for waterproofing details, creates drainage issues at the sliders, hides damage longer, and makes the concrete repair more difficult. We recommend stripping the tile and installing the new coating system for waterproofing, aesthetics, and future repair/recoating needs.

These 40 year old walkway railings at Four Seasons are precast concrete railings with a poured cap placed on top of walkways and stairs. They are spalling and deteriorating. New, properly installed surface mounted aluminum railings with kynar finish will better protect the structure and will not need repetitive painting. The new railings can be the decorative aluminum panel rails, cut to mimic the concrete railing profiles as used on buildings 8, 9, and 10.

Sliding Glass Doors and Windows-The choice of sliding glass doors and windows for a coastal application must be given proper consideration. “Coastal Quality” products are recommended and should consider corrosion resistance, coating finish performance, superior water resistance, the use of all stainless-steel hardware, concealed/sealed stainless-steel fasteners, energy efficiency and proper tint. Many of these are not achieved with a “minimum” code compliant door. Lastly, proper installation is a must, for any door quality level.

Having new glass doors or panels installed over existing spalled concrete is becoming a common issue. Most door installers are either not going to recognize these issues, or purposely overlook them in order to not delay the installation. Buildings that have a concrete spalling history should have an inspection performed by an experienced individual before new glass is installed, either at the opening or perimeter of the balcony**. It is preferred to incorporate needed or desired sliding glass door replacements as part of the restoration project and under the umbrella of the chosen restoration contractor**.

Many times, concrete spalling occurs under a sliding glass door due to long term, chronic water intrusion at the door track. This spalling can encroach on the interior space and affect interior finishes during the repairs. **Sliding glass doors**

are typically owned by the individual unit owner and not the Association, which can complicate the project activities. Cooperation is needed between the unit owners and the Association to handle necessary sliding glass door removal and reinstallation/replacement as necessary to complete the project scope of work. For sliding glass doors, subcontractors are generally NOT viable as the sliding glass door work is generally completed during the restoration work, making it difficult to interject a 3rd party subcontractor. Having the restoration contractor handle the sliding glass door installation also provides for installation inspections by the engineering team during the project. Several of the sliding glass doors at Four Seasons are in an advanced state of deterioration and at the end of their recommended service life.

Drainage- Shutter systems, floor finishes and sliding glass door installations should all be designed such that water readily drains off the balcony.

Water Intrusion-If water can get in, the salt can get in, which leads to corrosion and concrete spalling. Sliding glass doors, floor finishes, railings, shutters, fasteners-should all be designed and installed such that water intrusion is minimized. The building is in need of full sealing, painting and perimeter sealants.

Project Considerations-Project considerations are primarily safety, asset preservation and aesthetics. It is up to the Association to decide on what level of asset preservation and aesthetics they wish to employ. The engineer can only make recommendations and explain consequences of the decisions. Safety is the only area where the engineer has to insist on a solution. **The Association can decide to adopt all, some, or none of the engineer's recommendations.**

Comprehensive Solution-A long-term comprehensive solution provided is the most effective at minimizing future restoration cycles and providing the most aesthetic result. It is the lowest cost over time, and considers proactive protective measures and maintainable coating finishes, and overall protection of the structure from the elements. **This is the highest reasonable level of consideration.**

Decision-Making-Not everyone wants the same level of building maintenance, aesthetic considerations or maintenance budget funding. Everyone will have their individual opinion of what is appropriate or acceptable. That is one of the challenges of providing consultation to a condominium, as we cannot provide any solution that will please all parties. Each of you has the discretion to agree or disagree with our recommendations.

Florida Statute SB 4-D- Recently, the State of Florida has adopted this statute in reaction to the Champlain Towers South building collapse. This statute has several requirements you should become familiar with. One of the requirements is a "structural milestone inspection" which should be covered by this report.

There are other requirements, such as the Structural Inspection Reserve Study (SIRS), which requires the structural milestone inspection and many other items. Structural repairs and other maintenance aspects, including funding reserves, are being required, and no longer optional. We feel this is going to create a significant backlog and bottleneck of structural restoration work over the next several years.

Major Project Considerations for Four Seasons

Balconies and Walkways – Concrete Spalling– The balconies are experiencing a moderate level of concrete slab floor and edge spalling due to reinforcing steel corrosion that we would normally expect from a +40-year-old conventionally-constructed structure. The concrete spalling was visible on the balcony slab edges, floor surfaces, ceilings and near sliding glass doors. The spalling on the floors will affect the floor finishes, requiring repair. **Possible hidden conditions may exist behind screen enclosures, under the tile and under "patches" done by others.**

The project budgets consider two options:

- Option 1 is considered a "short-term budget" approach to repair all spalled concrete detected visibly and acoustically. These repairs would also be touched up as needed for floor coating, stucco and paint to match as best possible. The existing railings would be maintained. The existing floor finishes would be repaired and recoated. Full building painting is recommended, including painting the old railings.

- Option 2 is considered a "long-term, comprehensive" solution to perform a restoration of the balconies and walkways, including fully stripping the existing floor coatings, properly repairing all concrete spalling, profiling the surface for improved drainage and the installation of new floor coating with improved waterproofing and crack spanning capabilities. This option includes the replacement of the aged walkway concrete railings with a new surface mounted railing system with decorative panels the proper AAMA 2605 finish. Full building painting is also recommended.

Balcony and Walkway Floor Finishes – The floor finish is the first line of defense against the corrosive elements of the salt air. The balconies and walkways have a fair coating system. The balconies were also observed to have standing water in areas causing ponding and dirt accumulation. Currently, ten units have tile on the balconies. *Tile provides little to no protection and many, including the undersigned engineer, feel tile is worse than having no floor finish at all (bare concrete) as it allows the balcony surface to remain wet and exposed to saltwater nearly continuously.*

Budget option 1 considers repairing and application of full new the top coat of the existing coating system.

Budget option 2 considers stripping all existing coatings (and tile) and install an improved coating system including profiling for improved drainage.

The recommended balcony and walkway finish is a high performance acrylic high build, single color, textured (knockdown) finish, with a faux grout line finish pattern. This system provides very good protection to the balcony or walkway

slab surface, while considering the ease of future structural repairs and the ability to repair the coating texture and recoat the surface with relative ease, and without the need to fully strip the floors for several future repair cycles. It is also likely an aesthetic improvement for most, or at least equal to any current finish.

Walkway and stair Railing Systems- The existing railing system is a precast concrete balustrade with concrete cap. system. The railing are cracking and spalling and in need of significant repairs. **Surface-mounted railings are less invasive to the finished concrete and the reinforcing steel at the slab edges**. Surface mounted railings, properly installed using stainless steel anchors set in predrilled holes, filled with sealant can greatly minimize future edge spalling.

The budgets reflect (Option 1) leaving the original railings in place to perform the needed concrete repairs and (Option 2) removing the existing railings to perform the concrete repairs, apply new coatings and then install new, surface-mounted railings to match buildings 8, 9, and 10 current decorative aluminum panels.

New, properly installed surface-mounted railings and an improved protective floor coating system will greatly reduce future concrete damage.

Balcony Screen Enclosures- The screens will need to be fully removed and disposed of in units 408 and 606 due to its age and condition as well as not having pickets. The rest of the units of buildings 1-7 can have the screen enclosures removed and reinstalled. Some may need to be repaired or replaced due to fading. It is also highly probable that the screened frames are concealing additional concrete spalling.

The screen frames are also problematic, as the bottom tracks are mounted directly to the floors in most cases and preventing proper drainage off of the balcony slab edge. This lack of drainage, combined with corroding fasteners, causes standing water, dirt accumulation and exacerbates reinforcing steel corrosion and spalling at the balcony edges. The frames can be reinstalled with drainage shims part of option 2.

Shutters- There are some units with shutters at the sliding glass doors at Four Seasons. The shutters, much like the sliding glass doors, are typically the individual unit owner property and responsibility. The shutters can also many times necessarily become part of the restoration project. In some cases, the shutters need to be removed to access the concrete spalling damage, or to apply the new floor coatings. Other issues common with shutters are the inappropriate use of non-stainless fasteners, and directly mounting the tracks to the floor surface which blocks drainage, damages the coatings, and contributes to concrete spalling.

The use of non-stainless fasteners creates several problems, including, allowing saltwater intrusion at the penetration, rust staining on the building, potential failure of the fasteners in a tropical storm, and breaking off in the concrete during removal. The latter issue creates excessive costs during a restoration project as all broken fasteners need to be excavated from the concrete.

Tracks installed directly to the floor coating surface blocks water drainage. This issue can exist for shutter tracks in front of the sliding glass doors (preventing water from draining off the thresholds) and on the balcony edge (preventing water from draining off the slab edge as intended).

Of the unit's inspection to date for Four Seasons, several had no shutters, and others had roll down shutters in front of the sliding glass doors. The shutters in front of the sliding glass doors were mounted to the floor and some were blocking drainage. Some also had visible corroding fasteners.

Some shutters may need to be removed as needed for concrete repairs. Shutter elements attached the floors will likely need to be removed for balcony floor coating efforts, to ensure a full topcoat application. It is possible to consider compromising for the balcony floor coating repair option, to coat around the shutter tracks without removal. Shutter removals need to consider in advance the age and condition of the shutter, and if it is a candidate for reinstallation, or will require replacement with a new version.

It is recommended to remove shutters from the balconies on an as needed basis to perform needed concrete repairs and apply floor coatings. All shutters with non-stainless fasteners should be removed and reinstalled with stainless steel fasteners. All shutters without drainage shims should be removed and reinstalled with proper provisions for drainage.

Sliding Glass Doors – The existing sliding glass doors are mostly older and in fair to poor condition. Many have corroded fasteners which allow saltwater intrusion & weaken the installation. It is recommended to consider replacing aged sliding glass doors with quality new coastal rated versions.

This can, and should, be completed as part of the restoration project and handled by the restoration contractor for timing and logistics. Sliding glass door replacement should be completed during the project after structural repairs are completed and before finishes and coatings are started. The restoration contractors are some of the better sliding glass door installers in the industry and it would include some engineering supervision.

Recommendations Summary for a Restoration Project

- **Discuss the budgets presented, for any questions. Keystone will participate in discussion.**
- **Once decisions are made, put the project out for competitive sealed bids among the local restoration contractors. All practical options could be bid for comparison. Keystone Phase II.**
- **Consider a comprehensive restoration project as recommended. Keystone Phase III.**

The Corrosion Process with Chloride Contaminated Concrete

Since we cannot undo the cyclic corrosive effects of decades of exposure to salt air unless we fully remove all of the concrete slabs, we must consider other available techniques to minimize or at least slow the damage due to corrosion.

The concrete “spalling” damage occurring on the building is primarily caused by reinforcing steel corrosion. The reinforcing steel corrosion is due to ongoing exposure to salt air and eventual saturation with chlorides. It is helpful to have some basic understanding of this phenomenon when faced with decision-making responsibilities for repair of such structures.

Uncontaminated reinforced concrete provides a natural corrosion-inhibiting environment due to the protective nature of high alkalinity concrete surrounding the reinforcing steel. However, in salt-water environments, the chloride intrusion eventually breaks down the concrete’s natural ability to inhibit corrosion by creating corrosion cells throughout the concrete. A corrosive environment is created whereby corrosion cells are created due to slight variations in corrosion potential throughout the structure. This is due to the slight inconsistency of the chloride intrusion. Therefore, areas with higher levels of chlorides have higher corrosion potential versus adjacent areas with lower potentials. These higher potential areas (called anodes or anodic areas) corrode and spall, while lower potential areas (called cathodes) do not.

The proper understanding of the corrosion process allows for a project to address the problem of rebar corrosion as well as the symptom of concrete spalling. It is therefore an important aspect of the project to take measures to mitigate the corrosion of the reinforcing steel while also repairing the damaged concrete. Effective corrosion mitigation can delay or eliminate future concrete spalling from rebar corrosion.

For the specific situations on this project, the most effective solutions available to us involve reducing the exposure of the structural components of the building to the corrosive atmospheric elements along with the use of corrosion mitigation products. This is best accomplished by the elimination of the current cracking due to concrete spalling (by repairing the concrete structural spall to ICRI standards), reducing exposure at railing posts, screen enclosures, fasteners, shutter tracks, glass doors and horizontal surfaces by utilizing proper fasteners, methods, sealants and coatings. While these efforts will not fully stop the effects of corrosion on the building structure, they can greatly reduce the magnitude and rate of their effects over time. This will save the Association substantially in terms of maintenance costs, future assessments, the inconvenience, and loss of use as a result of construction and the collateral costs of construction including removing, reinstalling and/or replacing components such as railings, screen enclosures, coatings, shutters and doors.

Conclusion

Once the information in this report is reviewed, discussed, and understood, the Association can reach conclusions as to the planning and timing of the recommended repair work. Keystone Engineering can provide valuable input and services towards this discussion and decision-making process. Keystone can also provide the necessary services for the subsequent solicitation of bids for the work from qualified contractors as well as the oversight of the construction phase to ensure the work is properly executed, including control of the budget, quality of work, contractor payments and warranties.

It is our intention to assist and guide you to complete a quality and cost-effective project that will both enhance the value of your building, lower future maintenance costs and provide extended service life. Enclosed you will find survey summary quantities, survey results and project budget estimates. The actual survey maps are also enclosed. We look forward to meeting and discussing the project further in order to assist with the ongoing decision process.

Sincerely,

Tomas Ponce, MSCE, P.E.
FL # 50068
Keystone Engineering & Consulting, Inc.
Structural Engineer

Balconies

	A	B	C	D	E	F	G	H	I
1		**Four Seasons - Estimated Budget - Balconies Building 1**				**Option 1 Short-term Repair Existing Coatings/Screens**	**Option 2 Long-term All New Coatings and Screens**		
2		**Item**	**Est. Qty.**	**Units**	**Estimated Unit Cost**	**Estimated Extended Cost**	**Estimated Extended Cost**		
3	1	Mobilization	1	EA	$ 5,000.00	$ 5,000.00	$ 5,000.00		
4	2	Floor Coating Strip							
5		a. Coating Prep for recoating	840	SF	$ 1.00	$ 840.00			
6		b. Tile removal Stripping	0	SF	$ 6.00		$ -		
7		c. Floor Surface Coating for Stripping	840	SF	$ 4.00		$ 3,360.00		
8	3	Concrete Repairs							
9		a. Floor Surface	40	SF	$ 220.00	$ 8,800.00	$ 8,800.00		
10		b. Slab Edge	25	LF	$ 285.00	$ 7,125.00	$ 7,125.00		
11		c. Slab Full Depth	2	SF	$ 245.00	$ 490.00	$ 490.00		
12		d. Column/Beam	2	CF	$ 500.00	$ 1,000.00	$ 1,000.00		
13		e. Small Repairs Allowance-Spots	5	EA	$ 100.00	$ 500.00	$ 500.00		
14		f. Ceiling Spalls	2	SF	$ 225.00	$ 450.00	$ 450.00		
15		g. Crack Repairs Floor Slab	2	LF	$ 6.00	$ 12.00	$ 12.00		
16		h. Post Tension Cable Repair and Lock Off/Splice	0	EA	$ 2,400.00	$ -	$ -		
17		i. Remove Abandoned Fasteners-Allowance	5	EA	$ 12.00	$ 60.00	$ 60.00		
18		j. Remove/Replace Corroded Fasteners - Allowance	5	EA	$ 18.00	$ 90.00	$ 90.00		
19	4	Railings/ Screens							
20		a. Remove and Reinstall existing	300	LF	$ 24.00	$ 7,200.00	$ 7,200.00		
21		b. Regrout Rail Posts	0	EA	$ 45.00	$ -	$ -		
22		c. Replace with New Surface Mount Railings	0	LF	$ 90.00	$ -	$ -		
23	5	Balcony Floor Coating System-							
24		a. Repair Base Coat/Texture	120	SF	$ 8.00	$ 960.00	$ -		
25		b. Apply Topcoat Finish Wearcoat	840	SF	$ 4.00	$ 3,360.00	$ -		
26		c. Replace with Full New Coating System	840	SF	$ 8.00	$ -	$ 6,720.00		
27		d. Profiling Mortar for leveling and drainage	840	SF	$ 7.00	$ -	$ 5,880.00		
28	6	Stucco Over Masonry Repairs Allowance	40	SF	$ 35.00	$ 1,400.00	$ 1,400.00		
29	7	Window Sill Allowance Est.	12	LF	$ 65.00	$ 780.00	$ 780.00		
30	8	Int. Weather Barricade/Door Removal	0	LF	$ 85.00	$ -	$ -		
31		(interior finishes by others)					$ -		
32		a. Sliding Glass Door Reinstall-Panels	0	EA	$ 500.00	$ -	$ -		
33		**Balconies Estimated Budget Total**				**$ 38,067.00**	**$ 48,867.00**		
34		**Other Alternatives and Costs to Consider**							
35	11	Exterior Walls Painting	1	LS	TBD				
36	12	Ground Level Balcony Coatings	1	LS	TBD				
37		**Contingencies need to be added to budget for increased costs that are probable due to hidden conditions and**							
38		**additional concrete damage that may exist or occur over time**							

Balconies

	A	B	C	D	E	F	G	H	I
1		**Four Seasons - Estimated Budget - Balconies Building 2**				**Option 1 Short-term Repair Existing Coatings/Screens**	**Option 2 Long-term All New Coatings and Screens**		
2		**Item**	**Est. Qty.**	**Units**	**Estimated Unit Cost**	**Estimated Extended Cost**	**Estimated Extended Cost**		
3	1	Mobilization	1	EA	$ 5,000.00	$ 5,000.00	$ 5,000.00		
4	2	Floor Coating Strip							
5		a. Coating Prep for recoating	700	SF	$ 1.00	$ 700.00			
6		b. Tile removal Stripping	140	SF	$ 6.00		$ 840.00		
7		c. Floor Surface Coating for Stripping	840	SF	$ 4.00		$ 3,360.00		
8	3	Concrete Repairs							
9		a. Floor Surface	12	SF	$ 220.00	$ 2,640.00	$ 2,640.00		
10		b. Slab Edge	6	LF	$ 285.00	$ 1,710.00	$ 1,710.00		
11		c. Slab Full Depth	2	SF	$ 245.00	$ 490.00	$ 490.00		
12		d. Column/Beam	10	CF	$ 500.00	$ 5,000.00	$ 5,000.00		
13		e. Small Repairs Allowance-Spots	5	EA	$ 100.00	$ 500.00	$ 500.00		
14		f. Ceiling Spalls	2	SF	$ 225.00	$ 450.00	$ 450.00		
15		g. Crack Repairs Floor Slab	2	LF	$ 6.00	$ 12.00	$ 12.00		
16		h. Post Tension Cable Repair and Lock Off/Splice	0	EA	$ 2,400.00	$ -	$ -		
17		i. Remove Abandoned Fasteners-Allowance	5	EA	$ 12.00	$ 60.00	$ 60.00		
18		j. Remove/Replace Corroded Fasteners - Allowance	5	EA	$ 18.00	$ 90.00	$ 90.00		
19	4	Railings/ Screens							
20		a. Remove and Reinstall existing	300	LF	$ 24.00	$ 7,200.00	$ 7,200.00		
21		b. Regrout Rail Posts	0	EA	$ 45.00	$ -	$ -		
22		c. Replace with New Surface Mount Railings	0	LF	$ 90.00	$ -	$ -		
23	5	Balcony Floor Coating System-							
24		a. Repair Base Coat/Texture	40	SF	$ 8.00	$ 320.00	$ -		
25		b. Apply Topcoat Finish Wearcoat	840	SF	$ 4.00	$ 3,360.00	$ -		
26		c. Replace with Full New Coating System	840	SF	$ 8.00	$ -	$ 6,720.00		
27		d. Profiling Mortar for leveling and drainage	840	SF	$ 7.00	$ -	$ 5,880.00		
28	6	Stucco Over Masonry Repairs Allowance	40	SF	$ 35.00	$ 1,400.00	$ 1,400.00		
29	7	Window Sill Allowance Est.	12	LF	$ 65.00	$ 780.00	$ 780.00		
30	8	Int. Weather Barricade/Door Removal	0	LF	$ 85.00	$ -	$ -		
31		(interior finishes by others)					$ -		
32		a. Sliding Glass Door Reinstall-Panels	0	EA	$ 500.00	$ -	$ -		
33		**Balconies Estimated Budget Total**				**$ 29,712.00**	**$ 42,132.00**		
34		**Other Alternatives and Costs to Consider**							
35	11	Exterior Walls Painting	1	LS	TBD				
36	12	Ground Level Balcony Coatings	1	LS	TBD				
37		**Contingencies need to be added to budget for increased costs that are probable due to hidden conditions and**							
38		**additional concrete damage that may exist or occur over time**							

Balconies

	A	B	C	D	E	F	G	H	I
1		**Four Seasons - Estimated Budget - Balconies Building 3**				**Option 1 Short-term Repair Existing Coatings/Screens**	**Option 2 Long-term All New Coatings and Screens**		
2		**Item**	**Est. Qty.**	**Units**	**Estimated Unit Cost**	**Estimated Extended Cost**	**Estimated Extended Cost**		
3	1	Mobilization	1	EA	$ 5,000.00	$ 5,000.00	$ 5,000.00		
4	2	Floor Coating Strip							
5		a. Coating Prep for recoating	560	SF	$ 1.00	$ 560.00			
6		b. Tile removal Stripping	280	SF	$ 6.00		$ 1,680.00		
7		c. Floor Surface Coating for Stripping	840	SF	$ 4.00		$ 3,360.00		
8	3	Concrete Repairs							
9		a. Floor Surface	12	SF	$ 220.00	$ 2,640.00	$ 2,640.00		
10		b. Slab Edge	18	LF	$ 285.00	$ 5,130.00	$ 5,130.00		
11		c. Slab Full Depth	2	SF	$ 245.00	$ 490.00	$ 490.00		
12		d. Column/Beam	5	CF	$ 500.00	$ 2,500.00	$ 2,500.00		
13		e. Small Repairs Allowance-Spots	5	EA	$ 100.00	$ 500.00	$ 500.00		
14		f. Ceiling Spalls	2	SF	$ 225.00	$ 450.00	$ 450.00		
15		g. Crack Repairs Floor Slab	2	LF	$ 6.00	$ 12.00	$ 12.00		
16		h. Post Tension Cable Repair and Lock Off/Splice	0	EA	$ 2,400.00	$ -	$ -		
17		i. Remove Abandoned Fasteners-Allowance	5	EA	$ 12.00	$ 60.00	$ 60.00		
18		j. Remove/Replace Corroded Fasteners - Allowance	5	EA	$ 18.00	$ 90.00	$ 90.00		
19	4	Railings/ Screens							
20		a. Remove and Reinstall existing	300	LF	$ 24.00	$ 7,200.00	$ 7,200.00		
21		b. Regrout Rail Posts	0	EA	$ 45.00	$ -	$ -		
22		c. Replace with New Surface Mount Railings	0	LF	$ 90.00	$ -	$ -		
23	5	Balcony Floor Coating System-							
24		a. Repair Base Coat/Texture	120	SF	$ 8.00	$ 960.00	$ -		
25		b. Apply Topcoat Finish Wearcoat	840	SF	$ 4.00	$ 3,360.00	$ -		
26		c. Replace with Full New Coating System	840	SF	$ 8.00	$ -	$ 6,720.00		
27		d. Profiling Mortar for leveling and drainage	840	SF	$ 7.00	$ -	$ 5,880.00		
28	6	Stucco Over Masonry Repairs Allowance	40	SF	$ 35.00	$ 1,400.00	$ 1,400.00		
29	7	Window Sill Allowance Est.	12	LF	$ 65.00	$ 780.00	$ 780.00		
30	8	Int. Weather Barricade/Door Removal	0	LF	$ 85.00	$ -	$ -		
31		(interior finishes by others)					$ -		
32		a. Sliding Glass Door Reinstall-Panels	0	EA	$ 500.00	$ -	$ -		
33		**Balconies Estimated Budget Total**				**$ 31,132.00**	**$ 43,892.00**		
34		**Other Alternatives and Costs to Consider**							
35	11	Exterior Walls Painting	1	LS	TBD				
36	12	Ground Level Balcony Coatings	1	LS	TBD				
37		**Contingencies need to be added to budget for increased costs that are probable due to hidden conditions and**							
38		**additional concrete damage that may exist or occur over time**							

Balconies

	A	B	C	D	E	F	G	H	I
1		**Four Seasons - Estimated Budget - Balconies Building 4**				**Option 1 Short-term Repair Existing Coatings/Screens**	**Option 2 Long-term All New Coatings and Screens**		
2		**Item**	**Est. Qty.**	**Units**	**Estimated Unit Cost**	**Estimated Extended Cost**	**Estimated Extended Cost**		
3	1	Mobilization	1	EA	$ 5,000.00	$ 5,000.00	$ 5,000.00		
4	2	Floor Coating Strip							
5		a. Coating Prep for recoating	700	SF	$ 1.00	$ 700.00			
6		b. Tile removal Stripping	140	SF	$ 6.00		$ 840.00		
7		c. Floor Surface Coating for Stripping	840	SF	$ 4.00		$ 3,360.00		
8	3	Concrete Repairs							
9		a. Floor Surface	30	SF	$ 220.00	$ 6,600.00	$ 6,600.00		
10		b. Slab Edge	25	LF	$ 285.00	$ 7,125.00	$ 7,125.00		
11		c. Slab Full Depth	2	SF	$ 245.00	$ 490.00	$ 490.00		
12		d. Column/Beam	15	CF	$ 500.00	$ 7,500.00	$ 7,500.00		
13		e. Small Repairs Allowance-Spots	5	EA	$ 100.00	$ 500.00	$ 500.00		
14		f. Ceiling Spalls	10	SF	$ 225.00	$ 2,250.00	$ 2,250.00		
15		g. Crack Repairs Floor Slab	4	LF	$ 6.00	$ 24.00	$ 24.00		
16		h. Post Tension Cable Repair and Lock Off/Splice	0	EA	$ 2,400.00	$ -	$ -		
17		i. Remove Abandoned Fasteners-Allowance	5	EA	$ 12.00	$ 60.00	$ 60.00		
18		j. Remove/Replace Corroded Fasteners - Allowance	5	EA	$ 18.00	$ 90.00	$ 90.00		
19	4	Railings/ Screens							
20		a. Remove and Reinstall existing (Picket Screens)	275	LF	$ 24.00	$ 6,600.00	$ 6,600.00		
21		b. Regrout Rail Posts	0	EA	$ 45.00	$ -	$ -		
22		c. Replace with New Surface Mount Railings	25	LF	$ 90.00	$ -	$ 2,250.00		
23	5	Balcony Floor Coating System-							
24		a. Repair Base Coat/Texture	120	SF	$ 8.00	$ 960.00	$ -		
25		b. Apply Topcoat Finish Wearcoat	840	SF	$ 4.00	$ 3,360.00	$ -		
26		c. Replace with Full New Coating System	840	SF	$ 8.00	$ -	$ 6,720.00		
27		d. Profiling Mortar for leveling and drainage	840	SF	$ 7.00	$ -	$ 5,880.00		
28	6	Stucco Over Masonry Repairs Allowance	40	SF	$ 35.00	$ 1,400.00	$ 1,400.00		
29	7	Window Sill Allowance Est.	12	LF	$ 65.00	$ 780.00	$ 780.00		
30	8	Int. Weather Barricade/Door Removal	0	LF	$ 85.00	$ -	$ -		
31		(interior finishes by others)					$ -		
32		a. Sliding Glass Door Reinstall-Panels	0	EA	$ 500.00	$ -	$ -		
33		**Balconies Estimated Budget Total**				**$ 43,439.00**	**$ 57,469.00**		
34		**Other Alternatives and Costs to Consider**							
35	11	Exterior Walls Painting	1	LS	TBD				
36	12	Ground Level Balcony Coatings	1	LS	TBD				
37		**Contingencies need to be added to budget for increased costs that are probable due to hidden conditions and**							
38		**additional concrete damage that may exist or occur over time**							

Balconies

	A	B	C	D	E	F	G	H	I
1		**Four Seasons - Estimated Budget - Balconies Building 5**				**Option 1 Short-term Repair Existing Coatings/Screens**	**Option 2 Long-term All New Coatings and Screens**		
2		**Item**	**Est. Qty.**	**Units**	**Estimated Unit Cost**	**Estimated Extended Cost**	**Estimated Extended Cost**		
3	1	Mobilization	1	EA	$ 5,000.00	$ 5,000.00	$ 5,000.00		
4	2	Floor Coating Strip							
5		a. Coating Prep for recoating	700	SF	$ 1.00	$ 700.00			
6		b. Tile removal Stripping	140	SF	$ 6.00		$ 840.00		
7		c. Floor Surface Coating for Stripping	840	SF	$ 4.00		$ 3,360.00		
8	3	Concrete Repairs							
9		a. Floor Surface	10	SF	$ 220.00	$ 2,200.00	$ 2,200.00		
10		b. Slab Edge	14	LF	$ 285.00	$ 3,990.00	$ 3,990.00		
11		c. Slab Full Depth	2	SF	$ 245.00	$ 490.00	$ 490.00		
12		d. Column/Beam	15	CF	$ 500.00	$ 7,500.00	$ 7,500.00		
13		e. Small Repairs Allowance-Spots	5	EA	$ 100.00	$ 500.00	$ 500.00		
14		f. Ceiling Spalls	10	SF	$ 225.00	$ 2,250.00	$ 2,250.00		
15		g. Crack Repairs Floor Slab	4	LF	$ 6.00	$ 24.00	$ 24.00		
16		h. Post Tension Cable Repair and Lock Off/Splice	0	EA	$ 2,400.00	$ -	$ -		
17		i. Remove Abandoned Fasteners-Allowance	5	EA	$ 12.00	$ 60.00	$ 60.00		
18		j. Remove/Replace Corroded Fasteners - Allowance	5	EA	$ 18.00	$ 90.00	$ 90.00		
19	4	Railings/ Screens							
20		a. Remove and Reinstall existing	300	LF	$ 24.00	$ 7,200.00	$ 7,200.00		
21		b. Regrout Rail Posts	0	EA	$ 45.00	$ -	$ -		
22		c. Replace with New Surface Mount Railings	0	LF	$ 90.00	$ -	$ -		
23	5	Balcony Floor Coating System-							
24		a. Repair Base Coat/Texture	120	SF	$ 8.00	$ 960.00	$ -		
25		b. Apply Topcoat Finish Wearcoat	840	SF	$ 4.00	$ 3,360.00	$ -		
26		c. Replace with Full New Coating System	840	SF	$ 8.00	$ -	$ 6,720.00		
27		d. Profiling Mortar for leveling and drainage	840	SF	$ 7.00	$ -	$ 5,880.00		
28	6	Stucco Over Masonry Repairs Allowance	40	SF	$ 35.00	$ 1,400.00	$ 1,400.00		
29	7	Window Sill Allowance Est.	12	LF	$ 65.00	$ 780.00	$ 780.00		
30	8	Int. Weather Barricade/Door Removal	0	LF	$ 85.00	$ -	$ -		
31		(interior finishes by others)					$ -		
32		a. Sliding Glass Door Reinstall-Panels	0	EA	$ 500.00	$ -	$ -		
33		**Balconies Estimated Budget Total**				**$ 36,504.00**	**$ 48,284.00**		
34		**Other Alternatives and Costs to Consider**							
35	11	Exterior Walls Painting	1	LS	TBD				
36	12	Ground Level Balcony Coatings	1	LS	TBD				
37		**Contingencies need to be added to budget for increased costs that are probable due to hidden conditions and**							
38		**additional concrete damage that may exist or occur over time**							

Balconies

	A	B	C	D	E	F	G	H	I
1		**Four Seasons - Estimated Budget - Balconies Building 6**				**Option 1 Short-term Repair Existing Coatings/Screens**	**Option 2 Long-term All New Coatings and Screens**		
2		**Item**	**Est. Qty.**	**Units**	**Estimated Unit Cost**	**Estimated Extended Cost**	**Estimated Extended Cost**		
3	1	Mobilization	1	EA	$ 5,000.00	$ 5,000.00	$ 5,000.00		
4	2	Floor Coating Strip							
5		a. Coating Prep for recoating	280	SF	$ 1.00	$ 280.00			
6		b. Tile removal Stripping	560	SF	$ 6.00		$ 3,360.00		
7		c. Floor Surface Coating for Stripping	840	SF	$ 4.00		$ 3,360.00		
8	3	Concrete Repairs							
9		a. Floor Surface	10	SF	$ 220.00	$ 2,200.00	$ 2,200.00		
10		b. Slab Edge	25	LF	$ 285.00	$ 7,125.00	$ 7,125.00		
11		c. Slab Full Depth	2	SF	$ 245.00	$ 490.00	$ 490.00		
12		d. Column/Beam	10	CF	$ 500.00	$ 5,000.00	$ 5,000.00		
13		e. Small Repairs Allowance-Spots	5	EA	$ 100.00	$ 500.00	$ 500.00		
14		f. Ceiling Spalls	10	SF	$ 225.00	$ 2,250.00	$ 2,250.00		
15		g. Crack Repairs Floor Slab	4	LF	$ 6.00	$ 24.00	$ 24.00		
16		h. Post Tension Cable Repair and Lock Off/Splice	0	EA	$ 2,400.00	$ -	$ -		
17		i. Remove Abandoned Fasteners-Allowance	5	EA	$ 12.00	$ 60.00	$ 60.00		
18		j. Remove/Replace Corroded Fasteners - Allowance	5	EA	$ 18.00	$ 90.00	$ 90.00		
19	4	Railings/ Screens							
20		a. Remove and Reinstall existing (Picket Screens)	275	LF	$ 24.00	$ 6,600.00	$ 6,600.00		
21		b. Regrout Rail Posts	0	EA	$ 45.00	$ -	$ -		
22		c. Replace with New Surface Mount Railings	25	LF	$ 90.00	$ -	$ 2,250.00		
23	5	Balcony Floor Coating System-							
24		a. Repair Base Coat/Texture	40	SF	$ 8.00	$ 320.00	$ -		
25		b. Apply Topcoat Finish Wearcoat	840	SF	$ 4.00	$ 3,360.00	$ -		
26		c. Replace with Full New Coating System	840	SF	$ 8.00	$ -	$ 6,720.00		
27		d. Profiling Mortar for leveling and drainage	840	SF	$ 7.00	$ -	$ 5,880.00		
28	6	Stucco Over Masonry Repairs Allowance	10	SF	$ 35.00	$ 350.00	$ 350.00		
29	7	Window Sill Allowance Est.	12	LF	$ 65.00	$ 780.00	$ 780.00		
30	8	Int. Weather Barricade/Door Removal	0	LF	$ 85.00	$ -	$ -		
31		(interior finishes by others)					$ -		
32		a. Sliding Glass Door Reinstall-Panels	0	EA	$ 500.00	$ -	$ -		
33		**Balconies Estimated Budget Total**				**$ 34,429.00**	**$ 52,039.00**		
34									
35		**Other Alternatives and Costs to Consider**							
36	11	Exterior Walls Painting	1	LS	TBD				
37	12	Ground Level Balcony Coatings	1	LS	TBD				
38		**Contingencies need to be added to budget for increased costs that are probable due to hidden conditions and**							
39		**additional concrete damage that may exist or occur over time**							

Balconies

	A	B	C	D	E	F	G	H	I
1		**Four Seasons - Estimated Budget - Balconies Building 7**				**Option 1 Short-term Repair Existing Coatings/Screens**	**Option 2 Long-term All New Coatings and Screens**		
2		**Item**	**Est. Qty.**	**Units**	**Estimated Unit Cost**	**Estimated Extended Cost**	**Estimated Extended Cost**		
3	1	Mobilization	1	EA	$ 5,000.00	$ 5,000.00	$ 5,000.00		
4	2	Floor Coating Strip							
5		a. Coating Prep for recoating	700	SF	$ 1.00	$ 700.00			
6		b. Tile removal Stripping	140	SF	$ 6.00		$ 840.00		
7		c. Floor Surface Coating for Stripping	840	SF	$ 4.00		$ 3,360.00		
8	3	Concrete Repairs							
9		a. Floor Surface	10	SF	$ 220.00	$ 2,200.00	$ 2,200.00		
10		b. Slab Edge	5	LF	$ 285.00	$ 1,425.00	$ 1,425.00		
11		c. Slab Full Depth	2	SF	$ 245.00	$ 490.00	$ 490.00		
12		d. Column/Beam	10	CF	$ 500.00	$ 5,000.00	$ 5,000.00		
13		e. Small Repairs Allowance-Spots	5	EA	$ 100.00	$ 500.00	$ 500.00		
14		f. Ceiling Spalls	10	SF	$ 225.00	$ 2,250.00	$ 2,250.00		
15		g. Crack Repairs Floor Slab	4	LF	$ 6.00	$ 24.00	$ 24.00		
16		h. Post Tension Cable Repair and Lock Off/Splice	0	EA	$ 2,400.00	$ -	$ -		
17		i. Remove Abandoned Fasteners-Allowance	5	EA	$ 12.00	$ 60.00	$ 60.00		
18		j. Remove/Replace Corroded Fasteners - Allowance	5	EA	$ 18.00	$ 90.00	$ 90.00		
19	4	Railings/ Screens							
20		a. Remove and Reinstall existing (Picket Screens)	275	LF	$ 24.00	$ 6,600.00	$ 6,600.00		
21		b. Regrout Rail Posts	6	EA	$ 45.00	$ 270.00	$ -		
22		c. Replace with New Surface Mount Railings	25	LF	$ 90.00	$ -	$ 2,250.00		
23	5	Balcony Floor Coating System-							
24		a. Repair Base Coat/Texture	40	SF	$ 8.00	$ 320.00	$ -		
25		b. Apply Topcoat Finish Wearcoat	840	SF	$ 4.00	$ 3,360.00	$ -		
26		c. Replace with Full New Coating System	840	SF	$ 8.00	$ -	$ 6,720.00		
27		d. Profiling Mortar for leveling and drainage	840	SF	$ 7.00	$ -	$ 5,880.00		
28	6	Stucco Over Masonry Repairs Allowance	10	SF	$ 35.00	$ 350.00	$ 350.00		
29	7	Window Sill Allowance Est.	12	LF	$ 65.00	$ 780.00	$ 780.00		
30	8	Int. Weather Barricade/Door Removal	0	LF	$ 85.00	$ -	$ -		
31		(interior finishes by others)					$ -		
32		a. Sliding Glass Door Reinstall-Panels	0	EA	$ 500.00	$ -	$ -		
33		**Balconies Estimated Budget Total**				**$ 29,419.00**	**$ 43,819.00**		
34		**Other Alternatives and Costs to Consider**							
35	11	Exterior Walls Painting	1	LS	TBD				
36	12	Ground Level Balcony Coatings	1	LS	TBD				
37		**Contingencies need to be added to budget for increased costs that are probable due to hidden conditions and**							
38		**additional concrete damage that may exist or occur over time**							

	A	B	C	D	E	F	G
1		**Four Seasons - Estimated Budget - Walkways/Stairs Building 1**				**Option 1 Short-term Repair Existing Coatings-Maintain Railings**	**Option 2 Long-term All New Coatings and Railings**
2		**Item**	**Est. Qty.**	**Units**	**Estimated Unit Cost**	**Estimated Extended Cost**	**Estimated Extended Cost**
3	1	Mobilization	1	EA	$ 5,000.00	$ 5,000.00	$ 5,000.00
4	2	Floor Coating Strip					
5		a. Coating Prep for recoating	751	SF	$ 1.00	$ 751.00	
6		b. Tile removal Stripping	0	SF	$ 6.00		$ -
7		c. Floor Surface Coating for Stripping	751	SF	$ 4.00		$ 3,004.00
8	3	Concrete Repairs					
9		a. Floor Surface	40	SF	$ 220.00	$ 8,800.00	$ 8,800.00
10		b. Slab Edge	20	LF	$ 285.00	$ 5,700.00	$ 5,700.00
11		c. Slab Full Depth	2	SF	$ 245.00	$ 490.00	$ 490.00
12		d. Column/Beam	16	CF	$ 500.00	$ 8,000.00	$ 8,000.00
13		e. Small Repairs Allowance-Spots	3	EA	$ 100.00	$ 300.00	$ 300.00
14		f. Ceiling Spalls	2	SF	$ 225.00	$ 450.00	$ 450.00
15		g. Crack Repairs Floor Slab	10	LF	$ 6.00	$ -	$ 60.00
16		h. Post Tension Cable/Lock Off/Splice	0	EA	$ 2,400.00	$ -	$ -
17		i. Remove Abandoned Fasteners-Allowance	4	LF	$ 12.00	$ 48.00	$ 48.00
18	4	Railings - Walkway and Stairs					
19		a. Remove and Replace w/ New Aluminum Railings	260	LF	$ 200.00	$ -	$ 52,000.00
20		b. Fill Abandoned Core Holes	0	EA	$ 22.00	$ -	$ -
21	5	Walkway Floor Coating System-New					
22		a. Repair Base Coat/Texture	80	SF	$ 8.00	$ 640.00	$ -
23		b. Apply Topcoat Finish Wearcoat	751	SF	$ 4.00	$ 3,004.00	$ -
24		c. Replace with Full New Coating System	751	SF	$ 8.00	$ -	$ 6,008.00
25		d. Profiling Mortar for leveling and drainage	751	SF	$ 7.00	$ -	$ 5,257.00
26	6	Stucco Over Masonry Repairs Allowance	5	SF	$ 26.00	$ 130.00	$ 130.00
27	7	Window Sill Allowance	0	LF	$ 65.00	$ -	$ -
28		**Walkways - Estimated Budget Totals**				**$ 33,313.00**	**$ 95,247.00**
29		**Other Alternatives and Costs to Consider**					
30		**Option - Ground Level Coatings**	**1**	**LS**			TBD
31							
32		**Contingencies need to be added to budget for increased costs that are probable due to hidden conditions and**					
33		**additional concrete damage that may exist or occur over time**					
34							
35							

	A	B	C	D	E	F	G
1		**Four Seasons - Estimated Budget - Walkways/Stairs Building 2**				**Option 1 Short-term Repair Existing Coatings-Maintain Railings**	**Option 2 Long-term All New Coatings and Railings**
2		**Item**	**Est. Qty.**	**Units**	**Estimated Unit Cost**	**Estimated Extended Cost**	**Estimated Extended Cost**
3	1	Mobilization	1	EA	$ 5,000.00	$ 5,000.00	$ 5,000.00
4	2	Floor Coating Strip					
5		a. Coating Prep for recoating	751	SF	$ 1.00	$ 751.00	
6		b. Tile removal Stripping	0	SF	$ 6.00		$ -
7		c. Floor Surface Coating for Stripping	751	SF	$ 4.00		$ 3,004.00
8	3	Concrete Repairs					
9		a. Floor Surface	5	SF	$ 220.00	$ 1,100.00	$ 1,100.00
10		b. Slab Edge	10	LF	$ 285.00	$ 2,850.00	$ 2,850.00
11		c. Slab Full Depth	2	SF	$ 245.00	$ 490.00	$ 490.00
12		d. Column/Beam	0	CF	$ 500.00	$ -	$ -
13		e. Small Repairs Allowance-Spots	3	EA	$ 100.00	$ 300.00	$ 300.00
14		f. Ceiling Spalls	0	SF	$ 225.00	$ -	$ -
15		g. Crack Repairs Floor Slab	5	LF	$ 6.00	$ -	$ 30.00
16		h. Post Tension Cable/Lock Off/Splice	0	EA	$ 2,400.00	$ -	$ -
17		i. Remove Abandoned Fasteners-Allowance	5	LF	$ 12.00	$ 60.00	$ 60.00
18	4	Railings - Walkway and Stairs					
19		a. Remove and Replace w/ New Aluminum Railings	260	LF	$ 200.00	$ -	$ 52,000.00
20		b. Fill Abandoned Core Holes	0	EA	$ 22.00	$ -	$ -
21	5	Walkway Floor Coating System-New	751	SF	$ 7.00	$ -	$ 5,257.00
22		a. Repair Base Coat/Texture	10	SF	$ 8.00	$ 80.00	$ -
23		b. Apply Topcoat Finish Wearcoat	751	SF	$ 4.00	$ 3,004.00	$ -
24		c. Replace with Full New Coating System	751	SF	$ 8.00	$ -	$ 6,008.00
25		d. Profiling Mortar for leveling and drainage	751	SF	$ 7.00	$ -	$ 5,257.00
26	6	Stucco Over Masonry Repairs Allowance	5	SF	$ 26.00	$ 130.00	$ 130.00
27	7	Window Sill Allowance	0	LF	$ 65.00	$ -	$ -
28		**Walkways - Estimated Budget Totals**				**$ 13,765.00**	**$ 81,486.00**
29		**Other Alternatives and Costs to Consider**					
30		**Option - Ground Level Coatings**	**1**	**LS**			TBD
31							
32							
33		**Contingencies need to be added to budget for increased costs that are probable due to hidden conditions and**					
34		**additional concrete damage that may exist or occur over time**					
35							
36							

	A	B	C	D	E	F	G
1		**Four Seasons - Estimated Budget - Walkways/Stairs Building 3**				**Option 1 Short-term Repair Existing Coatings-Maintain Railings**	**Option 2 Long-term All New Coatings and Railings**
2		**Item**	**Est. Qty.**	**Units**	**Estimated Unit Cost**	**Estimated Extended Cost**	**Estimated Extended Cost**
3	1	Mobilization	1	EA	$ 5,000.00	$ 5,000.00	$ 5,000.00
4	2	Floor Coating Strip					
5		a. Coating Prep for recoating	751	SF	$ 1.00	$ 751.00	
6		b. Tile removal Stripping	0	SF	$ 6.00		$ -
7		c. Floor Surface Coating for Stripping	751	SF	$ 4.00		$ 3,004.00
8	3	Concrete Repairs					
9		a. Floor Surface	10	SF	$ 220.00	$ 2,200.00	$ 2,200.00
10		b. Slab Edge	5	LF	$ 285.00	$ 1,425.00	$ 1,425.00
11		c. Slab Full Depth	2	SF	$ 245.00	$ 490.00	$ 490.00
12		d. Column/Beam	5	CF	$ 500.00	$ 2,500.00	$ 2,500.00
13		e. Small Repairs Allowance-Spots	2	EA	$ 100.00	$ 200.00	$ 200.00
14		f. Ceiling Spalls	20	SF	$ 225.00	$ 4,500.00	$ 4,500.00
15		g. Crack Repairs Floor Slab	5	LF	$ 6.00	$ -	$ 30.00
16		h. Post Tension Cable/Lock Off/Splice	0	EA	$ 2,400.00	$ -	$ -
17		i. Remove Abandoned Fasteners-Allowance	0	LF	$ 12.00	$ -	$ -
18	4	Railings - Walkway and Stairs					
19		a. Remove and Replace w/ New Aluminum Railings	260	LF	$ 200.00	$ -	$ 52,000.00
20		b. Fill Abandoned Core Holes	0	EA	$ 22.00	$ -	$ -
21	5	Walkway Floor Coating System-New	751	SF	$ 7.00	$ -	$ 5,257.00
22		a. Repair Base Coat/Texture	20	SF	$ 8.00	$ 160.00	$ -
23		b. Apply Topcoat Finish Wearcoat	751	SF	$ 4.00	$ 3,004.00	$ -
24		c. Replace with Full New Coating System	751	SF	$ 8.00	$ -	$ 6,008.00
25		d. Profiling Mortar for leveling and drainage	751	SF	$ 7.00	$ -	$ 5,257.00
26	6	Stucco Over Masonry Repairs Allowance	5	SF	$ 26.00	$ 130.00	$ 130.00
27	7	Window Sill Allowance	0	LF	$ 65.00	$ -	$ -
28		**Walkways - Estimated Budget Totals**				**$ 20,360.00**	**$ 88,001.00**
29		**Other Alternatives and Costs to Consider**					
30		**Option - Ground Level Coatings**	**1**	**LS**			TBD
31							
32							
33		**Contingencies need to be added to budget for increased costs that are probable due to hidden conditions and**					
34		**additional concrete damage that may exist or occur over time**					
35							
36							

	A	B	C	D	E	F	G
1		**Four Seasons - Estimated Budget - Walkways/Stairs Building 4**				**Option 1 Short-term Repair Existing Coatings-Maintain Railings**	**Option 2 Long-term All New Coatings and Railings**
2		**Item**	**Est. Qty.**	**Units**	**Estimated Unit Cost**	**Estimated Extended Cost**	**Estimated Extended Cost**
3	1	Mobilization	1	EA	$ 5,000.00	$ 5,000.00	$ 5,000.00
4	2	Floor Coating Strip					
5		a. Coating Prep for recoating	751	SF	$ 1.00	$ 751.00	
6		b. Tile removal Stripping	0	SF	$ 6.00		$ -
7		c. Floor Surface Coating for Stripping	751	SF	$ 4.00		$ 3,004.00
8	3	Concrete Repairs					
9		a. Floor Surface	30	SF	$ 220.00	$ 6,600.00	$ 6,600.00
10		b. Slab Edge	20	LF	$ 285.00	$ 5,700.00	$ 5,700.00
11		c. Slab Full Depth	1	SF	$ 245.00	$ 245.00	$ 245.00
12		d. Column/Beam	10	CF	$ 500.00	$ 5,000.00	$ 5,000.00
13		e. Small Repairs Allowance-Spots	3	EA	$ 100.00	$ 300.00	$ 300.00
14		f. Ceiling Spalls	5	SF	$ 225.00	$ 1,125.00	$ 1,125.00
15		g. Crack Repairs Floor Slab	0	LF	$ 6.00	$ -	$ -
16		h. Post Tension Cable/Lock Off/Splice	0	EA	$ 2,400.00	$ -	$ -
17		i. Remove Abandoned Fasteners-Allowance	0	LF	$ 12.00	$ -	$ -
18	4	Railings - Walkway and Stairs					
19		a. Remove and Replace w/ New Aluminum Railings	260	LF	$ 200.00	$ -	$ 52,000.00
20		b. Fill Abandoned Core Holes	0	EA	$ 22.00	$ -	$ -
21	5	Walkway Floor Coating System-New	751	SF	$ 7.00	$ -	$ 5,257.00
22		a. Repair Base Coat/Texture	751	SF	$ 8.00	$ 6,008.00	$ -
23		b. Apply Topcoat Finish Wearcoat	751	SF	$ 4.00	$ 3,004.00	$ -
24		c. Replace with Full New Coating System	751	SF	$ 8.00	$ -	$ 6,008.00
25		d. Profiling Mortar for leveling and drainage	751	SF	$ 7.00	$ -	$ 5,257.00
26	6	Stucco Over Masonry Repairs Allowance	5	SF	$ 26.00	$ 130.00	$ 130.00
27	7	Window Sill Allowance	0	LF	$ 65.00	$ -	$ -
28		**Walkways - Estimated Budget Totals**				**$ 33,863.00**	**$ 95,626.00**
29		**Other Alternatives and Costs to Consider**					
30		**Option - Ground Level Coatings**	**1**	**LS**			TBD
31							
32		**Contingencies need to be added to budget for increased costs that are probable due to hidden conditions and**					
33		**additional concrete damage that may exist or occur over time**					
34							
35							

	A	B	C	D	E	F	G
1		**Four Seasons - Estimated Budget - Walkways/Stairs Building 5**				**Option 1 Short-term Repair Existing Coatings-Maintain Railings**	**Option 2 Long-term All New Coatings and Railings**
2		**Item**	**Est. Qty.**	**Units**	**Estimated Unit Cost**	**Estimated Extended Cost**	**Estimated Extended Cost**
3	1	Mobilization	1	EA	$ 5,000.00	$ 5,000.00	$ 5,000.00
4	2	Floor Coating Strip					
5		a. Coating Prep for recoating	50	SF	$ 1.00	$ 50.00	
6		b. Tile removal Stripping	0	SF	$ 6.00		$ -
7		c. Floor Surface Coating for Stripping	50	SF	$ 4.00		$ 200.00
8	3	Concrete Repairs					
9		a. Floor Surface	35	SF	$ 220.00	$ 7,700.00	$ 7,700.00
10		b. Slab Edge	10	LF	$ 285.00	$ 2,850.00	$ 2,850.00
11		c. Slab Full Depth	1	SF	$ 245.00	$ 245.00	$ 245.00
12		d. Column/Beam	35	CF	$ 500.00	$ 17,500.00	$ 17,500.00
13		e. Small Repairs Allowance-Spots	3	EA	$ 100.00	$ 300.00	$ 300.00
14		f. Ceiling Spalls	5	SF	$ 225.00	$ 1,125.00	$ 1,125.00
15		g. Profiling Mortar	751	SF	$ 9.00	$ -	$ 6,759.00
16		h. Crack Repairs Floor Slab	5	LF	$ 6.00	$ -	$ 30.00
17		i. Post Tension Cable/Lock Off/Splice	0	EA	$ 2,400.00	$ -	$ -
18		j. Remove Abandoned Fasteners-Allowance	0	LF	$ 12.00	$ -	$ -
19	4	Railings					
20		a. Remove and Replace with New Railings	150	LF	$ 200.00	$ -	$ 30,000.00
21		b. Fill Abandoned Core Holes	0	EA	$ 22.00	$ -	$ -
22	5	Walkway Floor Coating System-New	751	SF	$ 7.00	$ -	$ 5,257.00
23		a. Repair Base Coat/Texture	751	SF	$ 8.00	$ 6,008.00	$ -
24		b. Apply Topcoat Finish Wearcoat	751	SF	$ 4.00	$ 3,004.00	$ -
25		c. Replace with Full New Coating System	751	SF	$ 8.00	$ -	$ 6,008.00
26		d. Profiling Mortar for leveling and drainage	751	SF	$ 7.00	$ -	$ 5,257.00
27	6	Stucco Over Masonry Repairs Allowance	10	SF	$ 26.00	$ 260.00	$ 260.00
28	7	Window Sill Allowance	0	LF	$ 65.00	$ -	$ -
29		**Walkways - Estimated Budget Totals**				**$ 44,042.00**	**$ 88,491.00**
30		**Other Alternatives and Costs to Consider**					
31							
32		**Contingencies need to be added to budget for increased costs that are probable due to hidden conditions and**					
33		**additional concrete damage that may exist or occur over time**					
34							
35							

	A	B	C	D	E	F	G
1		**Four Seasons - Estimated Budget - Walkways/Stairs Building 6**				**Option 1 Short-term Repair Existing Coatings-Maintain Railings**	**Option 2 Long-term All New Coatings and Railings**
2		**Item**	**Est. Qty.**	**Units**	**Estimated Unit Cost**	**Estimated Extended Cost**	**Estimated Extended Cost**
3	1	Mobilization	1	EA	$ 5,000.00	$ 5,000.00	$ 5,000.00
4	2	Floor Coating Strip					
5		a. Coating Prep for recoating	751	SF	$ 1.00	$ 751.00	
6		b. Tile removal Stripping	0	SF	$ 6.00		$ -
7		c. Floor Surface Coating for Stripping	751	SF	$ 4.00		$ 3,004.00
8	3	Concrete Repairs					
9		a. Floor Surface	15	SF	$ 220.00	$ 3,300.00	$ 3,300.00
10		b. Slab Edge	10	LF	$ 285.00	$ 2,850.00	$ 2,850.00
11		c. Slab Full Depth	1	SF	$ 245.00	$ 245.00	$ 245.00
12		d. Column/Beam	12	CF	$ 500.00	$ 6,000.00	$ 6,000.00
13		e. Small Repairs Allowance-Spots	3	EA	$ 100.00	$ 300.00	$ 300.00
14		f. Ceiling Spalls	5	SF	$ 225.00	$ 1,125.00	$ 1,125.00
15		g. Crack Repairs Floor Slab	5	LF	$ 6.00	$ -	$ 30.00
16		h. Post Tension Cable/Lock Off/Splice	0	EA	$ 2,400.00	$ -	$ -
17		i. Remove Abandoned Fasteners-Allowance	0	LF	$ 12.00	$ -	$ -
18	4	Railings - Walkway and Stairs					
19		a. Remove and Replace w/ New Aluminum Railings	260	LF	$ 200.00	$ -	$ 52,000.00
20		b. Fill Abandoned Core Holes	0	EA	$ 22.00	$ -	$ -
21	5	Walkway Floor Coating System-New	751	SF	$ 7.00	$ -	$ 5,257.00
22		a. Repair Base Coat/Texture	751	SF	$ 8.00	$ 6,008.00	$ -
23		b. Apply Topcoat Finish Wearcoat	751	SF	$ 4.00	$ 3,004.00	$ -
24		c. Replace with Full New Coating System	751	SF	$ 8.00	$ -	$ 6,008.00
25		d. Profiling Mortar for leveling and drainage	751	SF	$ 7.00	$ -	$ 5,257.00
26	6	Stucco Over Masonry Repairs Allowance	5	SF	$ 26.00	$ 130.00	$ 130.00
27	7	Window Sill Allowance	0	LF	$ 65.00	$ -	$ -
28		**Walkways - Estimated Budget Totals**				**$ 28,713.00**	**$ 90,506.00**
29		**Other Alternatives and Costs to Consider**					
30							
31		**Option - Ground Level Coatings**	**1**	**LS**			TBD
32		**Contingencies need to be added to budget for increased costs that are probable due to hidden conditions and**					
33		**additional concrete damage that may exist or occur over time**					
34							
35							

	A	B	C	D	E	F	G
1		**Four Seasons - Estimated Budget - Walkways/Stairs Building 7**				**Option 1 Short-term Repair Existing Coatings-Maintain Railings**	**Option 2 Long-term All New Coatings and Railings**
2		**Item**	**Est. Qty.**	**Units**	**Estimated Unit Cost**	**Estimated Extended Cost**	**Estimated Extended Cost**
3	1	Mobilization	1	EA	$ 5,000.00	$ 5,000.00	$ 5,000.00
4	2	Floor Coating Strip					
5		a. Coating Prep for recoating	751	SF	$ 1.00	$ 751.00	
6		b. Tile removal Stripping	0	SF	$ 6.00		$ -
7		c. Floor Surface Coating for Stripping	751	SF	$ 4.00		$ 3,004.00
8	3	Concrete Repairs					
9		a. Floor Surface	5	SF	$ 220.00	$ 1,100.00	$ 1,100.00
10		b. Slab Edge	15	LF	$ 285.00	$ 4,275.00	$ 4,275.00
11		c. Slab Full Depth	1	SF	$ 245.00	$ 245.00	$ 245.00
12		d. Column/Beam	5	CF	$ 500.00	$ 2,500.00	$ 2,500.00
13		e. Small Repairs Allowance-Spots	3	EA	$ 100.00	$ 300.00	$ 300.00
14		f. Ceiling Spalls	3	SF	$ 225.00	$ 675.00	$ 675.00
15		g. Crack Repairs Floor Slab	5	LF	$ 6.00	$ -	$ 30.00
16		h. Post Tension Cable/Lock Off/Splice	0	EA	$ 2,400.00	$ -	$ -
17		i. Remove Abandoned Fasteners-Allowance	0	LF	$ 12.00	$ -	$ -
18	4	Railings - Walkway and Stairs					
19		a. Remove and Replace w/ New Aluminum Railings	262	LF	$ 200.00	$ -	$ 52,400.00
20		b. Fill Abandoned Core Holes	0	EA	$ 22.00	$ -	$ -
21	5	Walkway Floor Coating System-New	751	SF	$ 7.00	$ -	$ 5,257.00
22		a. Repair Base Coat/Texture	751	SF	$ 8.00	$ 6,008.00	$ -
23		b. Apply Topcoat Finish Wearcoat	751	SF	$ 4.00	$ 3,004.00	$ -
24		c. Replace with Full New Coating System	751	SF	$ 8.00	$ -	$ 6,008.00
25		d. Profiling Mortar for leveling and drainage	751	SF	$ 7.00	$ -	$ 5,257.00
26	6	Stucco Over Masonry Repairs Allowance	5	SF	$ 26.00	$ 130.00	$ 130.00
27	7	Window Sill Allowance	0	LF	$ 65.00	$ -	$ -
28		**Walkways - Estimated Budget Totals**				**$ 23,988.00**	**$ 86,181.00**
29		**Other Alternatives and Costs to Consider**					
30		**Option - Ground Level Coatings**	**1**	**LS**			TBD
31							
32		**Contingencies need to be added to budget for increased costs that are probable due to hidden conditions and**					
33		**additional concrete damage that may exist or occur over time**					
34							
35							

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	**Balcony Quantities - Four Seasons Condominiums**														
2	**Unit #**	**Balcony Surface Area (SF)**	**Railings (LF)**	**Floor Finish**	**Concrete Spall Surface (SF)**	**Concrete Spall Ceiling (SF)**	**Concrete Spall Edge (LF)**	**Concrete Spall Full Depth (SF)**	**Concrete Spall Column- Beam (CF)**	**Small Repairs (EA)**	**PT Pocket (EA)**	**Sliding Glass Door Intrusion (LF)**	**Window Sill (LF)**	**Sliding Glass Door Condition**	**Shutters**
3	112	140	25	Coating	0	0	0	0	0	0	0	0	0	Fair/Older	NA
4	110	140	25	Coating	0	0	0	0	0	0	0	0	0	Fair/Older	NA
5	108	140	25	Coating	6	0	3	0	0	0	0	0	0	Fair/Older	NA
6	106	140	25	Coating	12	0	0	0	0	0	0	0	0	Fair/Older	NA
7	104	140	25	Coating	0	0	0	0	0	0	0	0	0	Good/Newer	NA
8	102	140	25	Coating	0	0	0	0	0	0	0	0	0	Good/Newer	Roll Down/Edge
9	101	0	25	Tile	0	0	0	0	0	0	0	0	0	Fair/Older	Roll Down/Edge
10	103	0	25	Coating	0	0	0	0	0	0	0	0	0	Good/Newer	Roll Down/Door
11	105	0	25	Coating	0	0	0	0	0	0	0	0	0	Good/Newer	Roll Down/Door
12	107	0	25	Coating	0	0	2	0	0	0	0	0	0	Good/Older	NA
13	109	0	25	Tile	0	0	0	0	0	0	0	0	0	Fair/Older	NA
14	111	0	25	Tile	0	0	0	0	0	0	0	0	0	Fair/Older	NA
15	**Totals**	**840**	**300**	**0**	**18**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Keystone Engineering

Four Seasons Condominiums
Balcony Quantities - Building 2

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	**Balcony Quantities - Four Seasons Condominiums**														
2	**Unit #**	**Balcony Surface Area (SF)**	**Railings (LF)**	**Floor Finish**	**Concrete Spall Surface (SF)**	**Concrete Spall Ceiling (SF)**	**Concrete Spall Edge (LF)**	**Concrete Spall Full Depth (SF)**	**Concrete Spall Column- Beam (CF)**	**Small Repairs (EA)**	**PT Pocket (EA)**	**Sliding Glass Door Intrusion (LF)**	**Window Sill (LF)**	**Sliding Glass Door Condition**	**Shutters**
3	202	140	25	Tile	0	0	0	0	0	0	0	0	0	Good/Older	NA
4	204	140	25	Coating	0	0	0	0	0	0	0	0	0	Fair/Older	NA
5	206	140	25	Coating	0	0	0	0	2	0	0	0	0	Fair/Older	NA
6	210	140	25	Coating	4	0	0	0	1	0	0	0	0	Fair/Older	NA
7	208	140	25	Coating	0	0	0	0	0	0	0	0	0	Good/Older	NA
8	212	140	25	Coating	0	0	1	0	0	0	0	0	0	Good/Newer	NA
9	211	0	25	Tile	0	0	0	0	0	0	0	0	0	Fair/Older	NA
10	209	0	25	Coating	0	0	0	0	0	0	0	0	0	Fair/Older	NA
11	207	0	25	Coating	0	0	0	0	0	0	0	0	0	NA	NA
12	205	0	25	Bare	0	0	0	0	2	0	0	0	0	NA	NA
13	203	0	25	Bare	0	0	0	0	0	0	0	0	0	NA	NA
14	201	0	25	Tile	0	0	0	0	0	0	0	0	0	NA	Roll Down/Door
15	**Totals**	**840**	**300**	**0**	**4**	**0**	**1**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	**Balcony Quantities - Four Seasons Condominiums**														
2	**Unit #**	**Balcony Surface Area (SF)**	**Railings (LF)**	**Floor Finish**	**Concrete Spall Surface (SF)**	**Concrete Spall Ceiling (SF)**	**Concrete Spall Edge (LF)**	**Concrete Spall Full Depth (SF)**	**Concrete Spall Column- Beam (CF)**	**Small Repairs (EA)**	**PT Pocket (EA)**	**Sliding Glass Door Intrusion (LF)**	**Window Sill (LF)**	**Sliding Glass Door Condition**	**Shutters**
3	302	140	25	Coating	0	0	0	0	0	0	0	0	0	Fair/Older	NA
4	304	140	25	Coating	0	0	0	0	1	0	0	0	0	Good/Older	Roll Down/Door
5	306	140	25	Tile	0	0	0	0	0	0	0	0	0	Fair/Older	Roll Down/Door
6	308	140	25	Coating	0	0	0	0	0	0	0	0	0	Fair/Older	NA
7	310	140	25	Coating	0	0	0	0	0	0	0	0	0	Fair/Older	NA
8	312	140	25	Tile	0	0	9	0	0	0	0	0	0	Fair/Older	Roll Down/Edge
9	311	0	25	Bare	0	0	0	0	0	0	0	0	0	NA	NA
10	309	0	25	Coating	0	0	0	0	0	0	0	0	0	Fair/Older	NA
11	307	0	25	Tile	0	0	0	0	0	0	0	0	0	Fair/Older	NA
12	301	0	25	Tile	0	0	0	0	0	0	0	0	0	Fair/Older	Roll Down/Door
13	303	0	25	Coating	0	0	0	0	0	0	0	0	0	Fair/Older	NA
14	305	0	25	Tile	0	4	0	0	0	0	0	0	0	Fair/Older	Accordion/Edge
15	**Totals**	**840**	**300**	**0**	**0**	**4**	**9**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**

Keystone Engineering

Four Seasons Condominiums
Balcony Quantities - Building 4

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	**Balcony Quantities - Four Seasons Condominiums**														
2	**Unit #**	**Balcony Surface Area (SF)**	**Railings (LF)**	**Floor Finish**	**Concrete Spall Surface (SF)**	**Concrete Spall Ceiling (SF)**	**Concrete Spall Edge (LF)**	**Concrete Spall Full Depth (SF)**	**Concrete Spall Column- Beam (CF)**	**Small Repairs (EA)**	**PT Pocket (EA)**	**Sliding Glass Door Intrusion (LF)**	**Window Sill (LF)**	**Sliding Glass Door Condition**	**Shutters**
3	402	140	25	Coating	2	0	2	0	0	0	0	0	0	Good/Older	NA
4	404	140	25	Coating	0	0	0	0	0	0	0	0	0	Good/Newer	NA
5	406	140	25	Coating	5	0	0	0	0	0	0	0	0	Fair/Older	NA
6	408	140	25	Tile	0	0	8	0	0	0	0	0	0	Fair/Older	NA
7	410	140	25	Coating	0	0	0	0	2	0	0	0	0	Fair/Older	NA
8	412	140	25	Coating	0	0	0	0	0	0	0	0	0	Good/Newer	Roll Down/Door
9	411	0	25	Tile	0	0	0	0	0	0	0	0	0	Fair/Older	Roll Down/Edge
10	409	0	25	Carpet	0	0	0	0	2	0	0	0	0	Fair/Older	NA
11	405	0	25	Tile	0	2	0	0	0	0	0	0	0	Good/Newer	NA
12	401	0	25	Tile	2	2	4	0	1	0	0	0	0	NA	NA
13	403	0	25	Coating	2	0	0	0	0	0	0	0	0	Good/Older	NA
14	407	0	25	Bare	0	0	0	0	2	0	0	0	0	NA	NA
15	**Totals**	**840**	**275**	**0**	**11**	**4**	**14**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**
16	-	-	**Red indicates old non picket style screens**	-	-	-	-	-	-	-	-	-	-	-	**0**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	**Balcony Quantities - Four Seasons Condominiums**														
2	**Unit #**	**Balcony Surface Area (SF)**	**Railings (LF)**	**Floor Finish**	**Concrete Spall Surface (SF)**	**Concrete Spall Ceiling (SF)**	**Concrete Spall Edge (LF)**	**Concrete Spall Full Depth (SF)**	**Concrete Spall Column- Beam (CF)**	**Small Repairs (EA)**	**PT Pocket (EA)**	**Sliding Glass Door Intrusion (LF)**	**Window Sill (LF)**	**Sliding Glass Door Condition**	**Shutters**
3	512	140	25	Tile	0	0	0	0	0	0	0	0	0	Fair/Older	NA
4	510	140	25	Coating	0	0	0	0	1	0	0	0	0	Good/Older	NA
5	508	140	25	Coating	0	0	7	0	0	0	0	0	0	Fair/Older	NA
6	506	140	25	Coating	0	0	0	0	0	0	0	0	0	Fair/Older	Roll Down/Door
7	504	140	25	Coating	0	0	0	0	2	0	0	0	0	Fair/Older	NA
8	502	140	25	Coating	0	0	0	0	1	0	0	0	0	Fair/Older	NA
9	503	0	25	Bare	0	0	0	0	0	0	0	0	0	Fair/Older	NA
10	501	0	25	Bare	0	0	0	0	0	0	0	0	0	NA	NA
11	505	0	25	Carpet	0	0	0	0	1	0	0	0	0	Fair/Older	NA
12	507	0	25	Tile	0	0	0	0	0	0	0	0	0	Good/Older	NA
13	509	0	25	Tile	0	0	0	0	0	0	0	0	0	Good/Older	Roll Down/Edge
14	511	0	25	Tile	0	0	0	0	1	0	0	0	0	Good/Older	NA
15	**Totals**	**840**	**300**	**0**	**0**	**0**	**7**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**

Keystone Engineering

Four Seasons Condominiums
Balcony Quantities - Building 6

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	**Balcony Quantities - Four Seasons Condominiums**														
2	**Unit #**	**Balcony Surface Area (SF)**	**Railings (LF)**	**Floor Finish**	**Concrete Spall Surface (SF)**	**Concrete Spall Ceiling (SF)**	**Concrete Spall Edge (LF)**	**Concrete Spall Full Depth (SF)**	**Concrete Spall Column- Beam (CF)**	**Small Repairs (EA)**	**PT Pocket (EA)**	**Sliding Glass Door Intrusion (LF)**	**Window Sill (LF)**	**Sliding Glass Door Condition**	**Shutters**
3	602	140	25	Coating	0	0	0	0	0	0	0	0	0	Fair/Older	NA
4	604	140	25	Tile	0	0	0	0	0	0	0	0	0	Fair/Older	NA
5	606	140	25	Tile	0	0	0	0	1	0	0	0	0	Good/Older	NA
6	608	140	25	Tile	0	0	10	0	1	0	0	0	0	Fair/Older	NA
7	610	140	25	Tile	0	0	6	0	0	0	0	0	0	Fair/Older	NA
8	612	140	25	Coating	0	0	3	0	1	0	0	0	0	Good/Older	NA
9	611	0	25	Tile	0	0	0	0	0	0	0	0	0	Fair/Older	N/A
10	609	0	25	Tile	0	0	0	0	0	0	0	0	0	Good/Older	NA
11	607	0	25	Tile	0	0	0	0	0	0	0	0	0	Good/Older	NA
12	605	0	25	Tile	0	6	0	0	0	0	0	0	0	Fair/Older	NA
13	603	0	25	Bare	0	2	0	0	0	0	0	0	0	NA	NA
14	**Totals**	**840**	**275**	**0**	**0**	**8**	**19**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**
15	-	-	**Red indicates old non picket style screens**	-	-	–	-	-	-	-	–	-	–	-	-

Four Seasons Condominiums
Balcony Quantities - Building 7

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	**Balcony Quantities - Four Seasons Condominiums**														
2	**Unit #**	**Balcony Surface Area (SF)**	**Railings (LF)**	**Floor Finish**	**Concrete Spall Surface (SF)**	**Concrete Spall Ceiling (SF)**	**Concrete Spall Edge (LF)**	**Concrete Spall Full Depth (SF)**	**Concrete Spall Column- Beam (CF)**	**Small Repairs (EA)**	**PT Pocket (EA)**	**Sliding Glass Door Intrusion (LF)**	**Window Sill (LF)**	**Sliding Glass Door Condition**	**Shutters**
3	712	140	25	Coating	0	0	0	0	0	0	0	0	0	Good/Older	Roll Down/Edge
4	710	140	25	Coating	0	0	0	0	0	0	0	0	0	Fair/Older	Roll Down/Door
5	708 (N/A)	140	25	NA	0	0	0	0	0	0	0	0	0	NA	NA
6	706	140	25	Coating	0	0	0	0	1	0	0	0	0	Good/Older	NA
7	704	140	25	Coating	0	0	0	0	1	0	0	0	0	Fair/Older	Roll Down/Door
8	702	140	25	Tile	0	0	0	0	0	0	0	0	0	Fair/Older	NA
9	711	0	25	Tile	0	0	0	0	0	0	0	0	0	Good/Older	Roll Down/Door
10	707	0	25	Coating	0	0	0	0	0	0	0	0	0	Good/Older	Roll Down/Door
11	705	0	25	Tile	0	0	0	0	2	0	0	0	0	Fair/Older	NA
12	703	0	25	Coating	0	0	0	0	0	0	0	0	0	Good/Older	Roll Down/Door
13	701	0	25	Tile	0	0	0	0	0	0	0	0	0	Good/Older	NA
14	**Totals**	**840**	**275**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	-	-
15		-	**Red indicates old non picket style screens**	-	-	-	-	-	-	-	-	-	-	-	-

	A	B	C	D	E	F	G	H	I	J
1	**Estimated Walkway Repair Quantities- Four Seasons Condominiums**									
2	**Area**	**Walkway Floor Surface Area (SF)**	**Walkway Railings (LF)**	**Concrete Spall Surface (SF)**	**Concrete Spall Ceiling (SF)**	**Concrete Spall Edge (LF)**	**Concrete Spall Full Depth (SF)**	**Concrete Spall Column-Beam (CF)**	**Small Repair (EA)**	**Expansion Joint LF)**
3	Level 2	751	150	19	0	8	0	6	0	0
4	Level 1	NA	NA	0	0	0	0	0	0	0
5	**Estimated Totals**	**751**	**150**	**19**	**0**	**8**	**0**	**6**	**0**	**0**
6										
7										

	A	B	C	D	E	F	G	H	I	J
1	**Estimated Walkway Repair Quantities-Riverwalk Condominiums**									
2	**Area**	**Walkway Floor Surface Area (SF)**	**Walkway Railings (LF)**	**Concrete Spall Surface (SF)**	**Concrete Spall Ceiling (SF)**	**Concrete Spall Edge (LF)**	**Concrete Spall Full Depth (SF)**	**Concrete Spall Column-Beam (CF)**	**Small Repair (EA)**	**Expansion Joint LF)**
3	Level 2	751	150	0	0	0	0	0	0	0
4	Level 1	NA	NA	0	0	0	0	0	0	0
5	**Estimated Totals**	**751**	**150**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
6										
7										

	A	B	C	D	E	F	G	H	I	J
1	**Estimated Walkway Repair Quantities-Four Seasons Condominiums**									
2	**Area**	**Walkway Floor Surface Area (SF)**	**Walkway Railings (LF)**	**Concrete Spall Surface (SF)**	**Concrete Spall Ceiling (SF)**	**Concrete Spall Edge (LF)**	**Concrete Spall Full Depth (SF)**	**Concrete Spall Column-Beam (CF)**	**Small Repair (EA)**	**Expansion Joint LF)**
3	Level 2	751	150	0	0	0	0	0	0	0
4	Level 1	NA	NA	0	2	0	0	0	0	0
5	**Estimated Totals**	**751**	**150**	**0**	**2**	**0**	**0**	**0**	**0**	**0**
6										
7										

	A	B	C	D	E	F	G	H	I	J
1	**Estimated Walkway Repair Quantities-Four Seasons Condominiums**									
2	**Area**	**Walkway Floor Surface Area (SF)**	**Walkway Railings (LF)**	**Concrete Spall Surface (SF)**	**Concrete Spall Ceiling (SF)**	**Concrete Spall Edge (LF)**	**Concrete Spall Full Depth (SF)**	**Concrete Spall Column-Beam (CF)**	**Small Repair (EA)**	**Expansion Joint LF)**
3	Level 2	751	150	15	0	6	0	4	0	0
4	Level 1	NA	NA	0	0	0	0	0	0	0
5	**Estimated Totals**	**751**	**150**	**15**	**0**	**6**	**0**	**4**	**0**	**0**
6										
7										

	A	B	C	D	E	F	G	H	I	J
1	**Estimated Walkway Repair Quantities-Four Seasons Condominiums**									
2	**Area**	**Walkway Floor Surface Area (SF)**	**Walkway Railings (LF)**	**Concrete Spall Surface (SF)**	**Concrete Spall Ceiling (SF)**	**Concrete Spall Edge (LF)**	**Concrete Spall Full Depth (SF)**	**Concrete Spall Column-Beam (CF)**	**Small Repair (EA)**	**Expansion Joint LF)**
3	Level 2	751	150	16	0	0	0	15	1	0
4	Level 1	NA	NA	0	0	0	0	0	0	0
5	**Estimated Totals**	**751**	**150**	**16**	**0**	**0**	**0**	**15**	**1**	**0**
6										
7										

	A	B	C	D	E	F	G	H	I	J
1	**Estimated Walkway Repair Quantities-Four Seasons Condominiums**									
2	**Area**	**Walkway Floor Surface Area (SF)**	**Walkway Railings (LF)**	**Concrete Spall Surface (SF)**	**Concrete Spall Ceiling (SF)**	**Concrete Spall Edge (LF)**	**Concrete Spall Full Depth (SF)**	**Concrete Spall Column-Beam (CF)**	**Small Repair (EA)**	**Expansion Joint LF)**
3	Level 2	751	150	4	0	0	0	3	1	0
4	Level 1	NA	NA	0	0	0	0	0	0	0
5	**Estimated Totals**	**751**	**150**	**4**	**0**	**0**	**0**	**3**	**1**	**0**
6										
7										

	A	B	C	D	E	F	G	H	I	J
1	**Estimated Walkway Repair Quantities-Four Seasons Condominiums**									
2	**Area**	**Walkway Floor Surface Area (SF)**	**Walkway Railings (LF)**	**Concrete Spall Surface (SF)**	**Concrete Spall Ceiling (SF)**	**Concrete Spall Edge (LF)**	**Concrete Spall Full Depth (SF)**	**Concrete Spall Column-Beam (CF)**	**Small Repair (EA)**	**Expansion Joint LF)**
3	Level 2	751	150	0	0	4	0	0	0	0
4	Level 1	NA	NA	0	0	0	0	0	0	0
5	**Estimated Totals**	**751**	**150**	**0**	**0**	**4**	**0**	**0**	**0**	**0**
6										
7										

BUILDING 1

Example view of stained balcony floor coatings

Example view of rusting fasteners of screen railing

Example view of worn floor coatings

Example view of no shims under screen which prevents positive drainage

Example view of old sliders and old floor coatings

Example view of spalled concrete surface due to corroding reinforcing bars

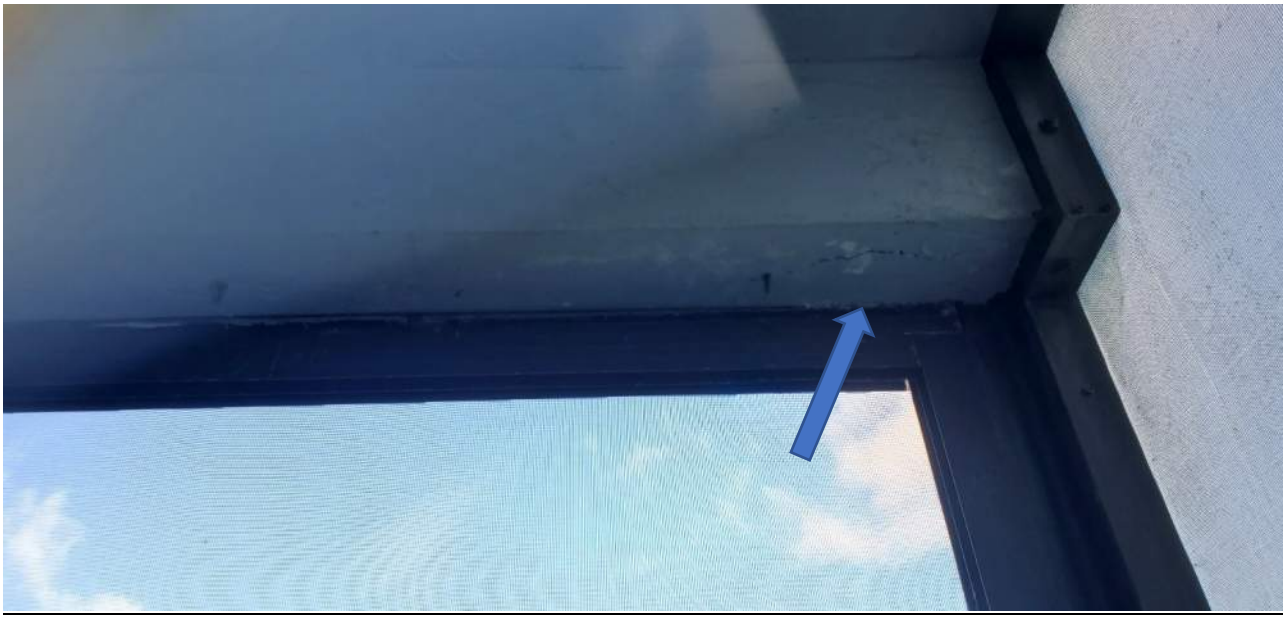
Example view of poor floor coatings

Example view of concrete balcony slab needing new coatings

Example view of spalled concrete surface due to corroding reinforcing bars

Example view of corroded corner column of screened porch

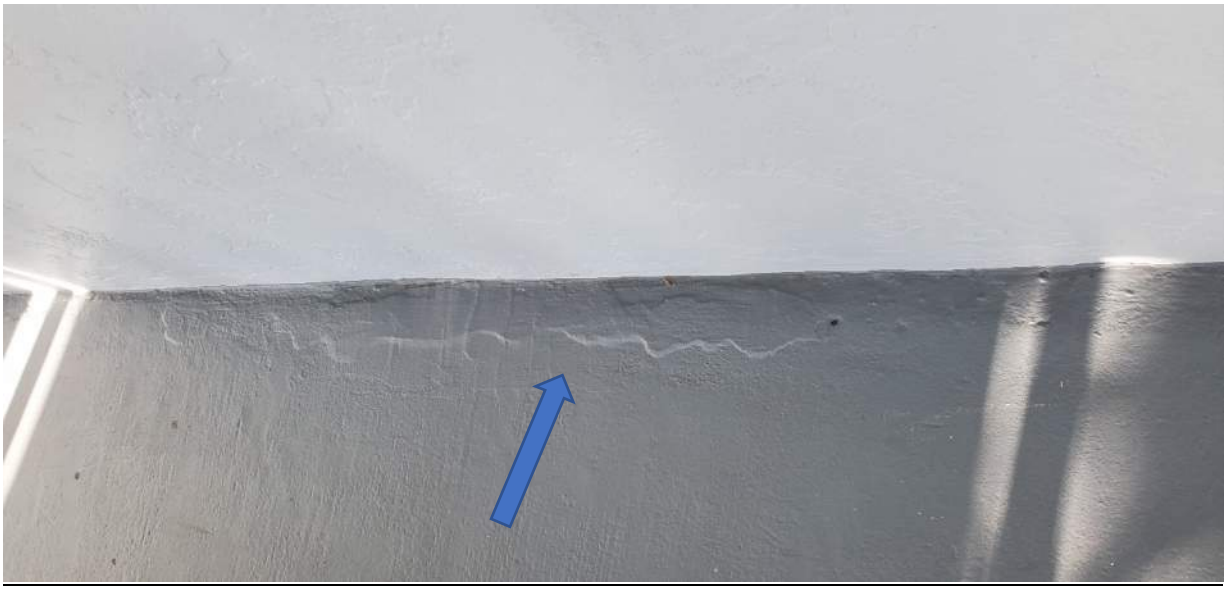
Example view of rust stains coming from screen posts



Example view of concrete beam spalling

Example view of spalling concrete slab ceiling

Example view of concrete ceiling spalling

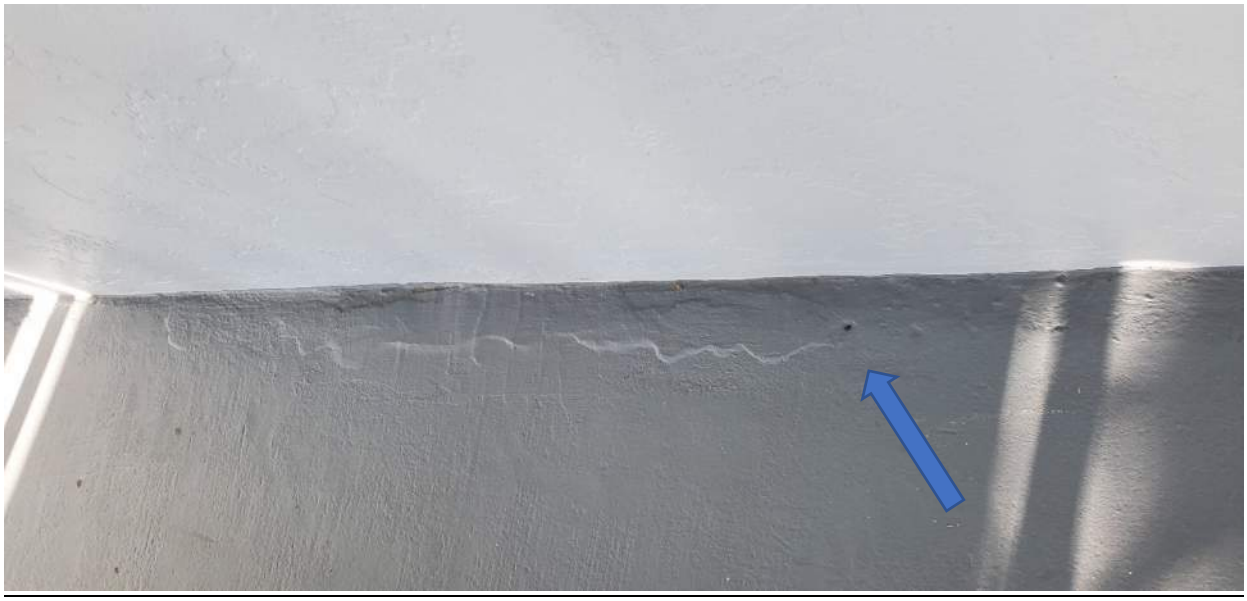


Example view of spalling concrete on walkway

Example view of concrete walkway railing spalling

Example view of spalling concrete walkway railing picket

Example view of concrete stairs spalling



Example view of concrete walkway spalling and rust spots

BUILDING 2

Example view of rusting railing fastener.
Note there is tile on the balcony surface.

Example view of rusting sliders.

Example view of rusting screen railing fasteners and bad coatings.

Example view of spalling concrete due to corroding reinforcing bars

Example view of concrete slab edge spalling

Example view of damaged header that has been previously patched

Example view of rusting bearing plate on top of column

Example view of rusting railing fasteners and worn slab coatings

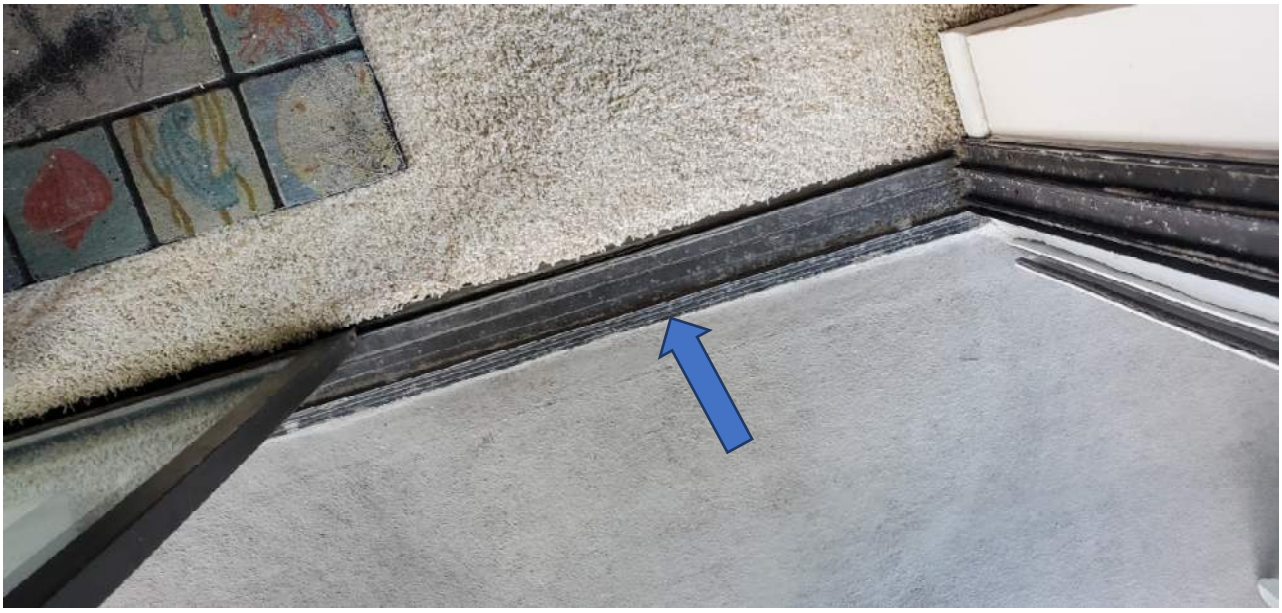
Example view of shimmed screen enclosure

Example view of unit 208. This slab was torn off about a year ago and a new slab was formed and poured with complete new waterproofing coatings.

Example view of spalling concrete railings on the walkway

Example view of concrete walkway railing spalling

BUILDING 3



Example view of old slider tracks

Example view of rusting and missing sliding door fasteners

Example view of concrete slab with tiles

Example view of concrete slab ceiling spall

Example view of concrete wall cracks adjacient to sliding glass door header

Example view of concrete walkway stair railing spalling

Example view of concrete walkway stair railing pickets spalling

BUILDING 4

Example view of spalled concrete ceiling

Example view of worn protective coatings

Example view of rusting fasteners

Example view of aging screens

Example view of concrete spalling by the slider

Example view of rusting screen railing fasteners

Example view of concrete spalling and rust spots

Example view of concrete ceiling spall

Example view of concrete edge spalling. Note the old style non picket screens

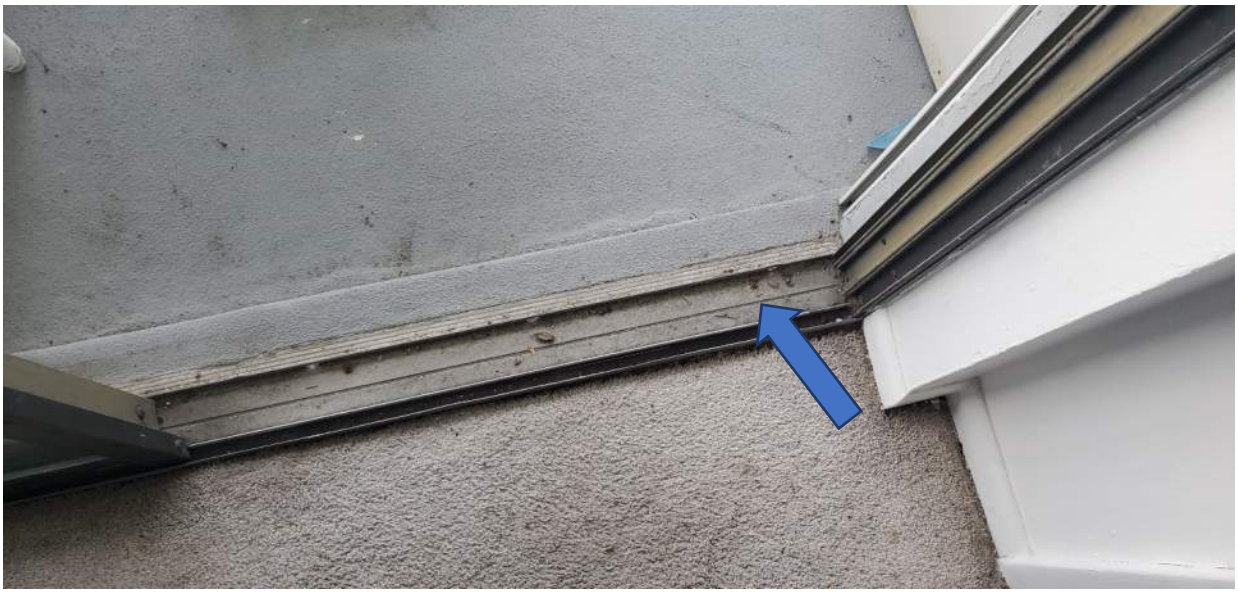
Example view of concrete edge spalling

Example view of concrete ceiling spalling

Example view of spalling concrete stairs post

BUILDING 5

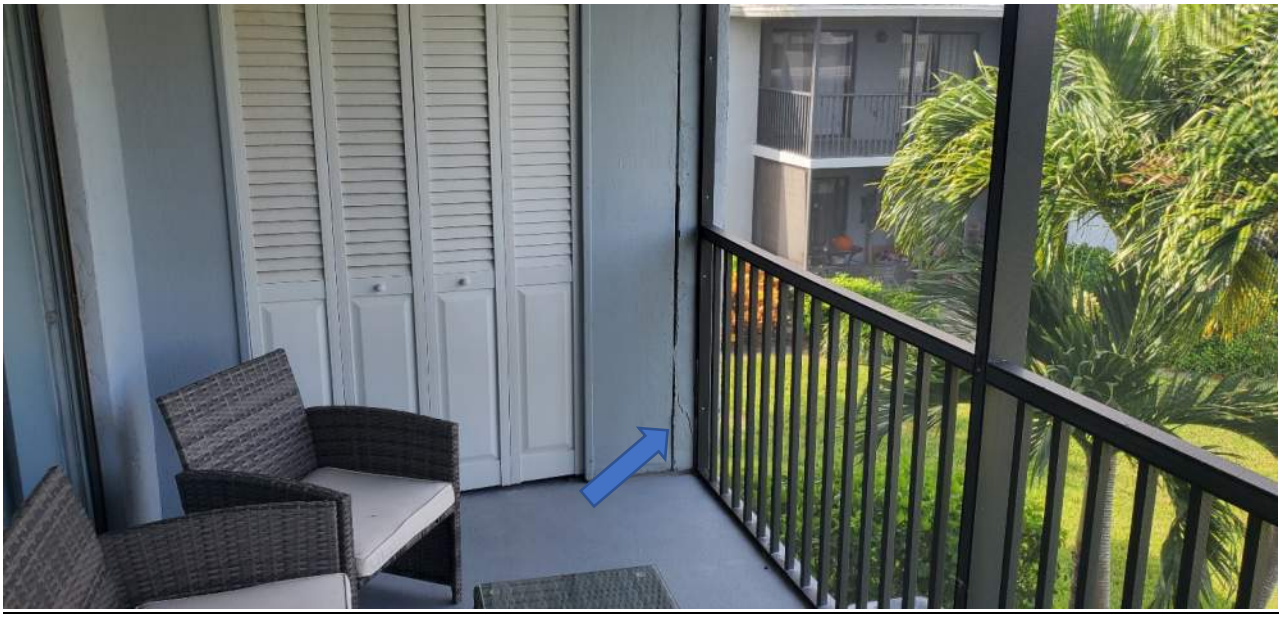
Example view of rusting screen fasteners and tiled concrete slab



Example view of rusting fasteners at slider

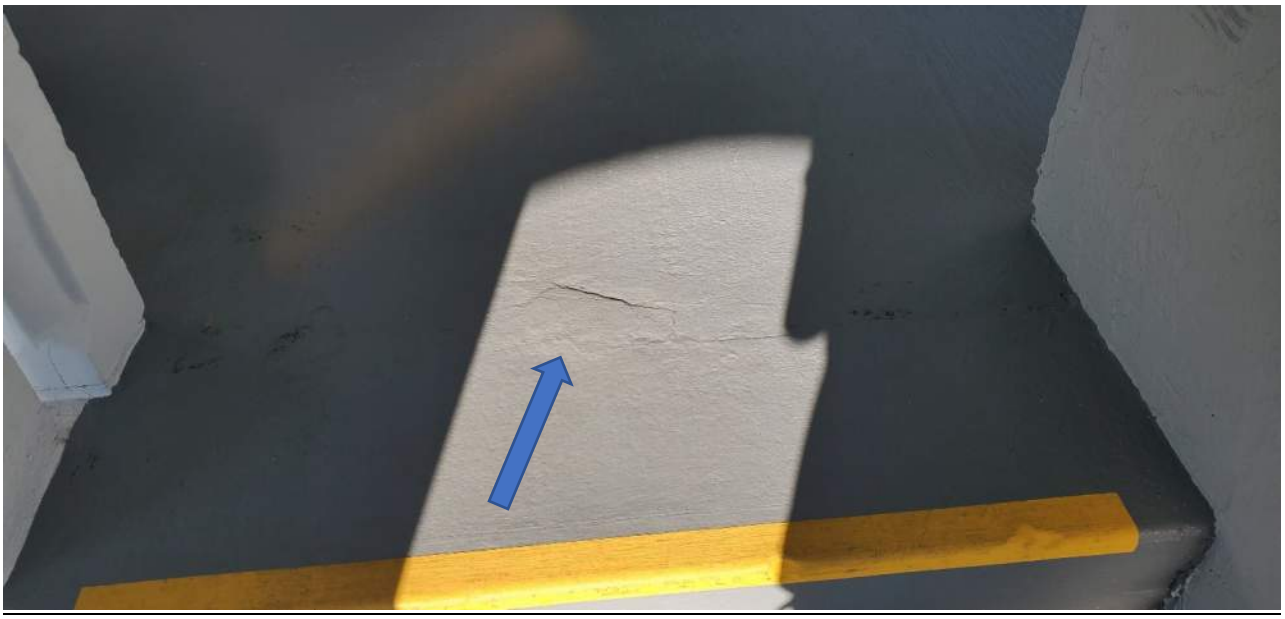
Example view of rusting screen fasteners and tiled concrete slab

Example view of slab with bad coatings



Example view of concrete column spall

Example view of concrete column spall



Example view of damaged coatings on top of the stairs

Example view of spalling concrete railing pickets

BUILDING 6

Example view of weathered coating system

Example view of slab edge spalls

Example view of weathered coating system

Example view of peeling screen railings and tiled slab.
Note the old style type screens without pickets

Example view of corroding screen railing fasteners

Example view of slab edge spalls

Example view of concrete ceiling staining

Example view of concrete beam spalling

Example view of concrete Header beam spalling

Example view of spalling concrete railings

BUILDING 7

Example view of slab with bad coatings

Example view of concrete spall in front of slider

Example view of concrete cracks

Example view of porch with glass enclosure

Example view of walkway

Example view of concrete walkway stair spalling

Example view of concrete walkway edge spalling