

Sunset Harbor Condominium

3873 South Banana River Boulevard
Cocoa Beach, Florida 32931

Walkways and Exterior Condition Survey Report

Prepared By
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September 16, 2022

Sunset Harbor Condominium Condition Survey Report

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September 16, 2022

Sunset Harbor Condominium Corp.
3873 South Banana River Boulevard
Cocoa Beach, Florida 32931

Re: Condition Survey Report –Walkways, Exterior Building Elements

EXECUTIVE SUMMARY

Keystone Engineering and Consulting, Inc. (Keystone) was contracted to provide an engineering inspection of the balconies, walkways, stairs and other exterior building elements at the Sunset Harbor Condominium. The inspection took place on November 10, 2021. It was performed by a professional engineer and trained assistants. Sunset Harbor consists of one, five-story, conventionally-reinforced, barrier island building constructed in 1985-1986.

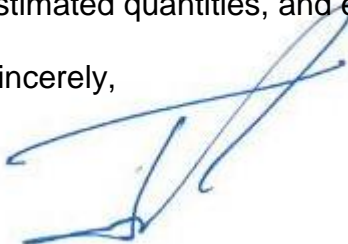
The inspection revealed a moderate amount of concrete spalling on the balconies and walkways. The concrete spalling is due to reinforcing steel corrosion induced by water and chloride (salt) intrusion. The damage was found throughout the inspected elements.

The structural repairs needed are straightforward and should be completed by qualified, experienced local restoration general contractors under the supervision of an experienced engineering firm, such as Keystone. The repairs, to provide proper structural performance and longevity, should be completed following the International Concrete Repair Institute (ICRI) and Post Tensioning Institute (PTI) standards.

For the purpose of this report, Keystone generated conceptual budgets for considering a comprehensive restoration and rehabilitation project. The budget considers two reasonable options for the floor coatings and railings/screens for discussion and decision making.

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

Sincerely,



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



September 16, 2022

Sunset Harbor Condominium Corp.
3873 South Banana River Boulevard
Cocoa Beach, Florida 32931

Re: Condition Survey Report –Walkways, Stair Landings and Stairs

Dear Board and Association Members:

Keystone Engineering and Consulting, Inc. (Keystone) was contracted to perform an inspection of the exterior building elements at the Sunset Harbor Condominium in Cocoa Beach, Florida. The inspection was completed on November 10, 2021. 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 this document is 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

Located on the Banana River, Sunset Harbor consists of one, five-story conventionally-reinforced, barrier island building constructed in 1985-1986. Access to the units is by elevator or by stairwells.

The poured in place concrete horizontal slabs are supported by structural load bearing columns and pilings. The exterior walls are a masonry construction with a painted stucco finish. The balcony and walkway floors have a coating finish. The walkway railings are surface mounted.

The balconies face west and have a screen enclosure railing system. The balconies have a variety of shutter systems. Many, possibly all of the screens/shutters are not shimmed to drain. Many of the sliding glass doors are aged with corroded fasteners and associated concrete spalling.

Project History

Other contractors have completed repair projects at Sunset Harbor over the years. No information was available to review. The quality of repairs are unknown, but suspected to be below industry standards.

Investigation Methodology

The inspection process was completed on a visual, acoustical, and hands-on basis by the undersigned Florida Registered Professional Engineer #50068 and 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, prove 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 or floors near the sliding glass doors, the screens/railings, sliding glass doors, and/or floor finishes 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 and post tension cable 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

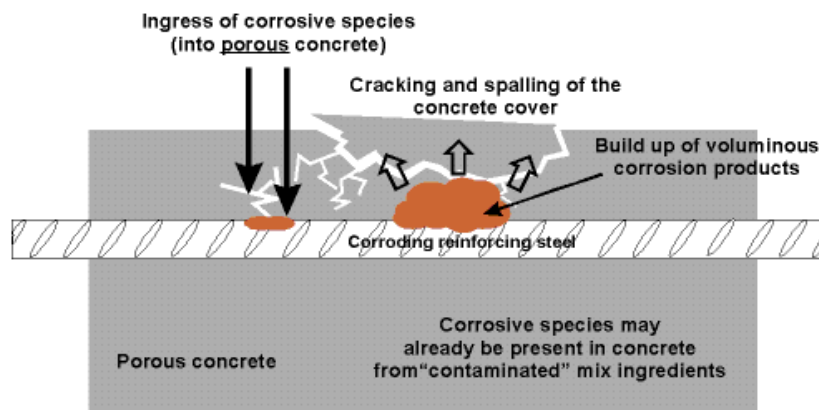
door replacement are examples of fixed items as both the task and quantities can be generally established accurately in advance.

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

Sunset Harbor is currently experiencing a moderate amount of corrosion induced concrete spalling damage on the walkways. Generally, this damage is in line with what we would expect on buildings of this age (36 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. All of these conditions can be improved to various degrees depending on the budget parameters. They include the screen enclosures, shutters, sliding glass doors and floor coatings.

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 controlled through corrosion mitigation. There are several corrosion mitigation strategies available, each with varying costs, performances, and life expectancies.

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, screens, 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.

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. 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 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 recommended 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.

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 floor 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 increased project costs.

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.**

Railing Systems-Cored in place railing systems are known to accelerate and exacerbate concrete spalling, particularly at the slab edges and locations of the post tension anchor heads. Cored railings feed salt-water into the slab on a nearly continuous basis. Properly installed "surface mounted" railings can eliminate the water intrusion at the rail post and greatly reduce the concrete damage.

Improper railing coatings along the coast can be problematic. Powder coating systems following AAMA 2604 are known to experience filiform corrosion which causes peeling of the coating finish. This necessitates the continuous repainting of the railing system. AAMA 2605 (PVDF or generally known as Kynar) utilizes a preferred chromium pretreatment process to provide excellent adhesion and weathering in a coastal exposure and greatly minimize filiform corrosion and peeling of the finish.

Screen enclosures need to be properly installed with sealed stainless steel fasteners and drainage shims.

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.

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

Shutters-When installing shutters, the area of installation should be inspected in advance to ensure no concrete repairs are needed that would necessitate the future removal and reinstallation of the shutter. The shutter should be installed to the proper building code and with stainless steel fasteners and appropriate drainage shims. **Shutters 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 shutter removal and reinstallation/replacement as necessary to complete the project scope of work using a qualified shutter subcontractor.** For shutters, subcontractors are viable as the shutter work can be completed before and after the restoration work.

Water Intrusion-If water can get in, the salt can get in, which leads to concrete spalling. Sliding glass doors, floor finishes, railings, shutters, fasteners-should all be designed and installed such that water intrusion is minimized.

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 State Statute 5B 4-D-Keystone intends for this report to satisfy a Phase II level structural inspection as exists under the current format of the statute. Keystone can also assist separately for the required roof, paint and windows inspection. Additional inspections for fire prevention, electrical and plumbing would be by others.

Major Project Considerations for Sunset Harbor

Balconies-Concrete Spalling -The balconies are experiencing a minor to moderate level of concrete spalling. The concrete spalling is predominantly at the slab edges and near the sliding glass doors. The balcony if Unit 309 has a high level of spalling throughout.

To minimize future concrete spalling, its frequency and magnitude a comprehensive project is recommended, including correcting, and improving the railings/screened enclosure, floor finishes and sliding glass doors as part of the restoration project.

Hidden conditions often exist behind shutters and under “patches” done by others.

To minimize future concrete spalling, its frequency and magnitude a comprehensive project is recommended, including correcting, and improving the shutter, screen enclosure, railing and floor finish issues as part of the balcony restoration project. This scope will require the removal of all screen enclosures, railings, floor finishes and most balcony shutters. In some cases, the concrete damage may extend under the sliding glass doors.

Balcony Floor Finishes – The balcony floor finish is the first line of defense against the corrosive elements of the salt air. Balconies had a fair to good coating, but had cracking and were different systems, colors and patterns. The recommended balcony 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 balcony finish.

Budget options are provided to repair and maintain the existing coating system or to strip to bare concrete and fully replace (recommended and preferred).

Balcony Screen Enclosures-The balcony screen enclosures exist on the perimeter of the majority of the balconies. In some cases, the screen frame base track is mounted directly to the balcony slab at the perimeter without drainage shims and is inhibiting drainage off the balcony. This lack of drainage is causing progressive concrete damage at the slab edge, stucco delamination and paint failure. The screen frames also have corroding fasteners and other deteriorating components. This is also accelerating the deterioration of the screen frames and fasteners, most of which are not stainless-steel.

The removal of the screens will allow the needed concrete repairs to be completed and the protective-decorative floor coating to be applied to the full balcony surface. Once the repairs are completed and the floor coating installed and walls painted, new screen enclosures can be installed. This would include proper Kynar coated aluminum framing, screening, drainage shims at the perimeter base track to accommodate continuous drainage, and the use of stainless-steel fasteners set in predrilled holes filled with urethane sealant.

Budgets are provided to maintain the existing screen/railing system, removing only as needed or to fully replace them (preferred and recommended option).

Note: The Association could consider switching from screen enclosures to an open railing system. This would reduce both current project and future maintenance costs.

Railing System-The existing railing system is built in to the screen enclosures. The Association could consider switching from screen enclosures to an open railing system. A full new railing system, surface mounted with the AAMA 2605 PVDF (Kynar) finish should be installed. Surface mounted railings provide future ease of repairs as they are easily removed and reinstalled. The railing option would be a cost saving over the screened enclosure.

Shutters-The current shutter installations have two fundamental and predominant issues; one is they lack proper drainage shims and are blocking water from existing the balcony. This is causing staining of the floor finish due to dirt build up, deterioration of the floor coatings, which are not designed to tolerate standing water, and ultimately, structural damage to the slab concrete edge due to salt-water infiltration at the slab edges. The other issue is the numerous corroded fasteners used for the shutters, including abandoned fasteners. The corroding fasteners weaken the installation and also are staining the buildings finishes. There are numerous abandoned corroding shutter fasteners and many of the current corroding shutter fasteners will break during removal and require extraction. The shutters are also likely hiding concrete spalling from visual or acoustical detection.

The project recommends that all balcony shutters attached to the balcony slab floor or at the balcony edge floor or ceiling, be fully removed for the project. Once all concrete repairs are completed, and floor coatings installed, the shutters can be reinstalled, or replaced, by a qualified shutter company. It is preferable to utilize a shutter contractor for this work contracted directly with the Association or unit owner, and not the restoration contractor. Since the shutter work removal can occur in phases, before the restoration work begins, and the shutter reinstallation/replacement can also occur in phases, once the restoration contractor has completed all work, a subcontractor is both feasible and preferred. One factor is the scarcity of resources, including labor, and handling the shutters is too taxing on the restoration contractors' resources as a non-core activity.

One aspect of the shutter to consider is its existing condition and the changes to the building codes since it was originally installed. It should first be determined by the shutter vendor whether a shutter can be simply removed and reinstalled, needs refurbishment to be reinstalled or must be replaced due to deterioration or building code changes. All reinstalled/replaced shutters need to include proper drainage shims, and stainless-steel fasteners set in predrilled holes filled with sealant.

Sliding Glass Doors-Many of the sliding glass doors appear to be older. Many have corroded fasteners, which can allow saltwater intrusion. There is concrete spalling on the balconies that can be attributed to saltwater intrusion at the sliding glass doors. Some of the doors will have to be removed to complete the recommended structural repairs. If it is an original door, and/or a door in poor condition, replacement with a new code compliant model will be needed. All older doors are candidates for recommended replacement.

Sliding glass doors are an individual owner item. However, it is recommended to consider replacing any aged or original sliding glass door as part of the restoration project. Properly specified and installed, new sliding glass doors, appropriate for an oceanfront exposure and performance, will provide better protection for the structure and spalling, and also better performance for water resistance, storms, wind driven rain, high pressure differentials during tropical storms and thermal/energy considerations.

For sliding glass door replacements, it is advisable to have the doors and installation provided by the restoration contractor, and not a 3rd party subcontractor, as with the shutters. This is due to the fact that the most appropriate time to install a new slider is during the project (not before or after) especially if there is concrete repairs needed under the doors. It is best to install the doors before final floor coatings and sealants are installed. Doors installed after the project; many times damage the new floor finishes. Also, doors installed during the project will be inspected by the engineering team to ensure the installation meets the manufacturer's requirements.

Walkway and Stair Floor Finishes – The walkways appeared to have less concrete spalling than the balconies. The walkways also do not have the detrimental factor of shutters with corroding fasteners and blocked drainage. The coating system on the walkways is starting to wear in places.

The budgets provided include options to repair and recoat the existing coating system after concrete repairs are completed. The preferred option provided is to strip all existing coatings to the bare concrete, once concrete repairs are completed, verify positive drainage and improve as needed with profiling mortar. Then install a full new decorative and protective floor coating system with proper

flexible waterproof coatings, faux tile patterned knock down texture, and color pigmented wear coat.

The recommended floor coating finish as considered in the budget 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 walkway and stairs 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.

For budget considerations, it is feasible to make the walkways entirely a separate and future project.

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.**
- **Consider a comprehensive restoration project as recommended including the following:**
 - **Unit 309 balcony to be removed and replaced.**
 - **All new balcony coatings to be applied.**
 - **Paint the exterior of the building.**

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.

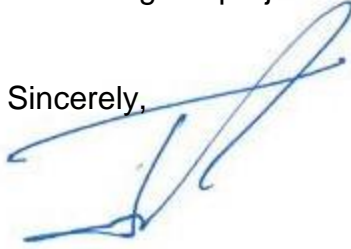
For the specific situations on this project, the most effective solutions available to us involve reducing the exposure of the structural components of the building to the corrosive atmospheric elements along with the use of corrosion mitigation products. This is best accomplished by the elimination of the current cracking due to concrete spalling (by repairing the concrete structural spall to ICRI standards), reducing exposure at railing posts, 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, 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,

A handwritten signature in blue ink, appearing to read 'Tomas Ponce', is written over the word 'Sincerely,'.

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

Sunset Harbor
Estimated Project Budget

Keystone Engineering
September 2022

Balconies

	A	B	C	D	E	F	G
1		Budget-Sunset Harbor Balconies				Repair Existing Coatings/ Railings/Screens	All New Coatings and Railings/Screens
2		<u>Item</u>	<u>Est. Qty.</u>	<u>Units</u>	<u>Estimated Unit Cost</u>	<u>Estimated Extended Cost</u>	<u>Estimated Extended Cost</u>
3	1	Mobilization	1	EA	\$ 45,000.00	\$ 45,000.00	\$ 45,000.00
4	2	Floor Coating					
5		a. Coating Strip	11050	SF	\$ 5.00		\$ 55,250.00
6		b. Tile Strip	0	SF	\$ 8.00		\$ -
7		b. Coating Prep and Recoat	11050	SF	\$ 1.50		\$ 16,575.00
8	3	Concrete Repairs					
9		a. Floor Surface	320	SF	\$ 185.00	\$ 59,200.00	\$ 59,200.00
10		b. Slab Edge	14	LF	\$ 285.00	\$ 3,990.00	\$ 3,990.00
11		c. Slab Full Depth	20	SF	\$ 275.00	\$ 5,500.00	\$ 5,500.00
12		d. Column/Beam	6	CF	\$ 500.00	\$ 3,000.00	\$ 3,000.00
13		e. Small Repairs Allowance-Spots	200	EA	\$ 75.00	\$ 15,000.00	\$ 15,000.00
14		f. Ceiling Spalls	30	SF	\$ 225.00	\$ 6,750.00	\$ 6,750.00
15		g. Profiling Mortar	11050	SF	\$ 9.00	\$ -	\$ 99,450.00
16		h. Crack Repairs Floor Slab	100	LF	\$ 8.00	\$ 800.00	\$ 800.00
17		i. Remove Aboandoned Fasteners-allowance	100	EA	\$ 12.00	\$ 1,200.00	\$ 1,200.00
18	4	Int. Weather Barricade/Door Removal	125	LF	\$ 85.00	\$ 10,625.00	\$ 10,625.00
19		(interior finishes by others)					\$ -
20		a. Sliding Glass Door Reinstall-Panels	12	EA	\$ 500.00	\$ 6,000.00	\$ 6,000.00
21	5	Stucco Over Masonry Repairs Allowance	300	SF	\$ 38.00	\$ 11,400.00	\$ 11,400.00
22	6	Window Sill Allowance Est.	36	LF	\$ 85.00	\$ 3,060.00	\$ 3,060.00
23	7	Railings/Screens					
24		a. Remove and Replace as needed	600	LF	\$ 130.00	\$ 78,000.00	
25		b. Replace with New Screen/Railings	600	LF	\$ 130.00	\$ -	\$ 78,000.00
26	8	Balcony Floor Coating System-					
27		a.New Full System	11050	SF	\$ 8.00		\$ 88,400.00
28		b. New topcoat over existing coating	11050	SF	\$ 3.00	\$ 33,150.00	\$ -
29		c. Repair Base Coat	1200	SF	\$ 8.00	\$ 9,600.00	\$ -
30		Balconies Estimated Budget Total				\$ 292,275.00	\$ 509,200.00
31		Other Alternatives and Costs to Consider					
32	9	Shutter R&R by others Incl. Fasteners	as needed to access needed repairs and apply protective coatings				
33	10	New Sliding Glass Door					
34		a. 12' x 6'-8"	1	EA	TBD		
35		b. 8' x 6'-8"	1	EA	TBD		
36		c. 6' x 6'-8"	1	EA	TBD		
37	11	Exterior Walls Painting	1	LS	TBD		
38	12	PT Cable Replace-If Needed			T&M		
39		Contingencies need to be added to budget for increased costs that are probable due to hidden conditions and					
40		additional concrete damage that may exist or occur over time					
41		*Roof Work may require additional efforts and a roofing contractor if it goes beyond a surface repair depth					

Sunset Harbor
Estimated Project Budget

Keystone Engineering
September 2022

Walkways

	A	B	C	D	E	F	G
1		Budget-Sunset Harbor Walkways				Repair Existing Coatings/ Railings	All New Coatings and Railings
2		<u>Item</u>	<u>Est. Qty.</u>	<u>Units</u>	<u>Estimated Unit Cost</u>	<u>Estimated Extended Cost</u>	<u>Estimated Extended Cost</u>
3	1	Mobilization	1	EA	\$ 25,000.00	\$ 25,000.00	\$ 25,000.00
4	2	Floor Coating					
5		a. Coating Strip	3864	SF	\$ 5.00		\$ 19,320.00
6		b. Coating Prep	3864	SF	\$ 1.50	\$ 5,796.00	
7	3	Concrete Repairs					
8		a. Floor Surface	110	SF	\$ 185.00	\$ 20,350.00	\$ 20,350.00
9		b. Slab Edge	30	LF	\$ 285.00	\$ 8,550.00	\$ 8,550.00
10		c. Slab Full Depth	10	SF	\$ 275.00	\$ 2,750.00	\$ 2,750.00
11		d. Column/Beam	5	CF	\$ 500.00	\$ 2,500.00	\$ 2,500.00
12		e. Small Repairs Allowance-Spots	80	EA	\$ 75.00	\$ 6,000.00	\$ 6,000.00
13		f. Ceiling Spalls	16	SF	\$ 225.00	\$ 3,600.00	\$ 3,600.00
14		g. Profiling Mortar	3864	SF	\$ 9.00	\$ -	\$ 34,776.00
15		h. Crack Repairs Floor Slab	40	LF	\$ 8.00	\$ -	\$ 320.00
16	4	Stucco Over Masonry Repairs Allowance	240	SF	\$ 38.00	\$ 9,120.00	\$ 9,120.00
17	5	Window Sill Allowance Est.	28	LF	\$ 80.00	\$ 2,240.00	\$ 2,240.00
18	6	Railings					
19		a. Remove and Reinstall as needed	200	LF	\$ 24.00	\$ 4,800.00	\$ -
20		b. Regrout Post Pockets	0	EA	\$ 45.00	\$ -	\$ -
21		c. Fill Abandoned Core Holes	0	EA	\$ 90.00	\$ -	\$ -
22		d. Replace with New Surface Mount Railings	864	LF	\$ 110.00	\$ -	\$ 95,040.00
23	7	Walkway Floor Coating System-					
24		a. Floor Coating Repair- Concrete Repairs or Loose Coating Finish	500	SF	\$ 8.00	\$ 4,000.00	
25		b. New topcoat over existing coating	3864	SF	\$ 4.00	\$ 15,456.00	\$ -
26		c. New Coating System	3864	SF	\$ 8.00		\$ 30,912.00
27		Walkways Estimated Budget Total				\$ 110,162.00	\$ 260,478.00
28							
29		Contingencies need to be added to budget for increased costs that are probable due to hidden conditions and					
30		additional concrete damage that may exist or occur over time					
31		*Roof Work may require additional efforts and a roofing contractor if it goes beyond a surface repair depth					

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Balcony Quantities-Sunset Harbor														
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)	Concrete Small Repair	Door Intrusion (LF)	Window Sill (LF)	Coating (SF)	Door Condition	Shutters
28	506	224	32	Coating	0	0	0	0	0	0	0	0	0	Fair/Older	Roll Down at Edge
29	406	224	32	Coating		0	7	0	0	0	0	0	0	Good/Newer	Roll Down at Edge
30	306	224	32	Coating	0	1	0	0	0	0	0	0	0	Good/Older	Roll Down at Edge
31	206	224	32	Coating	0	0	0	0	0	0	0	0	0	Good/Older	None
32	106	224	32	Coating	0	0	0	0	0	0	0	0	0		
33	507	224	32	Coating	0	0	0	0	0	0	0	0	0	Good/Older	Roll Down at Edge
34	407	224	32	Coating	0	0	0	0	0	0	0	0	0	Good/Older	Roll Down at Edge
35	307	224	32	Coating	0	0	0	0	0	0	0	0	0	Good/Older	Roll Down at Edge
36	207	224	32		0	0	0	0	0	0	0	0	0	Good/Newer	Roll Down at Edge
37	107	224	32		0	0	0	0	0	0	0	0	0		
38	508	224	32	Coating	0	0	0	0	0	0	0	0	0	Good/Newer	Roll Down at Edge
39	408	224	32	Coating	0	0	0	0	0	0	0	0	0	Good/Newer	Roll Down at Edge
40	308	224	32	Coating	0	0	0	0	0	0	0	0	0	Fair/Older	Roll Down at Edge
41	208	224	32	Coating	0	0	0	0	0	0	0	0	0	Good/Older	Roll Down at Edge
42	108	224	32		0	0	0	0	0	0	0	0	0		
43	509	321	54	Coating	2	0	0	0	0	0	0	0	0	Good/Older	Roll Down at Door
44	409	321	54	Coating	7	0	0	0	0	0	0	0	0	Fair/Older	Roll Down at Edge
45	309	321	54	Coating	56	5	0	0	0	0	0	0	0	Good/Older	Roll Down at Edge
46	209	321	54	Coating	2	0	0	0	1	0	0	0	0	Good/Older	Roll Down at Edge
47	109	321	54		0	0	0	0	0	0	0	0	0		
48	Totals	11050	1660	0	87	6	8	0	1	1	0	0	0	0	0

Example Photos



Ponding water evident from markings on balcony slab;
screen enclosure/railings not shimmed



Ponding water evident from markings on balcony slab;
screen enclosure/railings not shimmed



Screen enclosure/railing showing signs of oxidation



Corroded fasteners on screen enclosure



Corroded fasteners on screen enclosure



Screen enclosure fastener not embedded into concrete



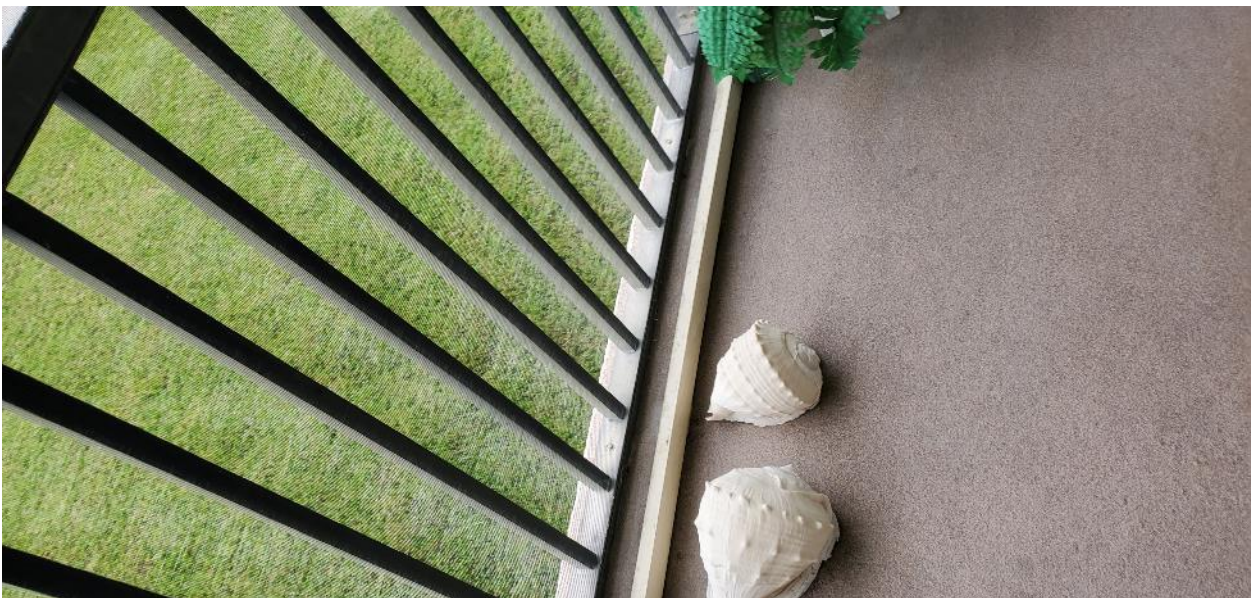
Enclosure/railing coating oxidizing and failing



Enclosure/railing coating oxidizing and failing



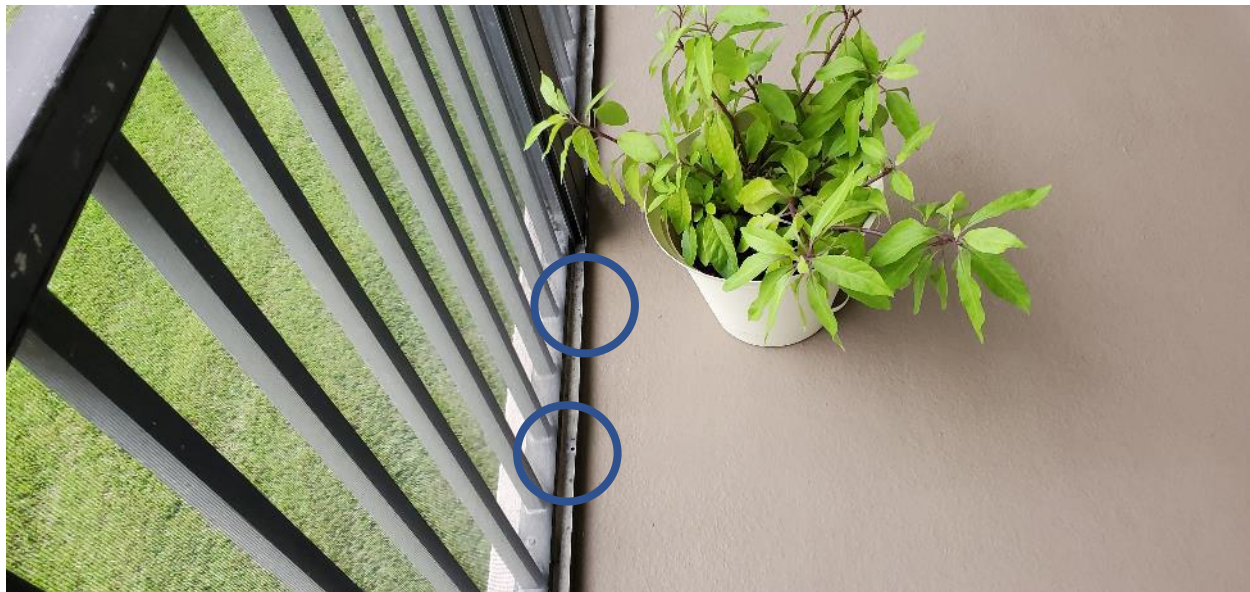
Shutters at balcony edge properly shimmed



Shutters at balcony edge properly shimmed



Corroded fasteners on shutter track



Corroded fasteners on shutter track



Cracks in balcony floor coating



Cracks in balcony floor coating



Corroded sliding glass door fasteners



Corroded fasteners at sliding glass door



Concrete spall at sliding glass door caused by reinforcing steel corrosion



Concrete spall under shutter track caused by reinforcing steel corrosion



Concrete spall at sliding glass door caused by reinforcing steel corrosion



Concrete spall at sliding glass door caused by reinforcing steel corrosion



Concrete spall caused by reinforcing steel corrosion



Concrete spall caused by reinforcing steel corrosion



Cracks at sliding glass door header



Cracks and rust spots on ceiling surface



Column spall and edge spall caused by reinforcing steel corrosion



Spalls along balcony slab edge, caused by reinforcing steel corrosion



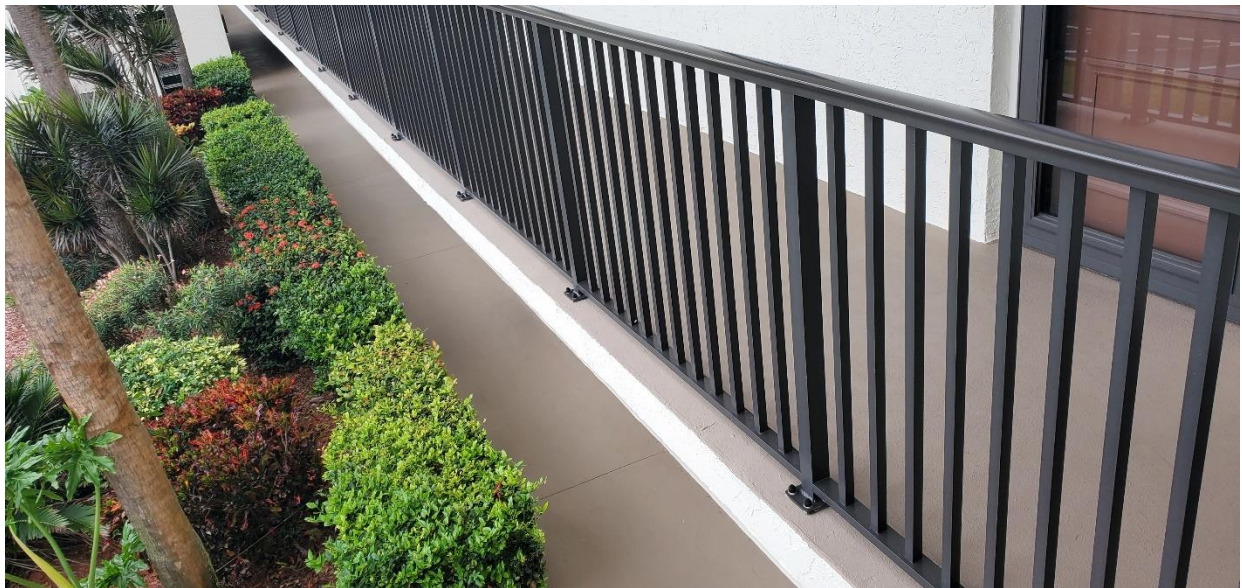
Spall along balcony slab edge, caused by reinforcing steel corrosion



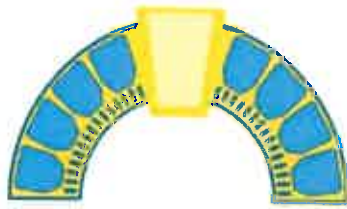
Advanced spall caused by reinforcing steel corrosion



Overview of west elevation



Overview of east elevation



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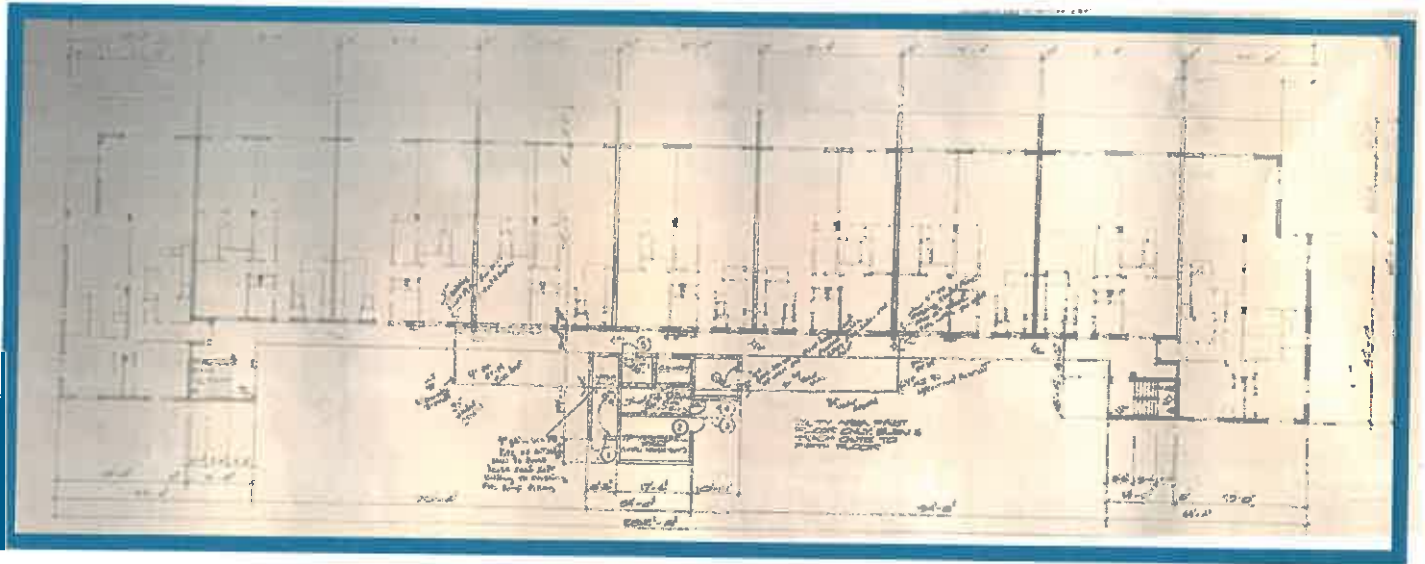
Office: 321.454.7300

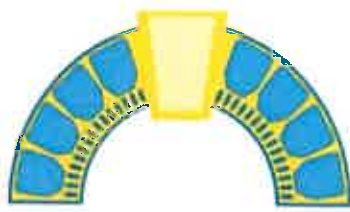
• KeystoneEngineeringPE.com

• Fax: 321.459.2888

Site Map

Sunset Harbor
3873 South Banana River Boulevard
Cocoa Beach, FL 32931





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Balcony Survey Map

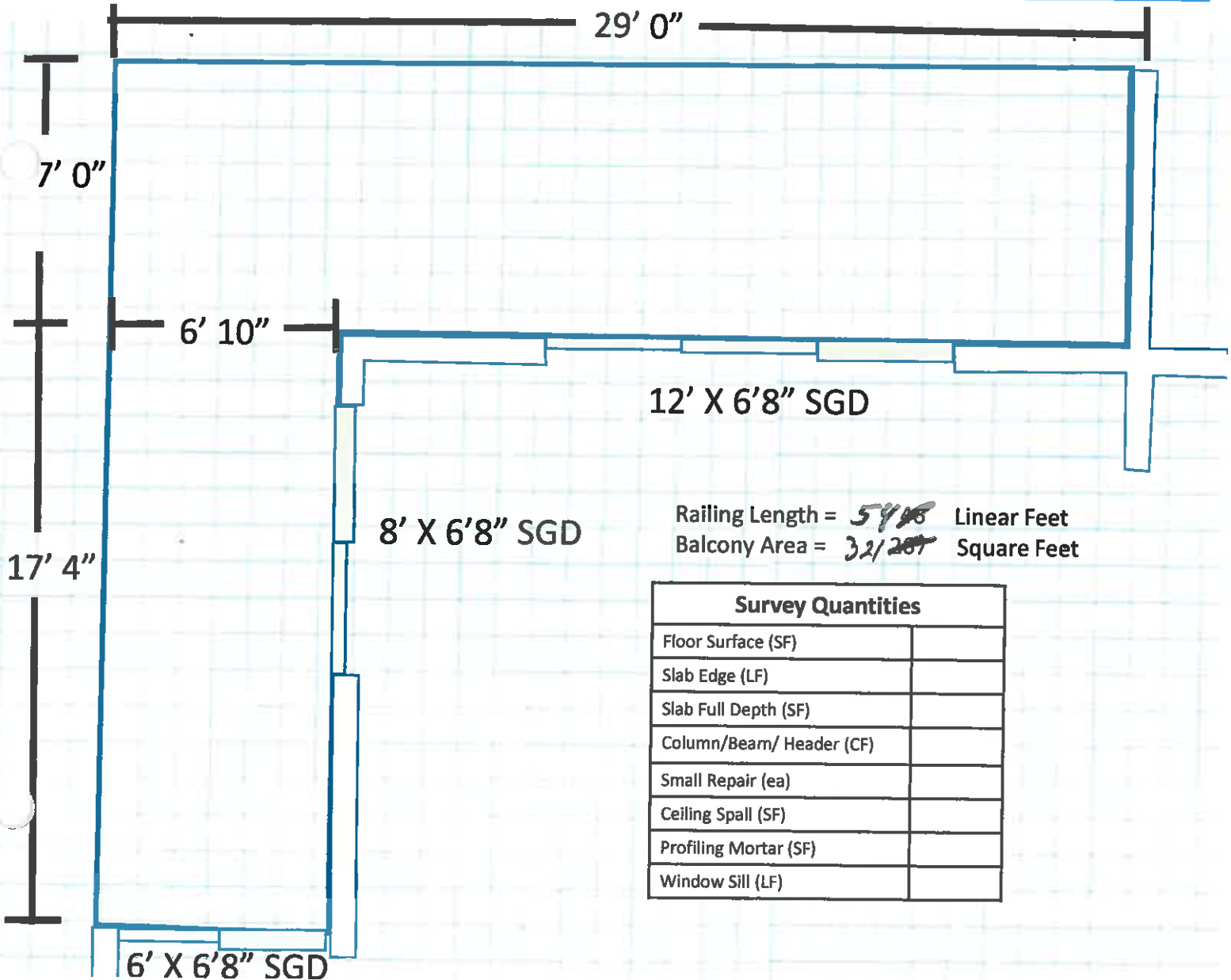
Stack 1

Project: Sunset Harbor

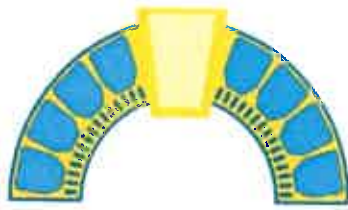
Unit # 401

Date: November 10, 2021

LEGEND		Railings			Sliding Doors		Vinyl Aluminum	
	Spall Above	Code Compliant:	<u>Yes</u>	No	Code Compliant:	<u>Yes</u>	No	
	Spall Below	Condition:	Good	<u>Fair</u>	Poor	Condition:	<u>Good</u>	Fair Poor
	Crack	Type:	Cored	<u>Surface Mount</u>	Screen	Age:	Older	<u>Newer</u>
	Rust Spot	Screen Shimmed:	<u>Yes</u>	No	Corroded Fasteners:	Yes	<u>No</u>	
		Shutters	<u>Yes</u>	No	Holes In Threshold:	Yes	<u>No</u>	
		Shimmed	Yes	No				
		<u>Edge</u>	Door		Flooring			
		Accordion	<u>Roll Down</u>					
					Type: Tile	<u>Coating</u>	Pattern	



Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

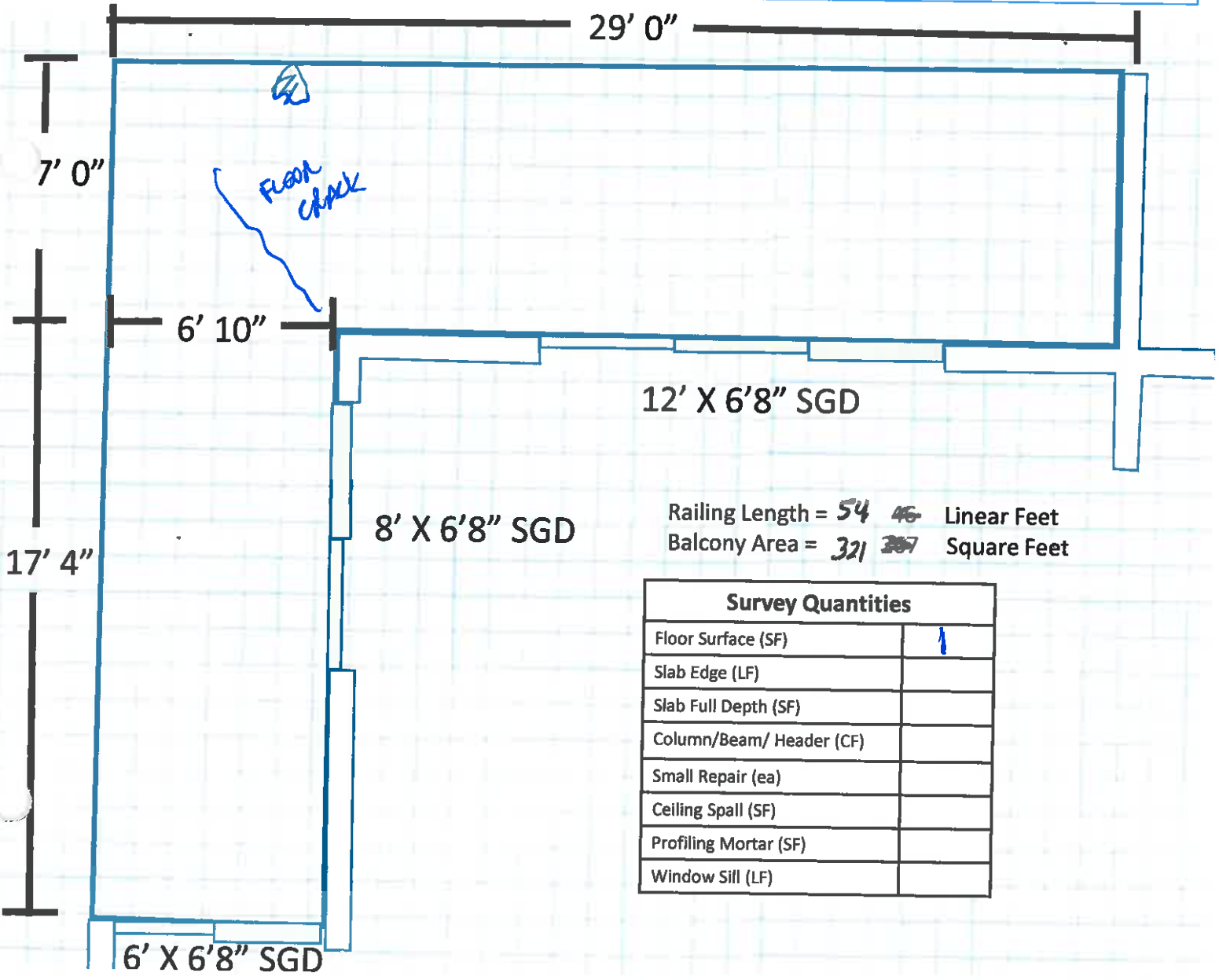
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Project: Sunset Harbor

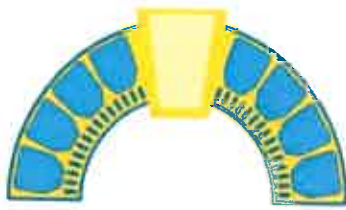
Unit # 301

Date: November, 2021

LEGEND		Railings		Sliding Doors		Flooring	
	Spall Above	Code Compliant: <u>Yes</u> No		Code Compliant: <u>Yes</u> No	<u>Vinyl</u> Aluminum		
	Spall Below	Condition: Good <u>Fair</u> Poor		Condition: <u>Good</u> Fair Poor	<u>Older</u> Newer		
	Crack	Type: Cored <u>Surface Mount</u> Screen		Age:			
	Rust Spot	Screen Shimmed: <u>Yes</u> No		Corroded Fasteners: <u>Yes</u> No			
		Shutters <u>Yes</u> No		Holes In Threshold: <u>Yes</u> No			
		Shimmed <u>Yes</u> No					
		<u>Edge</u> Door					
		Accordion <u>Roll Down</u>		Type: Tile <u>Coating</u> Pattern			



Survey Quantities	
Floor Surface (SF)	1
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

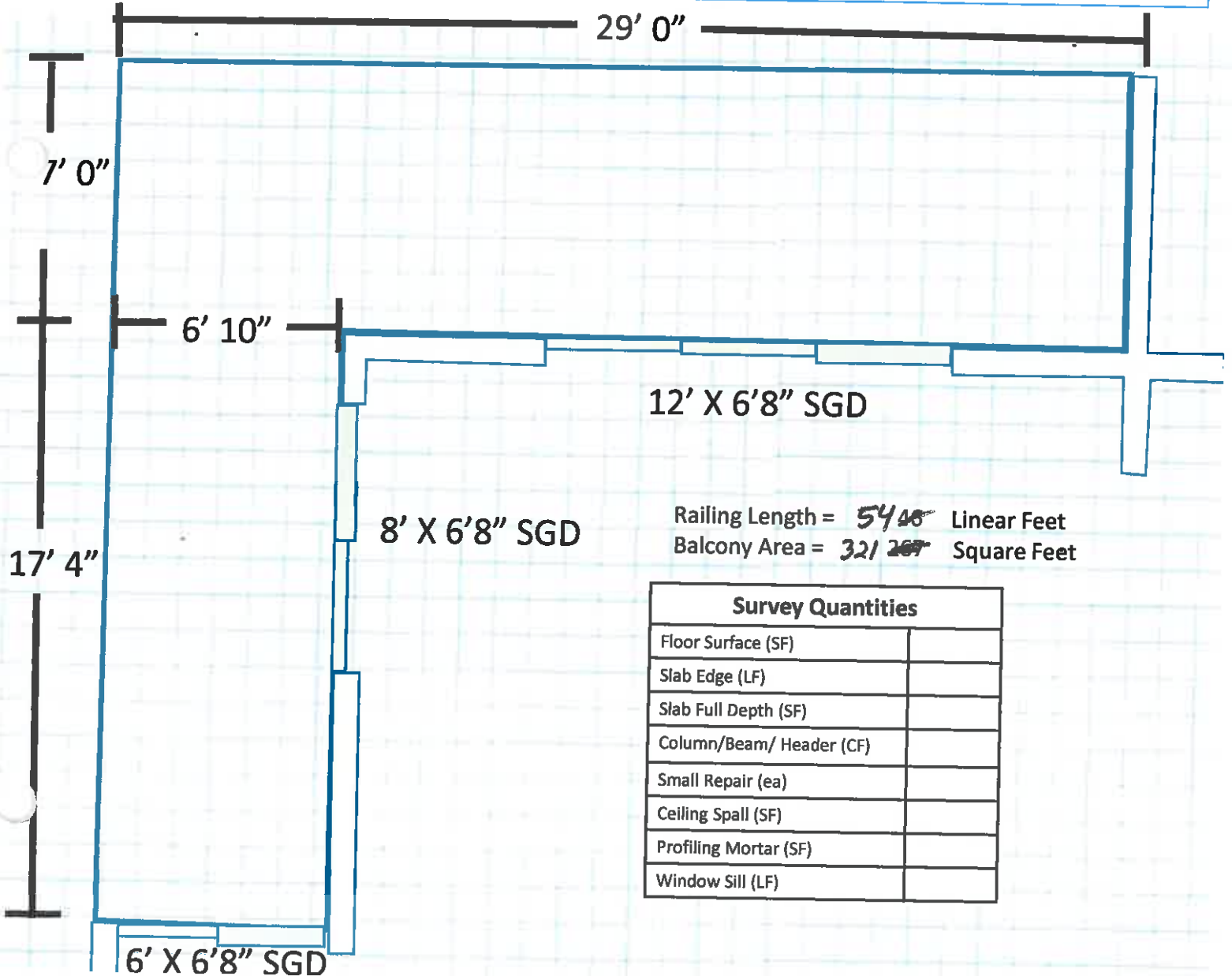
Stack 1

Project: Sunset Harbor

Unit # 201

Date: November 10, 2021

LEGEND		Railings		Sliding Doors	
	Spall Above	Code Compliant: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Code Compliant: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	Spall Below	Condition: <input checked="" type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor		Condition: <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor	
	Crack	Type: Cored <input checked="" type="checkbox"/> Surface Mount <input type="checkbox"/> Screen		Age: <input checked="" type="checkbox"/> Older <input type="checkbox"/> Newer	
	Rust Spot	Screen Shimmed: <input type="checkbox"/> Yes <input type="checkbox"/> No		Corroded Fasteners: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
		Shutters: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Holes In Threshold: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
		Shimmed: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
		Edge: <input checked="" type="checkbox"/> Door <input type="checkbox"/> Roll Down			
		Accordion: <input checked="" type="checkbox"/> Roll Down <input type="checkbox"/>			
				Flooring	
				Type: Tile <input checked="" type="checkbox"/> Coating <input type="checkbox"/> Pattern	



Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

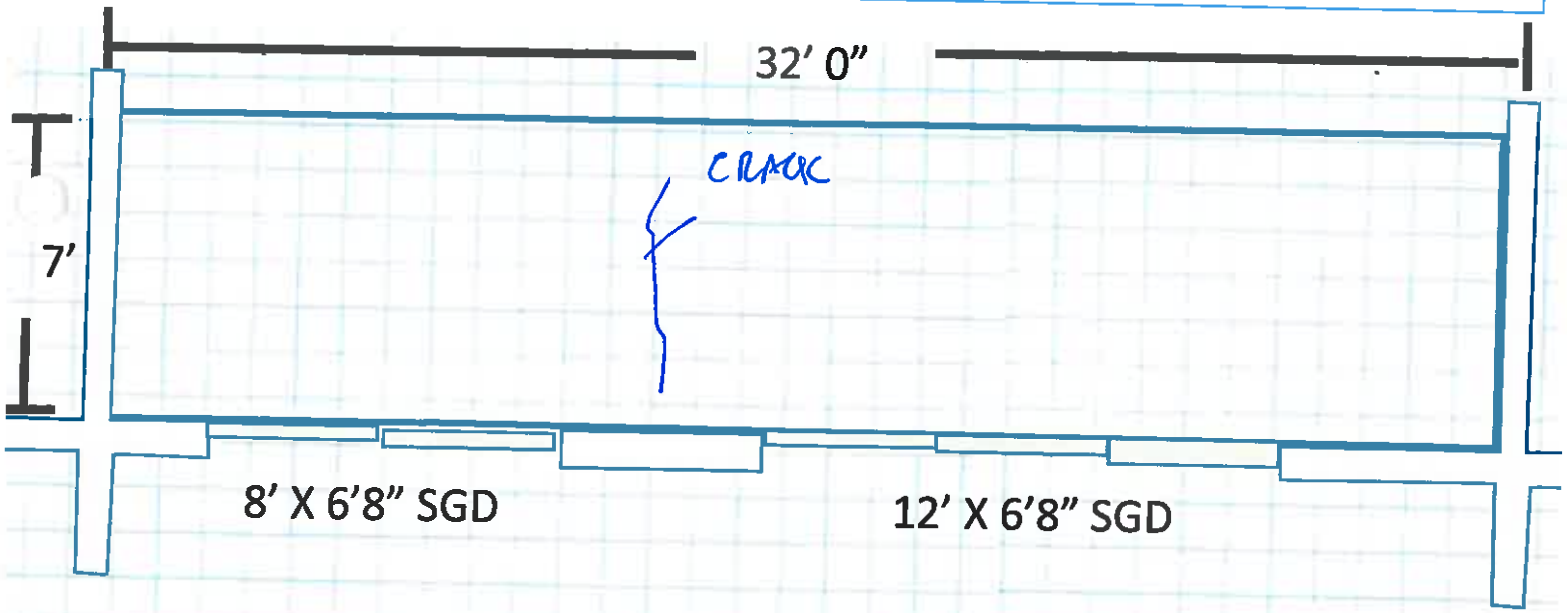
Stacks 2, 4, 5, 7

Project: Sunset Harbor

Unit # 502

Date: November 10, 2021

LEGEND		Railings		Sliding Doors	
	Spall Above	Code Compliant: <u>Yes</u> No		Vinyl	Aluminum
	Spall Below	Condition: <u>Good</u> <u>Fair</u> Poor		Code Compliant: <u>Yes</u> No	
	Crack	Type: Cored <u>Surface Mount</u> Screen		Condition: <u>Good</u> Fair Poor	
	Rust Spot	Screen Shimmed: <u>Yes</u> No		Age: <u>Older</u> Newer	
		Shutters	Yes <u>No</u>	Corroded Fasteners: <u>Yes</u> No	
		Shimmed	Yes No	Holes In Threshold: Yes <u>No</u>	
		Edge Door			
		Accordion Roll Down			
				Flooring	
				Type: Tile <u>Coating</u> Pattern	



Railing Length = 32 Linear Feet
Balcony Area = 224 Square Feet

Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

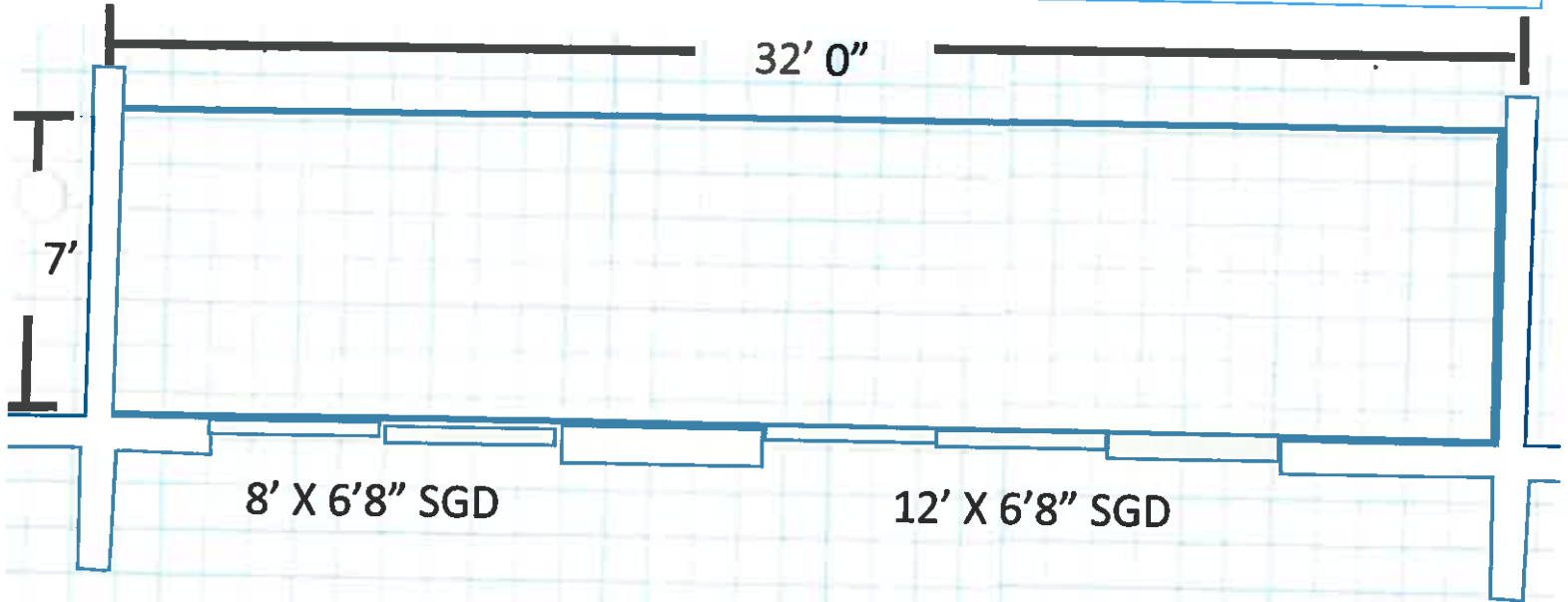
Stacks 2, 4, 5, 7

Project: Sunset Harbor

Unit # 402

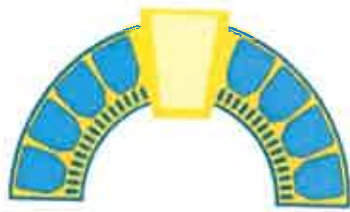
Date: November, 2021

LEGEND		Railings			Sliding Doors		
	Spall Above	Code Compliant: <u>Yes</u>	No	Vinyl	Aluminum		
	Spall Below	Condition: <u>Good</u>	<u>Fair</u>	Poor	Code Compliant: <u>Yes</u>	No	
	Crack	Type: <u>Cored</u>	<u>Surface Mount</u>	Screen	Condition: <u>Good</u>	<u>Fair</u>	Poor
	Rust Spot	Screen Shimmed: <u>Yes</u>	No		Age: <u>Older</u>	Newer	
		<u>Shutters</u>	Yes	No	Corroded Fasteners: <u>Yes</u>	No	
		Shimmed	<u>Yes</u>	No	Holes In Threshold: <u>Yes</u>	<u>No</u>	
		<u>Edge</u>	Door				
		Accordion	<u>Roll Down</u>				
					<u>Flooring</u>		
					Type: Tile	<u>Coating</u>	Pattern



Railing Length = ~~32~~ 32 Linear Feet
Balcony Area = ~~214~~ 224 Square Feet

Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

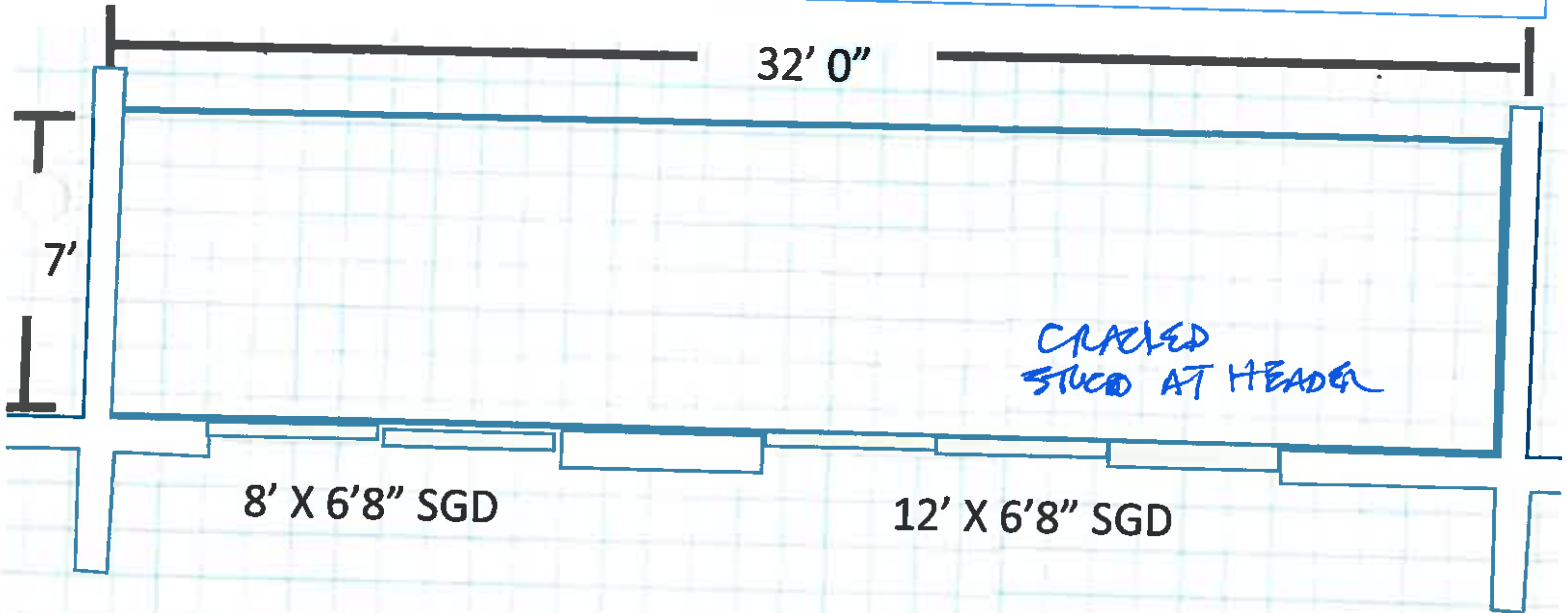
Stacks 2, 4, 5, 7

Project: Sunset Harbor

Unit # 207

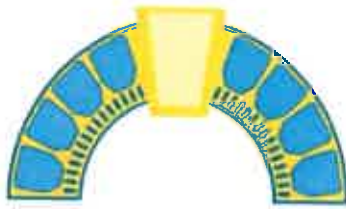
Date: November 10, 2021

LEGEND		Railings		Sliding Doors	
	Spall Above	Code Compliant: <u>Yes</u> No		Vinyl Aluminum	
	Spall Below	Condition: Good <u>Fair</u> Poor		Code Compliant: <u>Yes</u> No	
	Crack	Type: Cored <u>Surface Mount</u> Screen		Condition: <u>Good</u> Fair Poor	
	Rust Spot	Screen Shimmed: <u>Yes</u> No		Age: <u>Older</u> Newer	
		<u>Shutters</u>	<u>Yes</u> No	Corroded Fasteners: <u>Yes</u> No	
		Shimmed	Yes No	Holes In Threshold: <u>Yes</u> <u>No</u>	
		<u>Edge</u> <u>Door</u>			
		Accordion <u>Roll Down</u>			
				<u>Flooring</u>	
				Type: Tile <u>Coating</u> Pattern	



Railing Length = 32 ~~45~~ Linear Feet
Balcony Area = 224 ~~207~~ Square Feet

Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

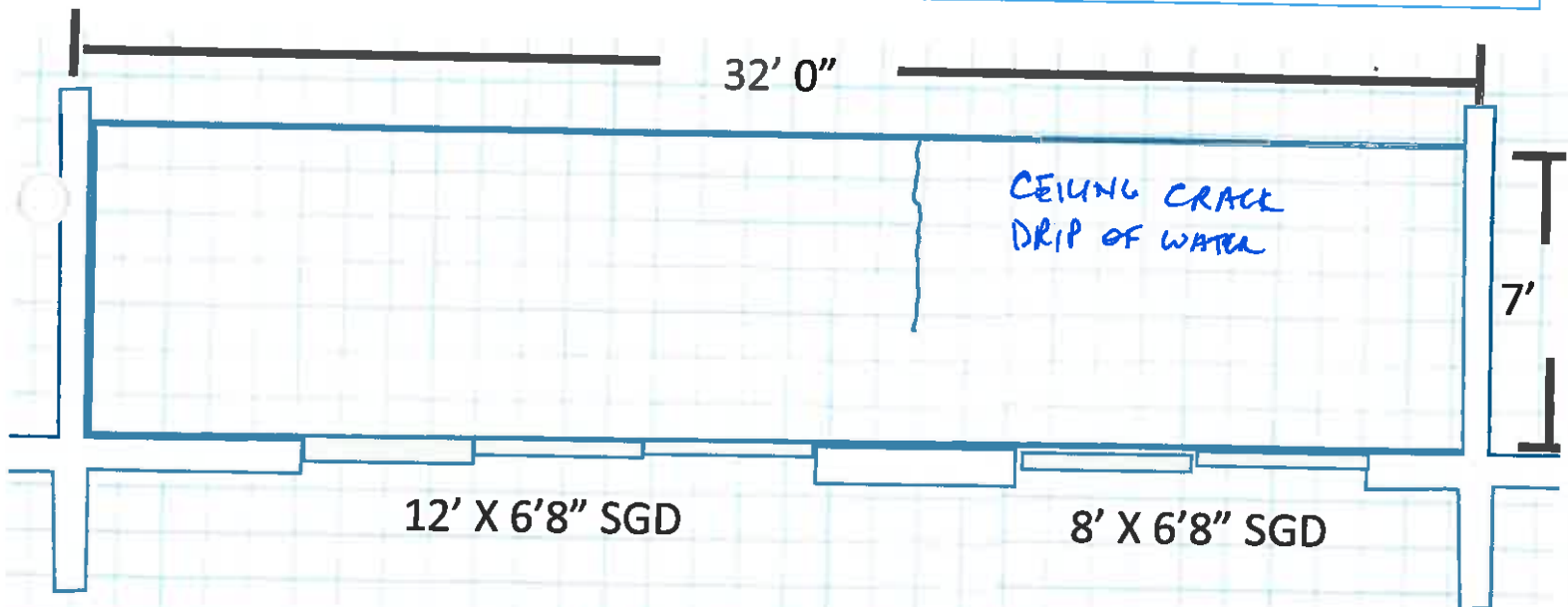
Stacks 3, 6, 8

Project: Sunset Harbor

Unit # 503

Date: November 10, 2021

LEGEND		Railings		Sliding Doors	
	Spall Above	Code Compliant: <u>Yes</u> No		Vinyl Aluminum	
	Spall Below	Condition: Good <u>Fair</u> Poor		Code Compliant: <u>Yes</u> No	
	Crack	Type: <u>Cored</u> Surface Mount Screen		Condition: <u>Good</u> Fair Poor	
	Rust Spot	Screen Shimmed: <u>Yes</u> No		Age: <u>Older</u> Newer	
		Shutters	Yes <u>No</u>	Corroded Fasteners: <u>Yes</u> No	
		Shimmed	Yes No	Holes In Threshold: Yes <u>No</u>	
		Edge Door			
		Accordion Roll Down			
				Flooring	
				Type: Tile <u>Coating</u> Pattern	



Railing Length = 32 Linear Feet
Balcony Area = 224 Square Feet

Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

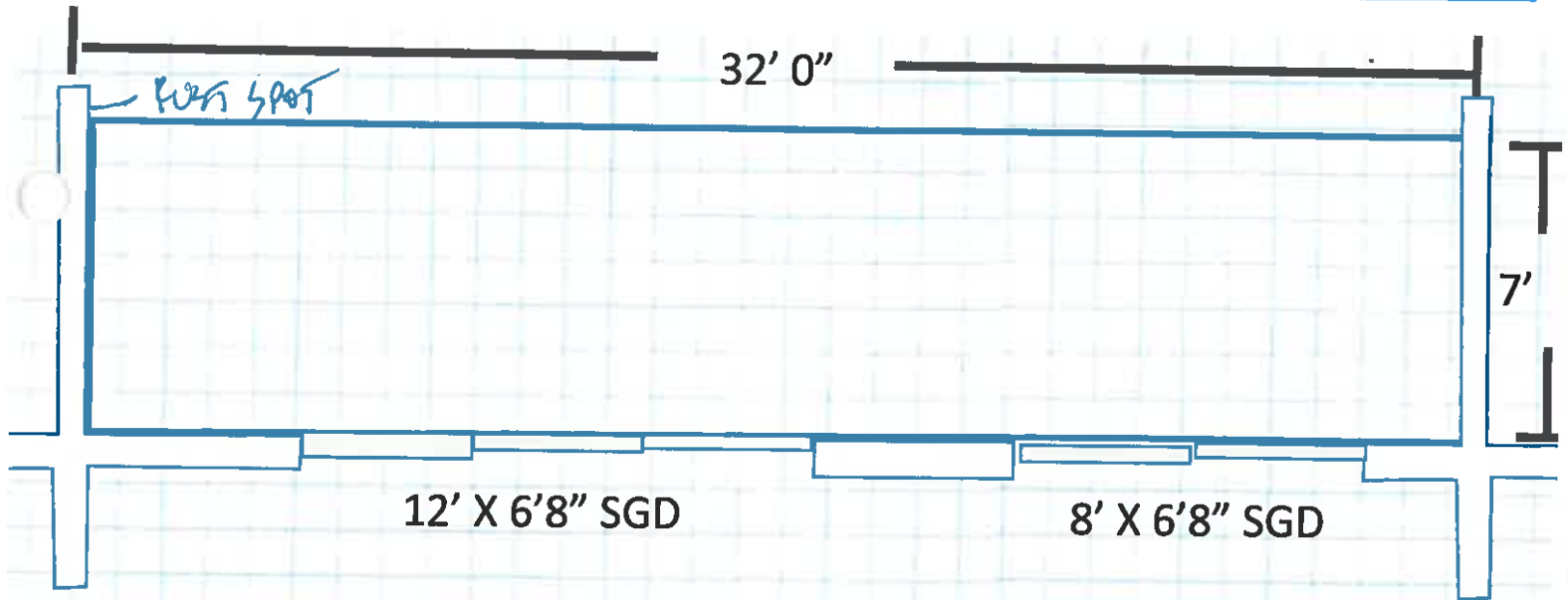
Stacks 3, 6, 8

Project: Sunset Harbor

Unit # 403

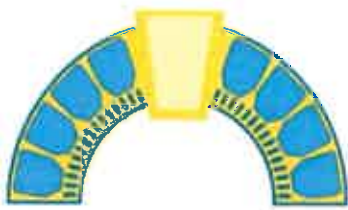
Date: November 10, 2021

LEGEND		Railings			Sliding Doors		Vinyl		Aluminum	
	Spall Above	Code Compliant:	<u>Yes</u>	No	Code Compliant:	<u>Yes</u>	No			
	Spall Below	Condition:	Good	<u>Fair</u>	Poor	Condition:	<u>Good</u>	Fair	Poor	
	Crack	Type:	Cored	<u>Surface Mount</u>	Screen	Age:	Older	<u>Newer</u>		
	Rust Spot	Screen Shimmed:	<u>Yes</u>	No		Corroded Fasteners:	Yes	<u>No</u>		
		<u>Shutters</u>	<u>Yes</u>	No			Holes In Threshold:	Yes	<u>No</u>	
		Shimmed	Yes	No			<u>Flooring</u>			
		<u>Edge</u>	<u>Door</u>				Type:	Tile	Coating	Pattern
		Accordion	<u>Roll Down</u>							



Railing Length = 32 ~~4~~ Linear Feet
Balcony Area = 224 ~~207~~ Square Feet

Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	<u>1</u>
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

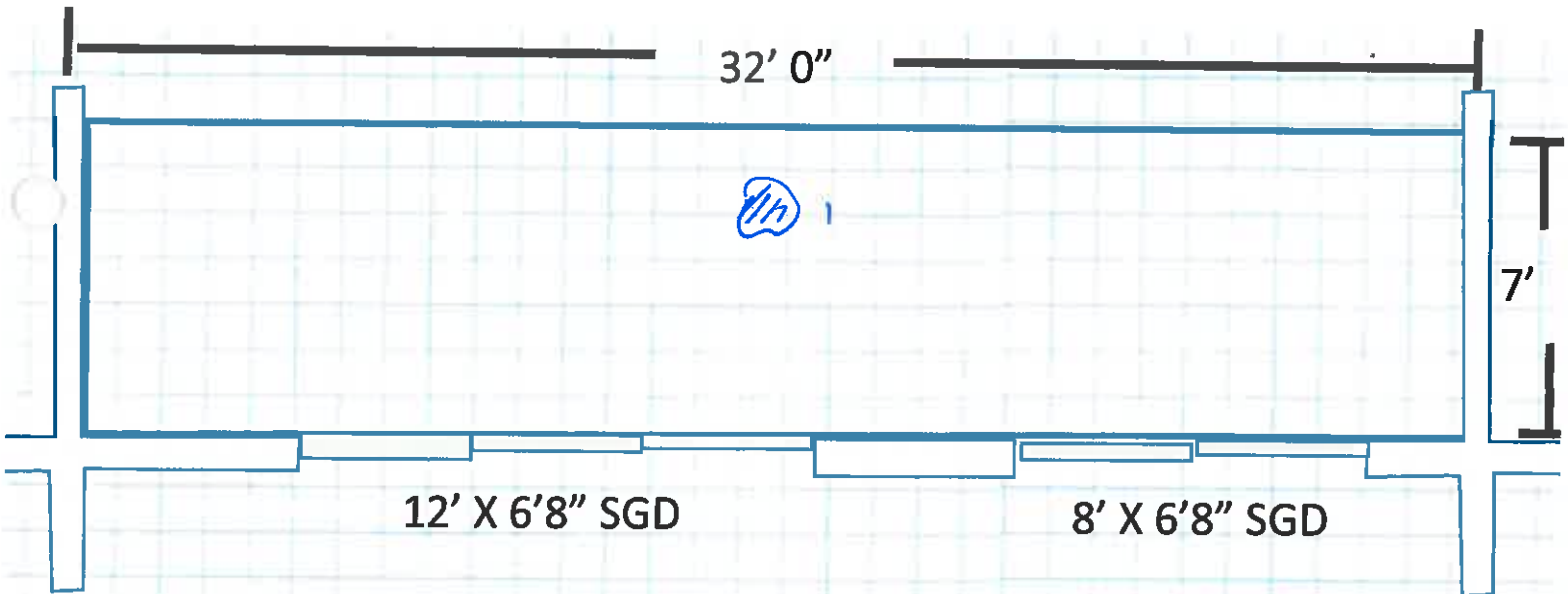
Stacks 3, 6, 8

Project: Sunset Harbor

Unit # 203

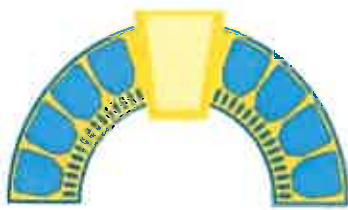
Date: November 10, 2021

LEGEND		Railings			Sliding Doors		Vinyl Aluminum	
	Spall Above	Code Compliant:	Yes	No	Code Compliant:	Yes	No	
	Spall Below	Condition:	Good	Fair	Poor	Condition:	Good	Fair
	Crack	Type:	Cored	Surface Mount	Screen	Age:	Older	Newer
	Rust Spot	Screen Shimmed:	Yes	No	Corroded Fasteners:	Yes	No	
		Shutters	Yes	No	Holes In Threshold:	Yes	No	
		Shimmed	Yes	No				
		Edge	Door		Flooring			
		Accordion	Roll Down					
					Type:	Tile	Coating	Pattern



Railing Length = 32 Linear Feet
Balcony Area = 224 Square Feet

Survey Quantities	
Floor Surface (SF)	1
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

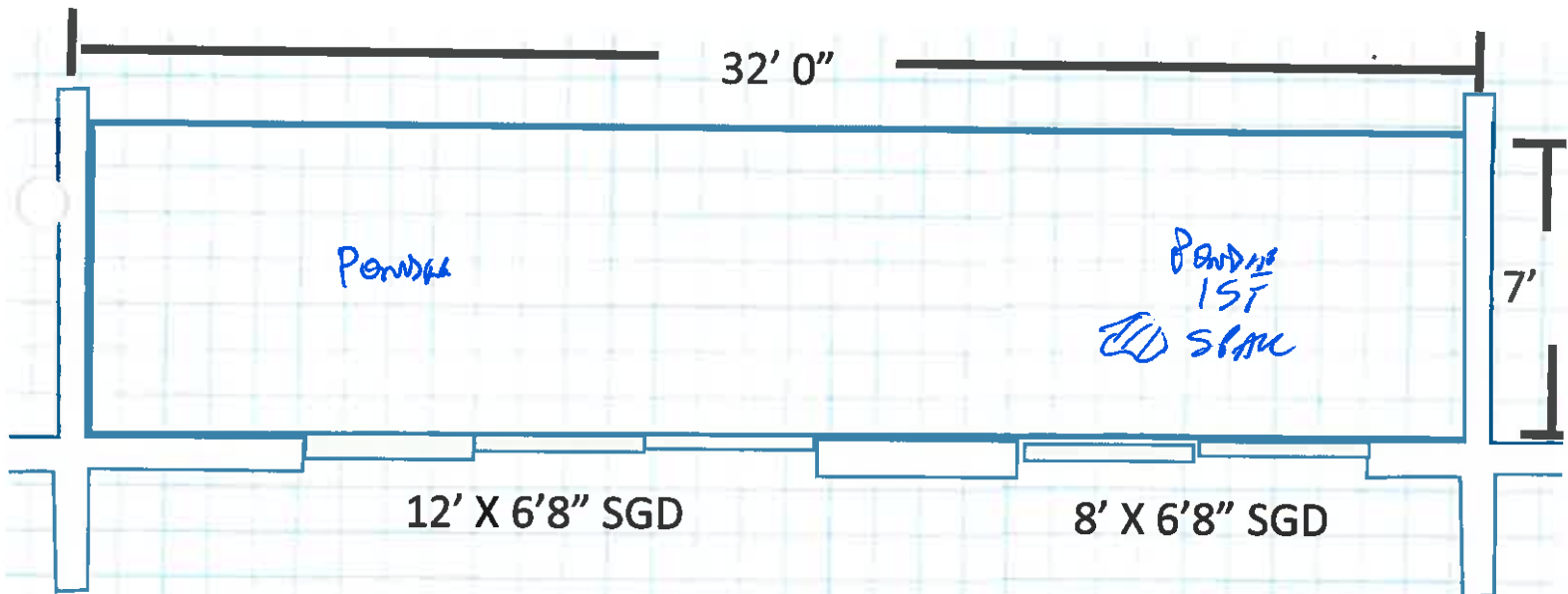
Stacks 3, 6, 8

Project: Sunset Harbor

Unit # 103

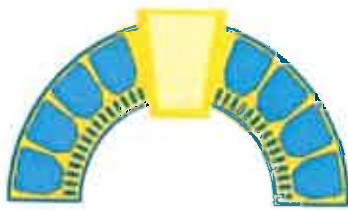
Date: November 10, 2021

LEGEND		Railings			Sliding Doors		Vinyl Aluminum		
	Spall Above	Code Compliant:	Yes	No	Code Compliant:	Yes	No		
	Spall Below	Condition:	Good	Fair	Poor	Condition:	Good	Fair	Poor
	Crack	Type:	Cored	Surface Mount	Screen	Age:	Older	Newer	
	Rust Spot	Screen Shimmed:	Yes	No	Corroded Fasteners:	Yes	No		
		Shutters	Yes	No	Holes In Threshold:	Yes	No		
		Shimmed	Yes	No					
		Edge	Door		Flooring				
		Accordion	Roll Down		Type:	Tile	Coating	Pattern	



Railing Length = 32 Linear Feet
Balcony Area = 224 Square Feet

Survey Quantities	
Floor Surface (SF)	<u>1</u>
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

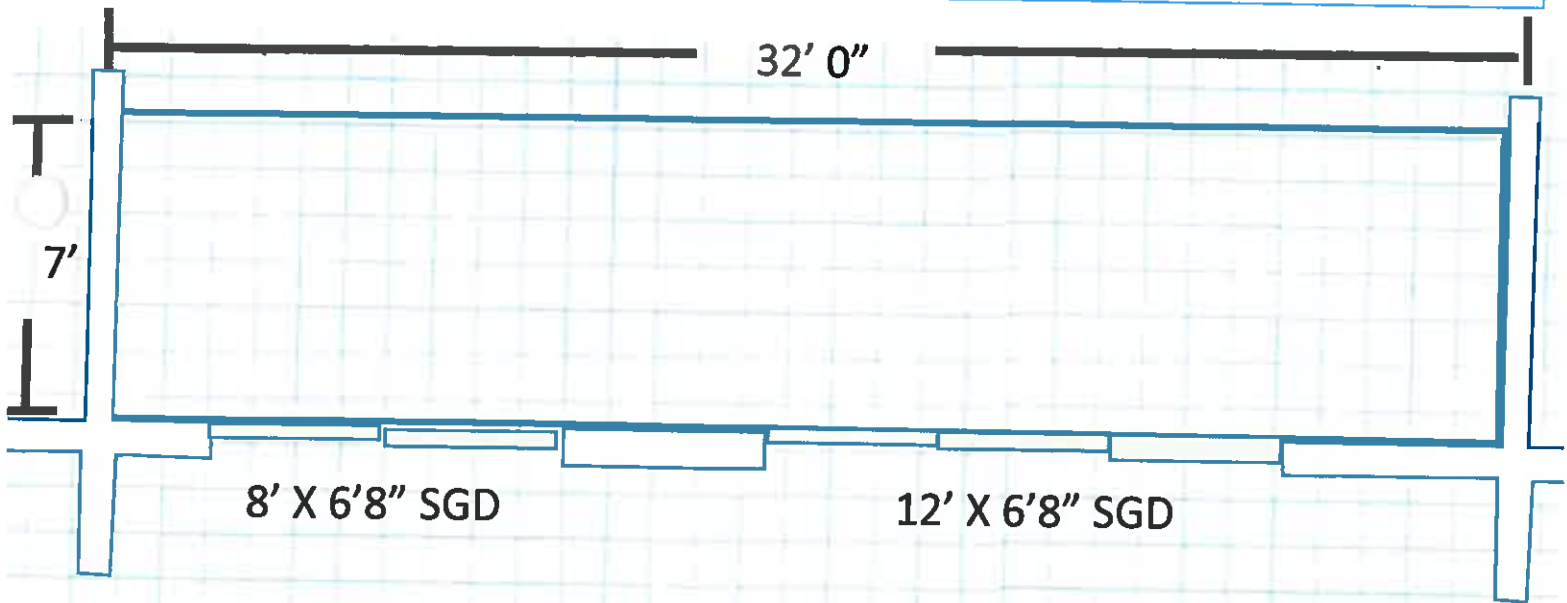
Stacks 2, 4, 5, 7

Project: Sunset Harbor

Unit # 504

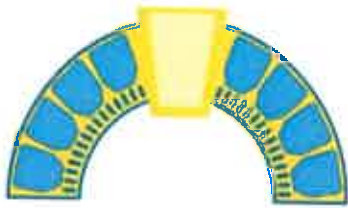
Date: November 10, 2021

LEGEND		Railings		Sliding Doors	
	Spall Above	Code Compliant: <u>Yes</u> No		Vinyl	Aluminum
	Spall Below	Condition: Good <u>Fair</u> Poor		Code Compliant: <u>Yes</u> No	
	Crack	Type: Cored <u>Surface Mount</u> Screen		Condition: Good <u>Fair</u> Poor	
	Rust Spot	Screen Shimmed: Yes No		Age: <u>Older</u> Newer	
		<u>Shutters</u>	<u>Yes</u> No	Corroded Fasteners: <u>Yes</u> No	
		Shimmed	Yes <u>No</u>	Holes In Threshold: Yes <u>No</u>	
		Edge	<u>Door</u>		
		Accordion	<u>Roll Down</u>		
				<u>Flooring</u>	
				Type: Tile	<u>Coating</u> Pattern



Railing Length = 32 Linear Feet
Balcony Area = 224 Square Feet

Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

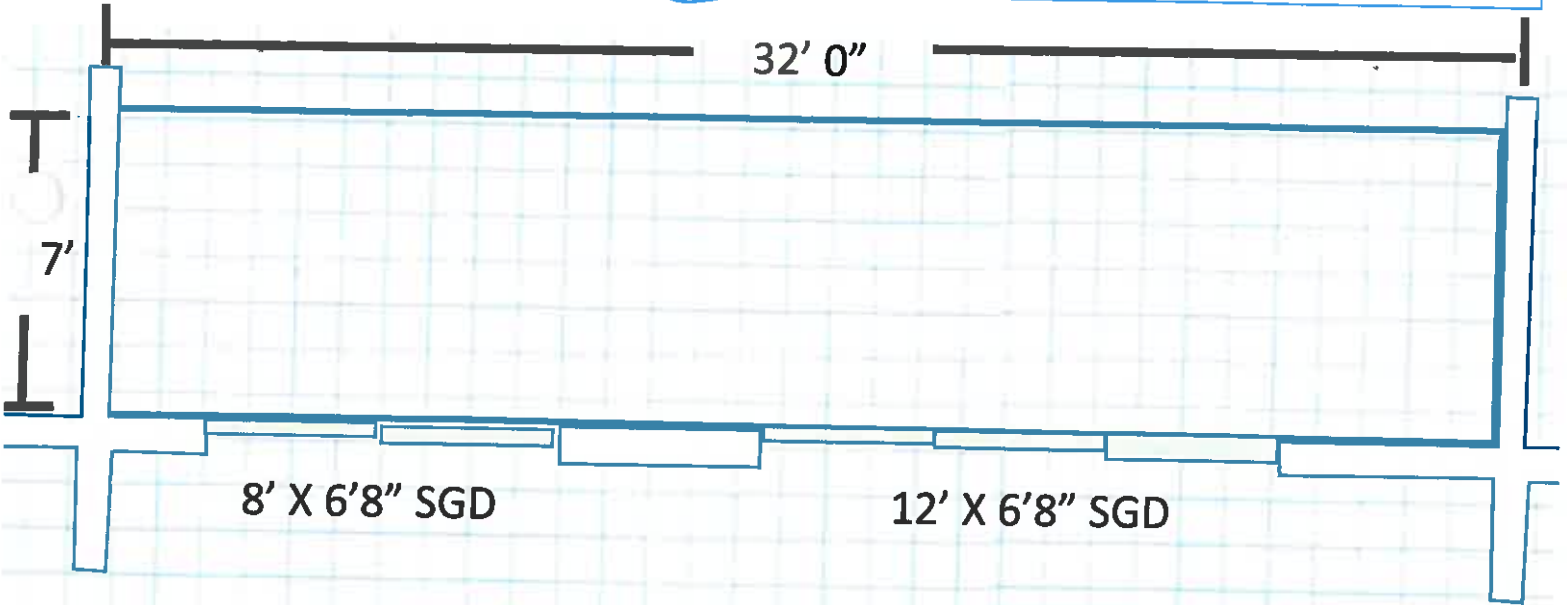
Stacks 2, 4, 5, 7

Project: Sunset Harbor

Unit # 404

Date: November 10, 2021

LEGEND		Railings			Sliding Doors		
	Spall Above	Code Compliant: Yes	No	Code Compliant: Yes	Vinyl	Aluminum	
	Spall Below	Condition: Good	Fair	Poor	Yes	No	
	Crack	Type: Cored	Surface Mount	Screen	Condition: Good	Fair	Poor
	Rust Spot	Screen Shimmed: Yes	No		Age: Older	Newer	
		Shutters: Yes	No		Corroded Fasteners: Yes	No	
		Shimmed: Yes	No		Holes In Threshold: Yes	No	
		Edge Door					
		Accordion	Roll Down				
					Flooring		
					Type: Tile	Coating	Pattern



Railing Length = 32 Linear Feet
Balcony Area = 224 Square Feet

Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

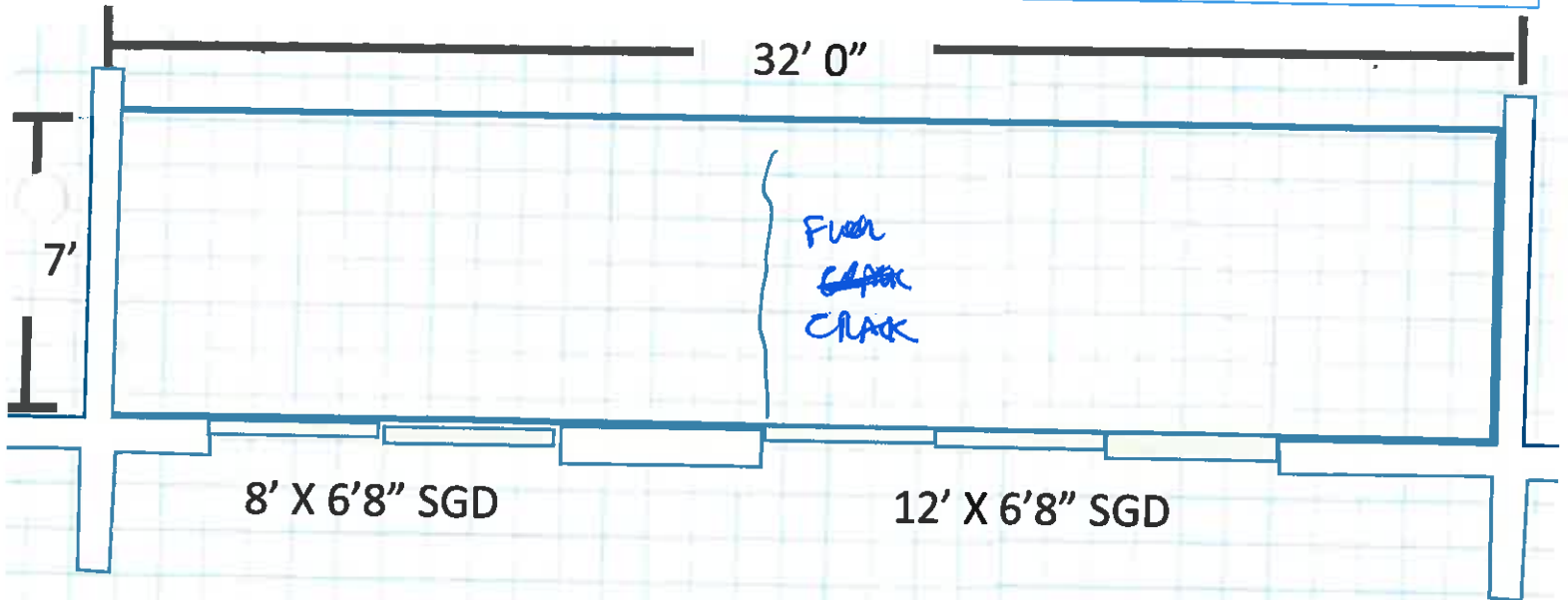
Stacks 2, 4, 5, 7

Project: Sunset Harbor

Unit # 204

Date: November, 2021

LEGEND		Railings		Sliding Doors		Flooring	
	Spall Above	Code Compliant: Yes	No	Code Compliant: Yes	Vinyl	Aluminum	
	Spall Below	Condition: Good	Fair	Condition: Good	Fair	Poor	
	Crack	Type: Cored	Surface Mount	Screen	Age: Older	Newer	
	Rust Spot	Screen Shimmed: Yes	No	Corroded Fasteners: Yes	No		
		Shutters Shimmed: Yes	No	Holes In Threshold: Yes	No		
		Edge Door: Edge	Roll Down	Type: Tile	Coating	Pattern	



Railing Length = 32 Linear Feet
Balcony Area = 224 Square Feet

Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

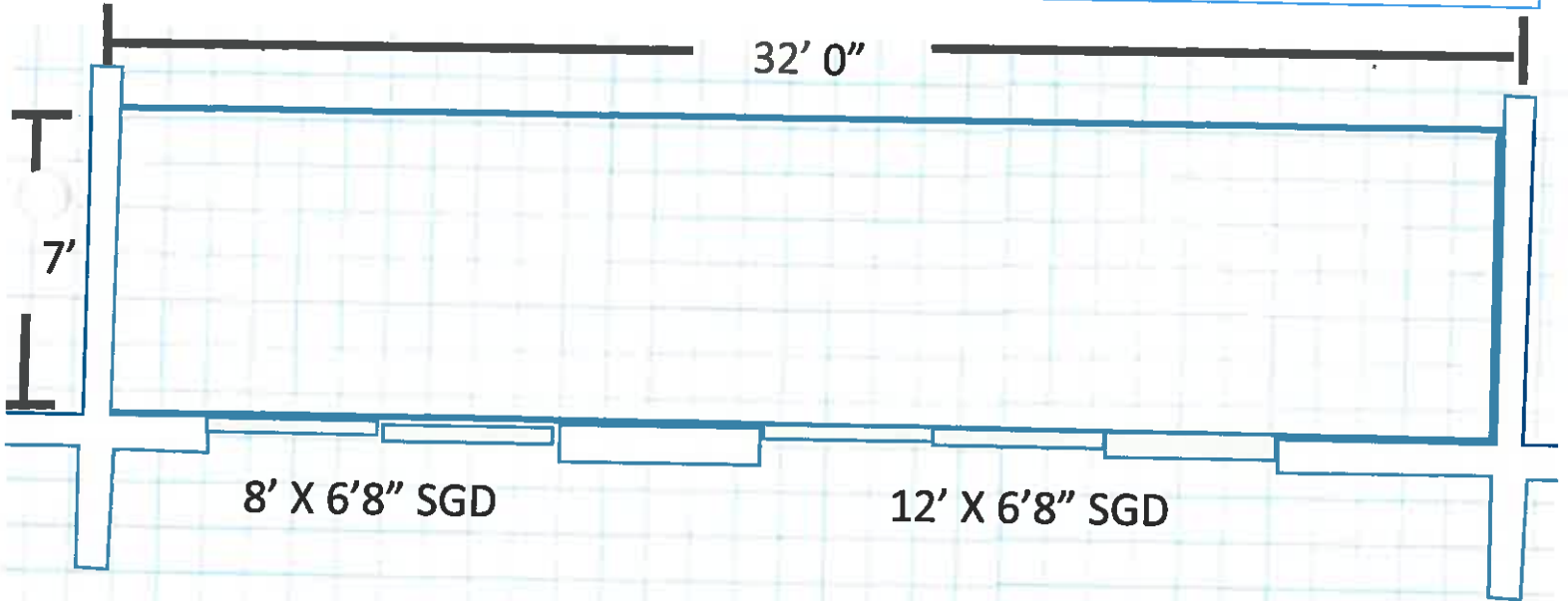
Stacks 2, 4, 5, 7

Project: Sunset Harbor

Unit # 304

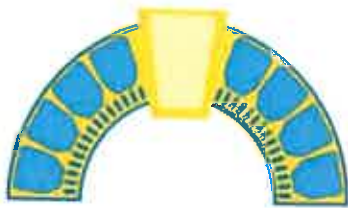
Date: November 10, 2021

LEGEND		Railings			Sliding Doors		Vinyl Aluminum			
	Spall Above	Code Compliant: Yes	No	Condition: Good	Fair	Poor	Code Compliant: Yes	No		
	Spall Below	Type: Cored	Surface Mount	Screen	Condition: Good	Fair	Poor	Age: Older	Newer	
	Crack	Screen Shimmed: Yes	No			Age: Older	Newer	Corroded Fasteners: Yes	No	
	Rust Spot						Holes In Threshold: Yes	No		
		Shutters					Flooring			
		Shimmed	Yes	No	Type: Tile	Coating	Pattern			
		Edge	Door	Roll Down						



Railing Length = 32 ~~46~~ Linear Feet
Balcony Area = 224 ~~287~~ Square Feet

Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

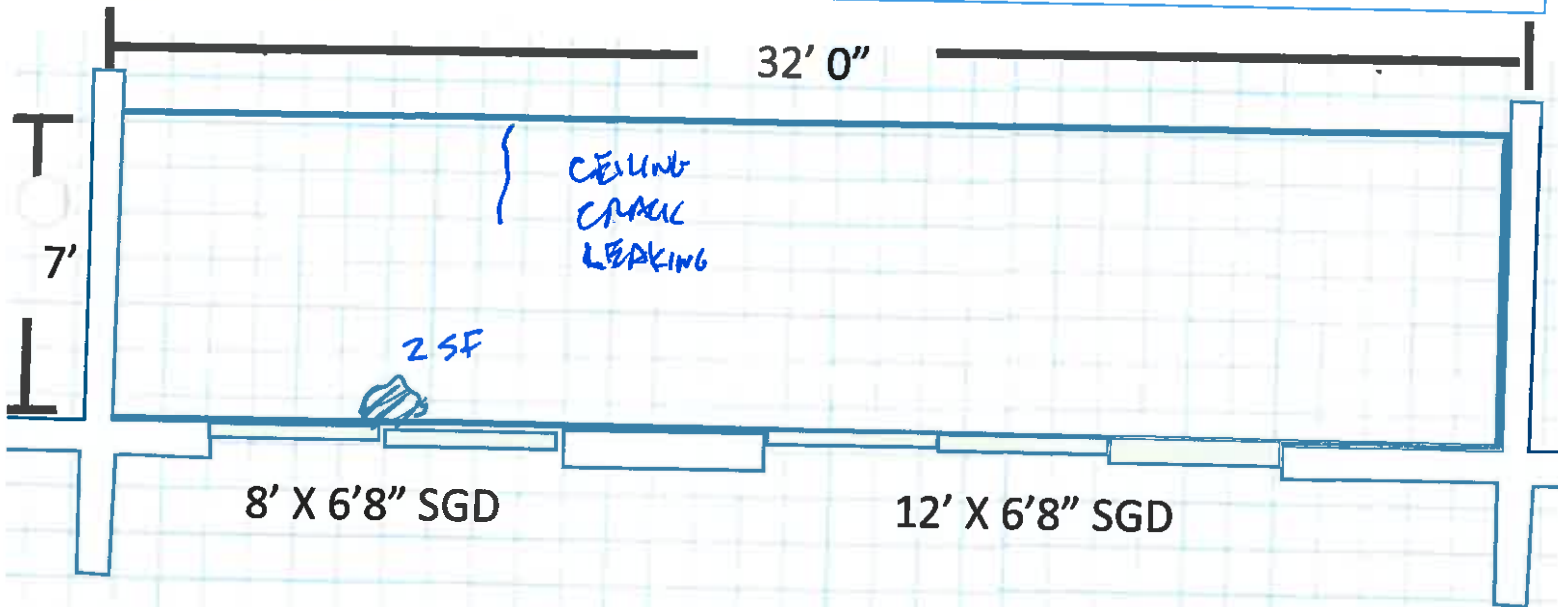
Stacks 2, 4, 5, 7

Project: Sunset Harbor

Unit # 505

Date: November 10, 2021

LEGEND		Railings		Sliding Doors		Flooring	
	Spall Above	Code Compliant: <u>Yes</u> No		Code Compliant: <u>Yes</u> No	Vinyl Aluminum		
	Spall Below	Condition: Good <u>Fair</u> Poor		Condition: <u>Good</u> Fair Poor			
	Crack	Type: Cored <u>Surface Mount</u> Screen		Age: <u>Older</u> Newer			
	Rust Spot	Screen Shimmed: <u>Yes</u> No		Corroded Fasteners: <u>Yes</u> No			
		Shutters <u>Yes</u> No		Holes in Threshold: <u>Yes</u> <u>No</u>			
		Shimmed <u>Yes</u> No					
		Edge <u>Door</u>					
		<u>Accordion</u> Roll Down					



Railing Length = 32 Linear Feet
Balcony Area = 224 Square Feet

Survey Quantities	
Floor Surface (SF)	<u>2</u>
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

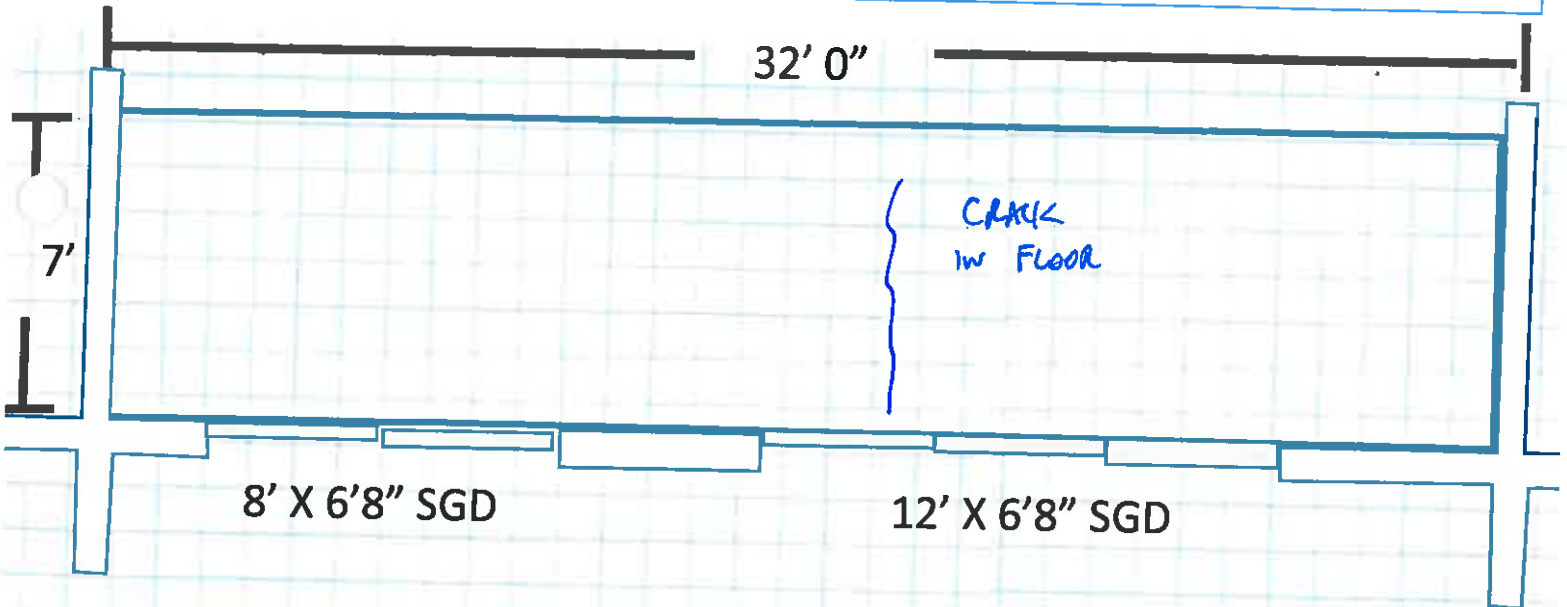
Stacks 2, 4, 5, 7

Project: Sunset Harbor

Unit # 305

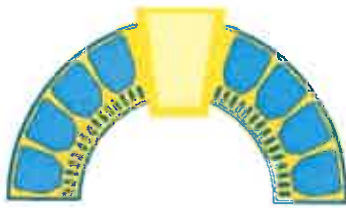
Date: November, 2021

LEGEND		Railings		Sliding Doors	
	Spall Above	Code Compliant: <u>Yes</u> No	Vinyl Aluminum	Code Compliant: <u>Yes</u> No	
	Spall Below	Condition: <u>Good</u> Fair Poor	Condition: <u>Good</u> Fair Poor	Age: <u>Older</u> Newer	
	Crack	Type: Cored <u>Surface Mount</u> Screen	Screen Shimmed: <u>Yes</u> No	Corroded Fasteners: <u>Yes</u> No	Holes In Threshold: Yes <u>No</u>
	Rust Spot	<u>Shutters</u>	<u>Yes</u> No	<u>Flooring</u>	
		Shimmed <u>Yes</u> No	Edge <u>Door</u>	Type: Tile <u>Coating</u> Pattern	
		<u>Accordion</u>	<u>Roll Down</u>		



Railing Length = 32 ~~25~~ Linear Feet
Balcony Area = 224 ~~207~~ Square Feet

Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

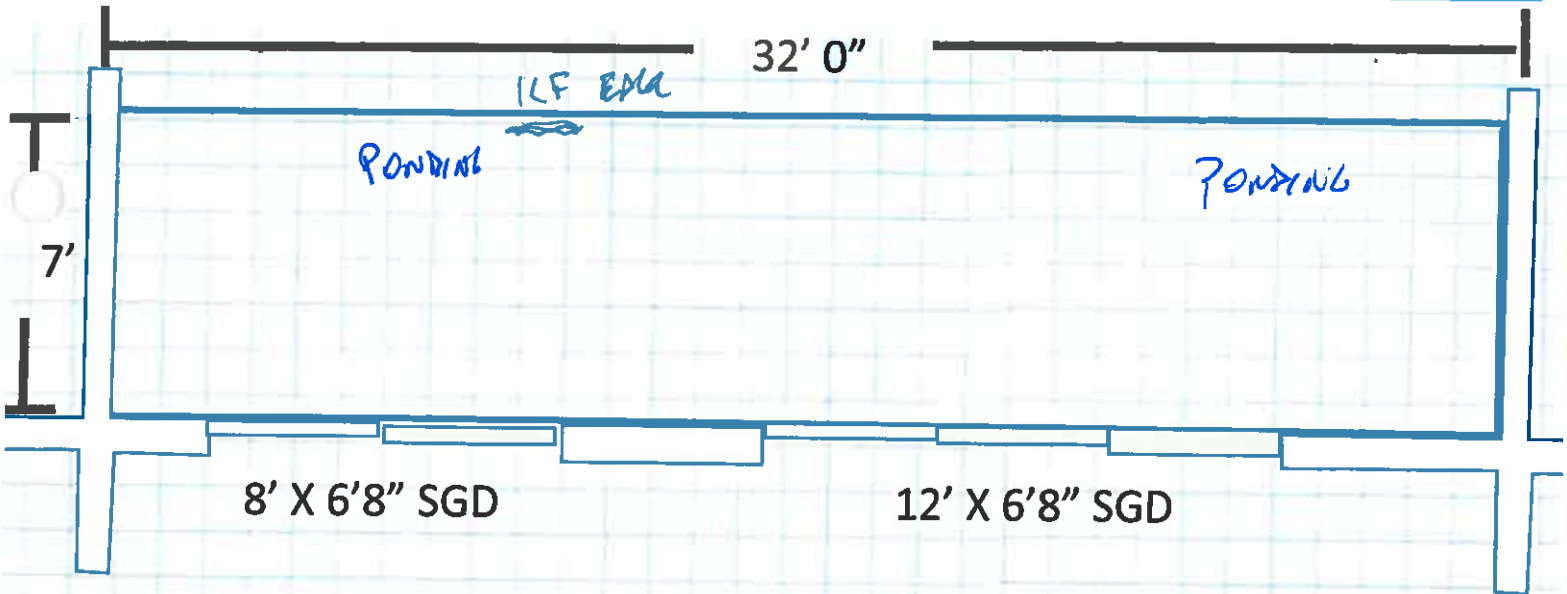
Stacks 2, 4, 5, 7

Project: Sunset Harbor

Unit # 105

Date: November, 2021

LEGEND		Railings		Sliding Doors		Vinyl		Aluminum	
	Spall Above	Code Compliant:	Yes	No	Code Compliant:	Yes	No		
	Spall Below	Condition:	Good	Fair	Poor	Condition:	Good	Fair	Poor
	Crack	Type:	Cored	Surface Mount	Screen	Age:	Older	Newer	
	Rust Spot	Screen Shimmed:	Yes	No	Corroded Fasteners:	Yes	No		
		<u>Shutters</u>	Yes	No	Holes In Threshold:	Yes	No		
		Shimmed	Yes	No					
		Edge	Door						
		Accordion	Roll Down						
					Flooring				
					Type:	Tile	Coating	Pattern	



Railing Length = 32 ~~48~~ Linear Feet
Balcony Area = 224 ~~336~~ Square Feet

Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	<u>1</u>
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	<u>1</u>
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

Stacks 3, 6, 8

Project: Sunset Harbor

Unit # 506

Date: November 10, 2021

LEGEND		Railings		Sliding Doors		Flooring	
	Spall Above	Code Compliant:	<u>Yes</u> No	Vinyl	Aluminum		
	Spall Below	Condition:	Good <u>Fair</u> Poor	Code Compliant:	<u>Yes</u> No		
	Crack	Type: Cored	<u>Surface Mount</u> Screen	Condition:	Good <u>Fair</u> Poor		
	Rust Spot	Screen Shimmed:	<u>Yes</u> No	Age:	<u>Older</u> Newer		
		<u>Shutters</u>	<u>Yes</u> No	Corroded Fasteners:	<u>Yes</u> No		
		Shimmed	Yes No	Holes In Threshold:	Yes <u>No</u>		
		<u>Edge</u>	<u>Door</u>				
		<u>Accordion</u>	<u>Roll Down</u>				
				Type: Tile	<u>Coating</u>	Pattern	

32' 0"

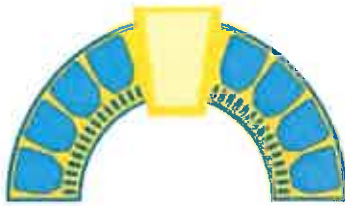
7'

12' X 6'8" SGD

8' X 6'8" SGD

Railing Length = 32 ~~48~~ Linear Feet
Balcony Area = 224 ~~257~~ Square Feet

Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

Stacks 3, 6, 8

Project: Sunset Harbor

Unit # 406

Date: November, 2021

LEGEND		Railings		Sliding Doors		Vinyl/ Aluminum	
	Spall Above	Code Compliant: <u>Yes</u>	No	Code Compliant: <u>Yes</u>	No	<u>Yes</u>	No
	Spall Below	Condition: Good <u>Fair</u> Poor		Condition: <u>Good</u> Fair Poor		<u>Good</u> Fair Poor	
	Crack	Type: Cored <u>Surface Mount</u> Screen		Age: Older <u>Newer</u>		Older <u>Newer</u>	
	Rust Spot	Screen Shimmed: <u>Yes</u> No		Corroded Fasteners: Yes <u>No</u>		Yes <u>No</u>	
		<u>Shutters</u>	Yes No			<u>Flooring</u>	
		Shimmed	Yes No	Type: Tile <u>Coating</u> Pattern			
		<u>Edge</u> Door					
		<u>Accordion</u> <u>Roll Down</u>					

32' 0"

75F

7'

12' X 6'8" SGD

8' X 6'8" SGD

Railing Length = 32 ~~48~~ Linear Feet
Balcony Area = 224 ~~288~~ Square Feet

Survey Quantities	
Floor Surface (SF)	<u>75</u>
Slab Edge (LF)	<u>7</u>
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

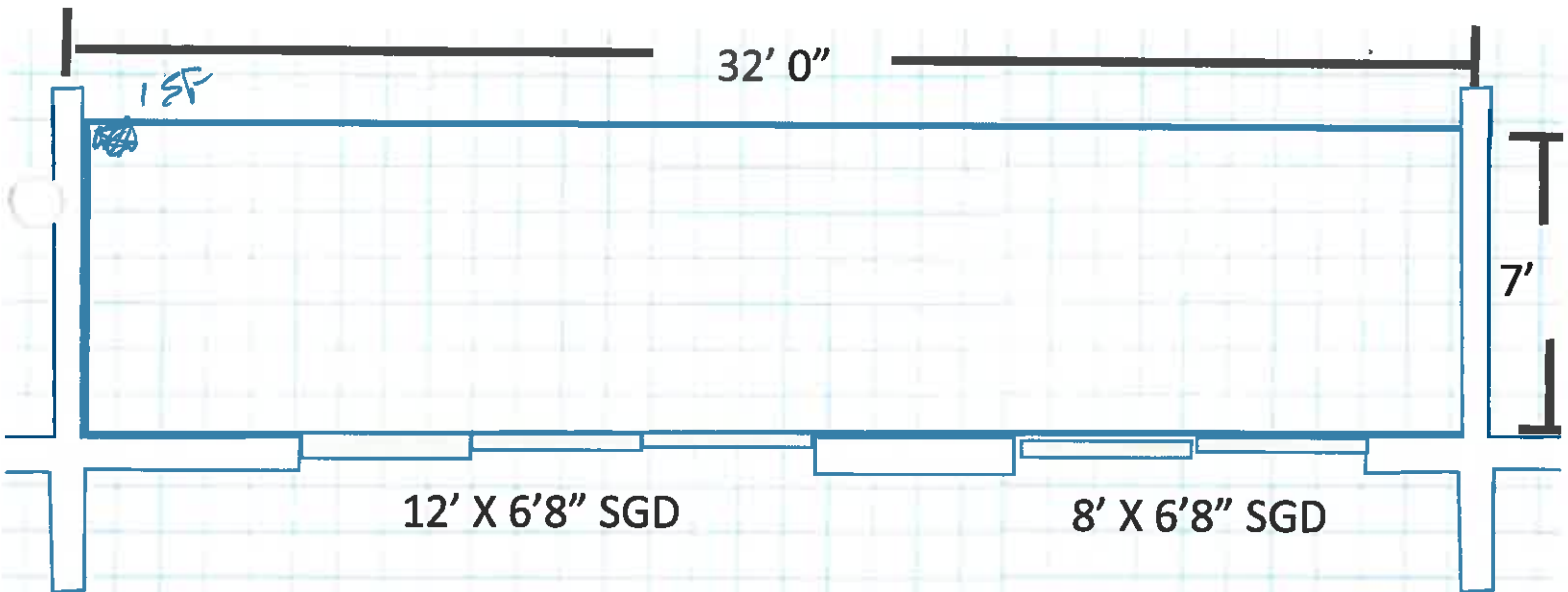
Stacks 3, 6, 8

Project: Sunset Harbor

Unit # 306

Date: November 10, 2021

LEGEND		Railings			Sliding Doors			Vinyl Aluminum								
	Spall Above	Code Compliant:	Yes	No	Code Compliant:	Yes	No	Code Compliant:	Yes	No						
	Spall Below	Condition:	Good	Fair	Poor	Condition:	Good	Fair	Poor	Condition:	Good	Fair	Poor			
	Crack	Type:	Cored	Surface Mount	Screen	Age:	Older	Newer	Age:	Older	Newer	Age:	Older	Newer		
	Rust Spot	Screen Shimmed:	Yes	No	Screen Shimmed:	Yes	No	Screen Shimmed:	Yes	No	Screen Shimmed:	Yes	No	Screen Shimmed:	Yes	No
		Shutters			Flooring											
		Shimmed	Yes	No	Type:	Tile	Coating	Pattern								
		Edge	Door	Roll Down												
		Accordion	Roll Down	Roll Down												



Railing Length = 32 ~~46~~ Linear Feet
Balcony Area = 224 ~~257~~ Square Feet

Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	1
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

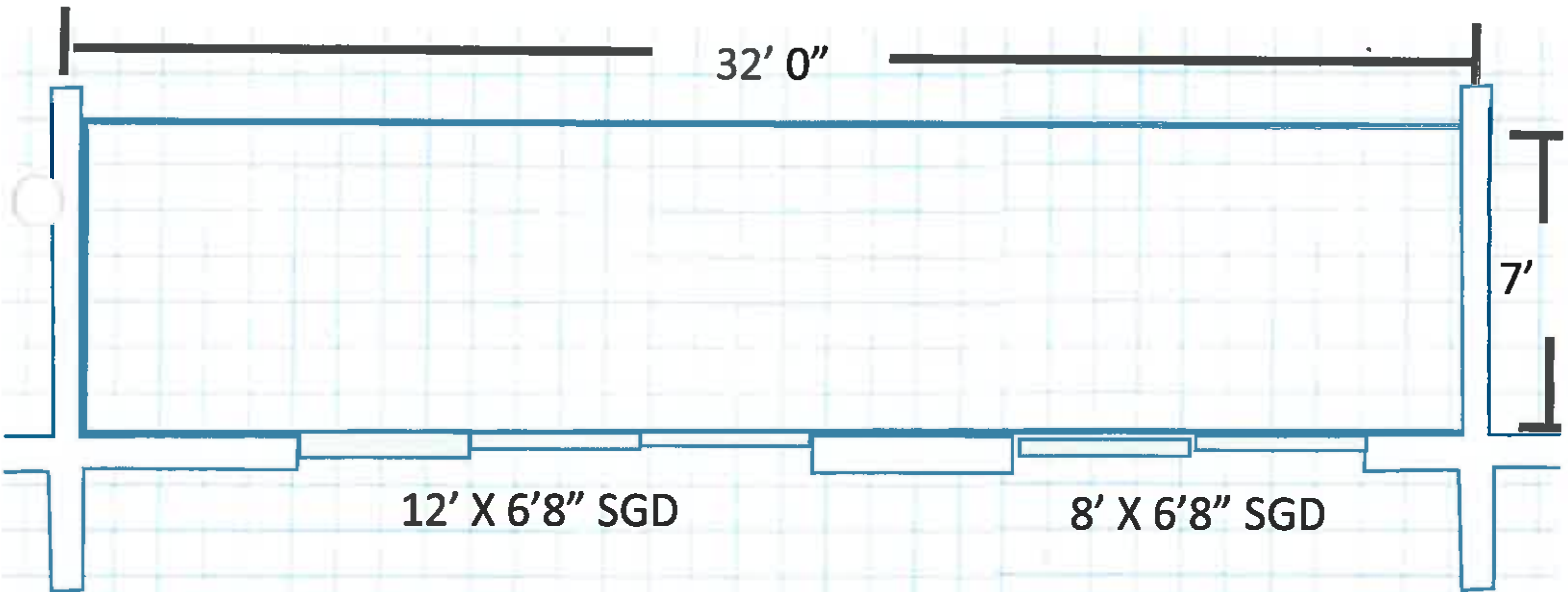
Stacks 3, 6, 8

Project: Sunset Harbor

Unit # 206

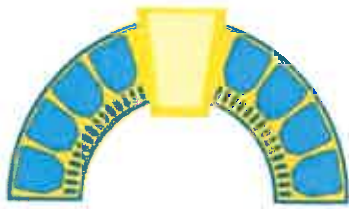
Date: November 10, 2021

LEGEND Spall Above Spall Below Crack Rust Spot	Railings Code Compliant: <u>Yes</u> No Condition: Good <u>Fair</u> Poor Type: Cored <u>Surface Mount</u> Screen Screen Shimmed: <u>Yes</u> No	Sliding Doors Vinyl Aluminum Code Compliant: <u>Yes</u> No Condition: <u>Good</u> Fair Poor Age: <u>Older</u> Newer Corroded Fasteners: <u>Yes</u> No Holes In Threshold: Yes <u>No</u>
	Shutters Shimmed Yes <u>No</u> Edge Door Accordion Roll Down	Flooring Type: Tile <u>Coating</u> Pattern



Railing Length = 32 Linear Feet
 Balcony Area = 224 Square Feet

Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

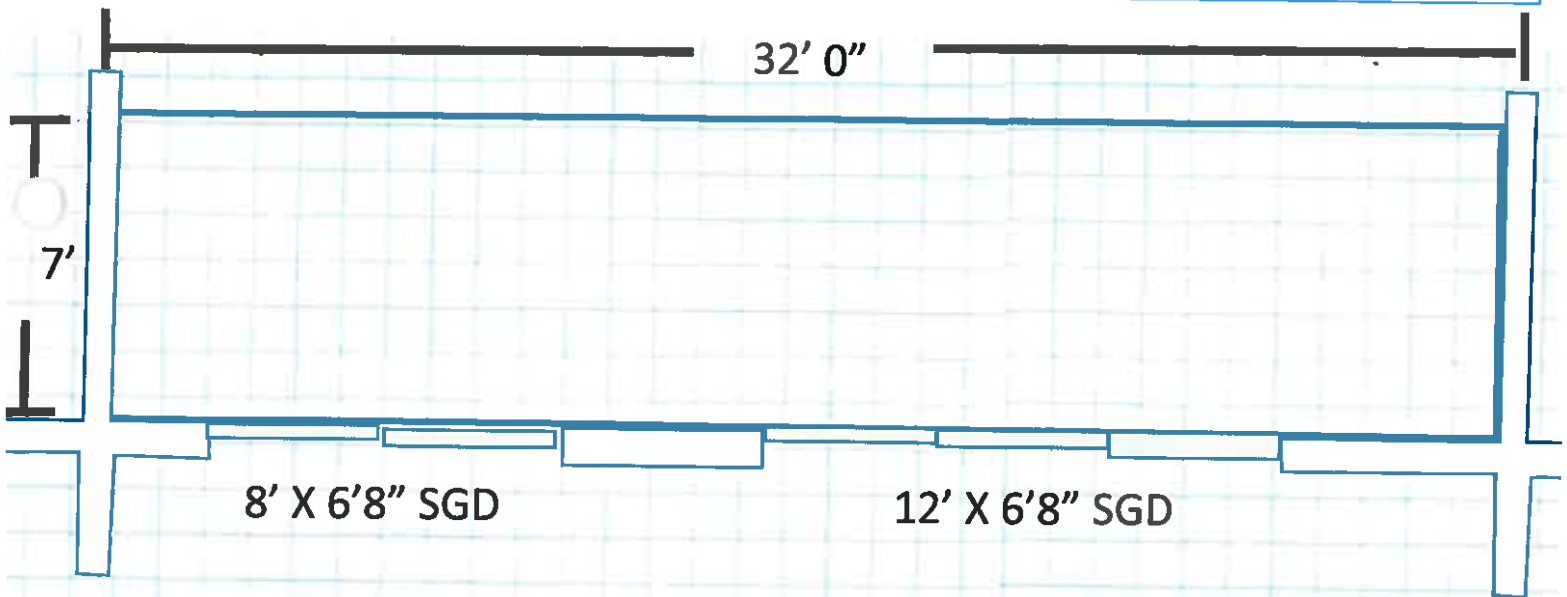
Stacks 2, 4, 5, 7

Project: Sunset Harbor

Unit # 507

Date: November 10, 2021

LEGEND Spall Above Spall Below Crack Rust Spot	Railings Code Compliant: <u>Yes</u> <u>No</u> Condition: <u>Good</u> <u>Fair</u> <u>Poor</u> Type: <u>Cored</u> <u>Surface Mount</u> <u>Screen</u> Screen Shimmed: <u>Yes</u> <u>No</u>	Sliding Doors Vinyl Aluminum Code Compliant: <u>Yes</u> <u>No</u> Condition: <u>Good</u> <u>Fair</u> <u>Poor</u> Age: <u>Older</u> <u>Newer</u> Corroded Fasteners: <u>Yes</u> <u>No</u> Holes in Threshold: <u>Yes</u> <u>No</u>
	Shutters Shimmed <u>Yes</u> <u>No</u> <u>Edge</u> <u>Door</u> <u>Accordion</u> <u>Roll Down</u>	Flooring Type: <u>Tile</u> <u>Coating</u> <u>Pattern</u>



Railing Length = 32 Linear Feet
 Balcony Area = 224 Square Feet

Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

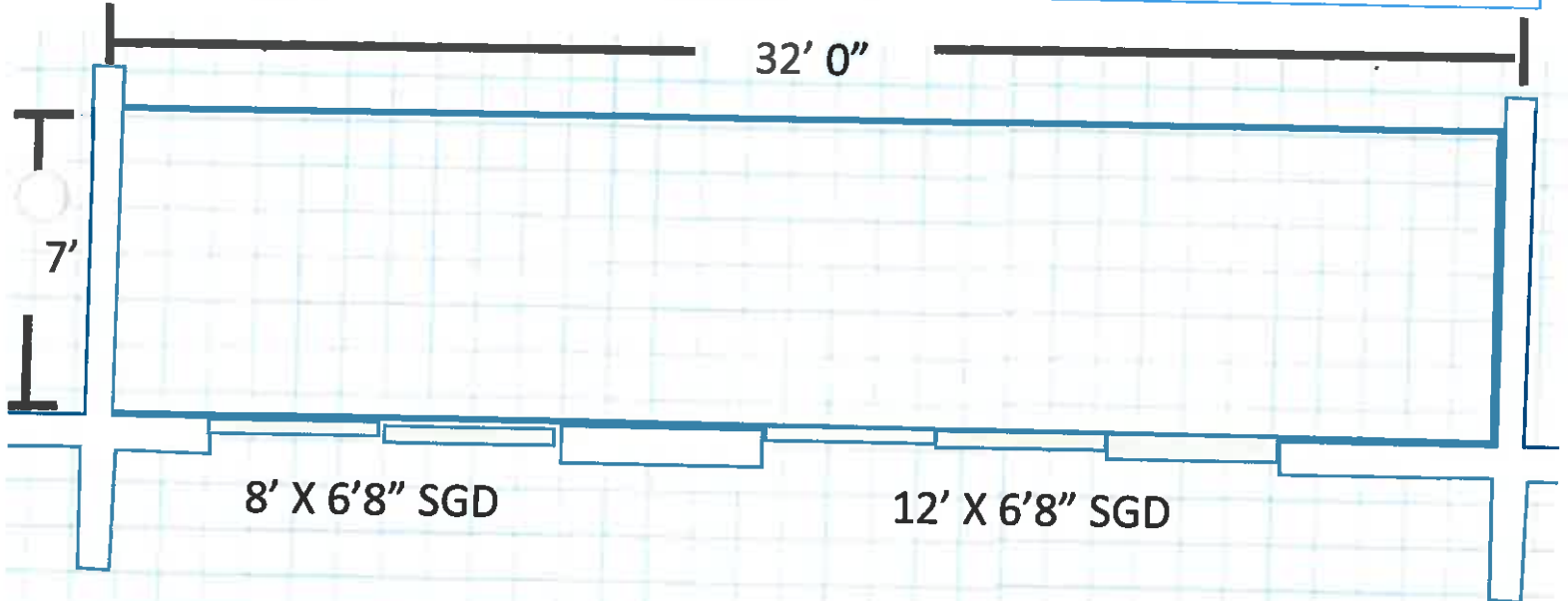
Stacks 2, 4, 5, 7

Project: Sunset Harbor

Unit # 407

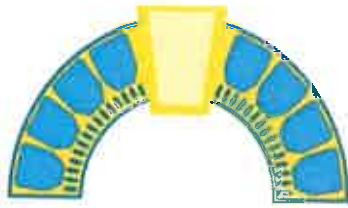
Date: November, 2021

LEGEND		Railings		Sliding Doors	
	Spall Above	Code Compliant: <u>Yes</u> No		Vinyl Aluminum	
	Spall Below	Condition: Good <u>Fair</u> Poor		Code Compliant: <u>Yes</u> No	
	Crack	Type: Cored <u>Surface Mount</u> Screen		Condition: <u>Good</u> Fair Poor	
	Rust Spot	Screen Shimmed: Yes No		Age: <u>Older</u> Newer	
		<u>Shutters</u> Yes No		Corroded Fasteners: Yes <u>No</u>	
		Shimmed Yes No		Holes In Threshold: Yes <u>No</u>	
		<u>Edge</u> <u>Door</u>			
		Accordion <u>Roll Down</u>		Flooring	
				Type: Tile <u>Coating</u> Pattern	



Railing Length = 32 Linear Feet
Balcony Area = 224 Square Feet

Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

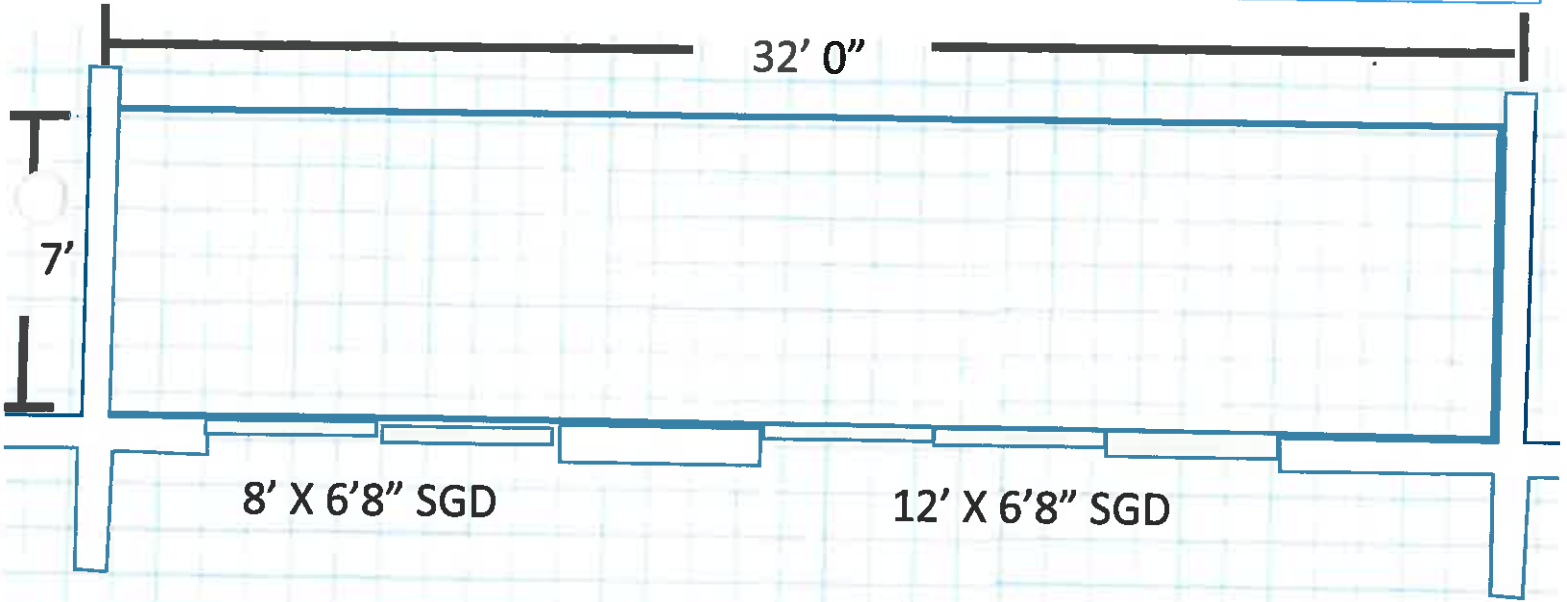
Stacks 2, 4, 5, 7

Project: Sunset Harbor

Unit # 307

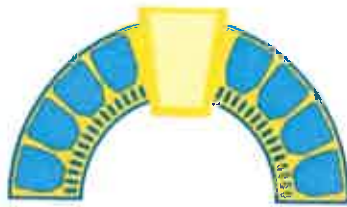
Date: November 10, 2021

LEGEND Spall Above Spall Below Crack Rust Spot	Railings Code Compliant: <u>Yes</u> No Condition: <u>Good</u> Fair Poor Type: Cored <u>Surface Mount</u> Screen Screen Shimmed: Yes No	Sliding Doors Vinyl Aluminum Code Compliant: <u>Yes</u> No Condition: <u>Good</u> Fair Poor Age: <u>Older</u> Newer Corroded Fasteners: <u>Yes</u> No Holes In Threshold: Yes <u>No</u>
	Shutters Shimmed <u>Yes</u> No <u>Edge</u> Door Accordion <u>Roll Down</u>	Flooring Type: Tile <u>Coating</u> Pattern



Railing Length = 32 Linear Feet
 Balcony Area = 224 Square Feet

Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

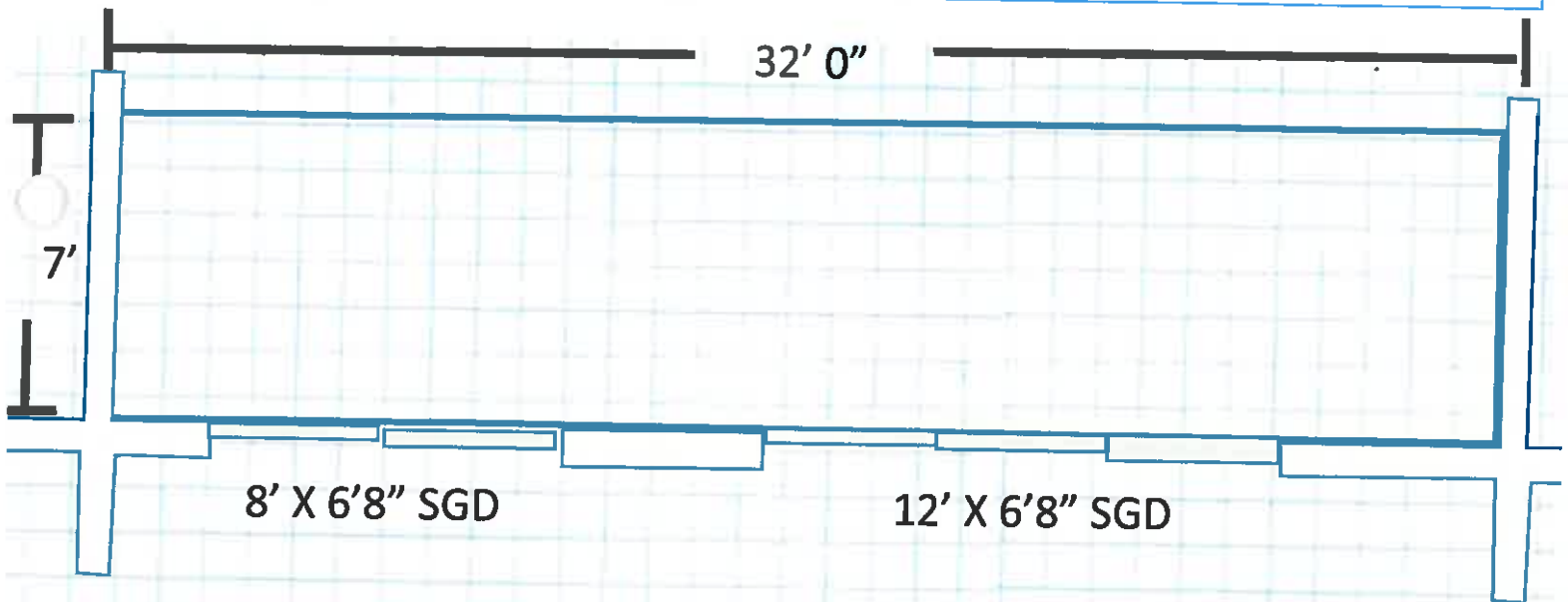
Stacks 2, 4, 5, 7

Project: Sunset Harbor

Unit # 207

Date: November 10, 2021

LEGEND		Railings		Sliding Doors	
	Spall Above	Code Compliant: Yes	No	Vinyl	Aluminum
	Spall Below	Condition: Good	Fair	Yes	No
	Crack	Type: Cored	Surface Mount	Screen	
	Rust Spot	Screen Shimmed: Yes	No	Age: Older	Newer
		Shutters	Yes	No	
		Shimmed	Yes	No	
		Edge	Door		
		Accordion	Roll Down		
				Flooring	
				Type: Tile	Coating
					Pattern



Railing Length = ~~32~~ 32 Linear Feet
Balcony Area = ~~224~~ 224 Square Feet

Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

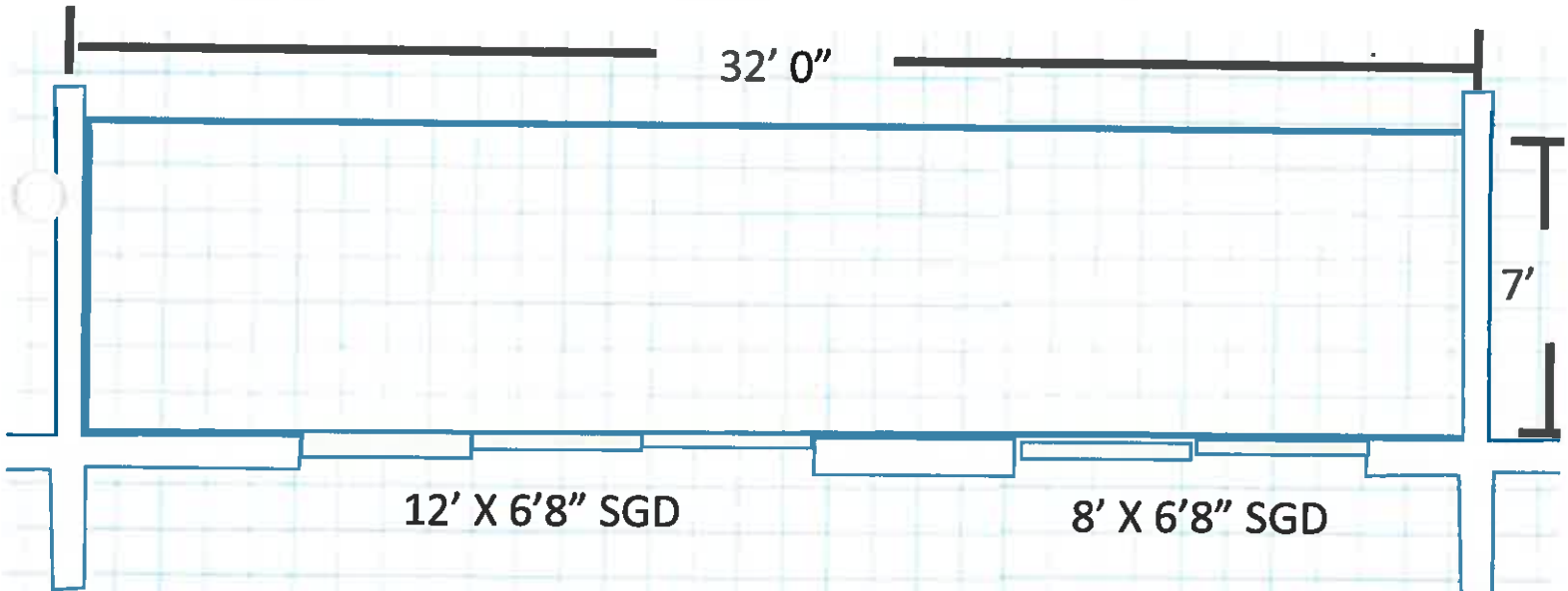
Stacks 3, 6, 8

Project: Sunset Harbor

Unit # 508

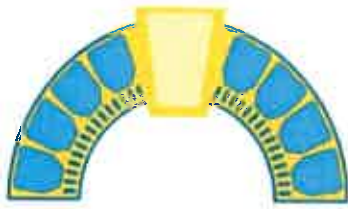
Date: November 10, 2021

LEGEND Spall Above Spall Below Crack Rust Spot	Railings Code Compliant: Yes <u>No</u> Condition: <u>Good</u> Fair Poor Type: <u>Cored</u> Surface Mount Screen Screen Shimmed: Yes <u>No</u>	Sliding Doors Code Compliant: <u>Yes</u> Vinyl Aluminum Condition: <u>Good</u> Fair Poor Age: Older <u>Newer</u> Corroded Fasteners: Yes <u>No</u> Holes In Threshold: Yes <u>No</u>
	Shutters Shimmed <u>Yes</u> No <u>Edge</u> Door Accordion <u>Roll Down</u>	Flooring Type: Tile <u>Coating</u> Pattern



Railing Length = 32 Linear Feet
 Balcony Area = 224 Square Feet

Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

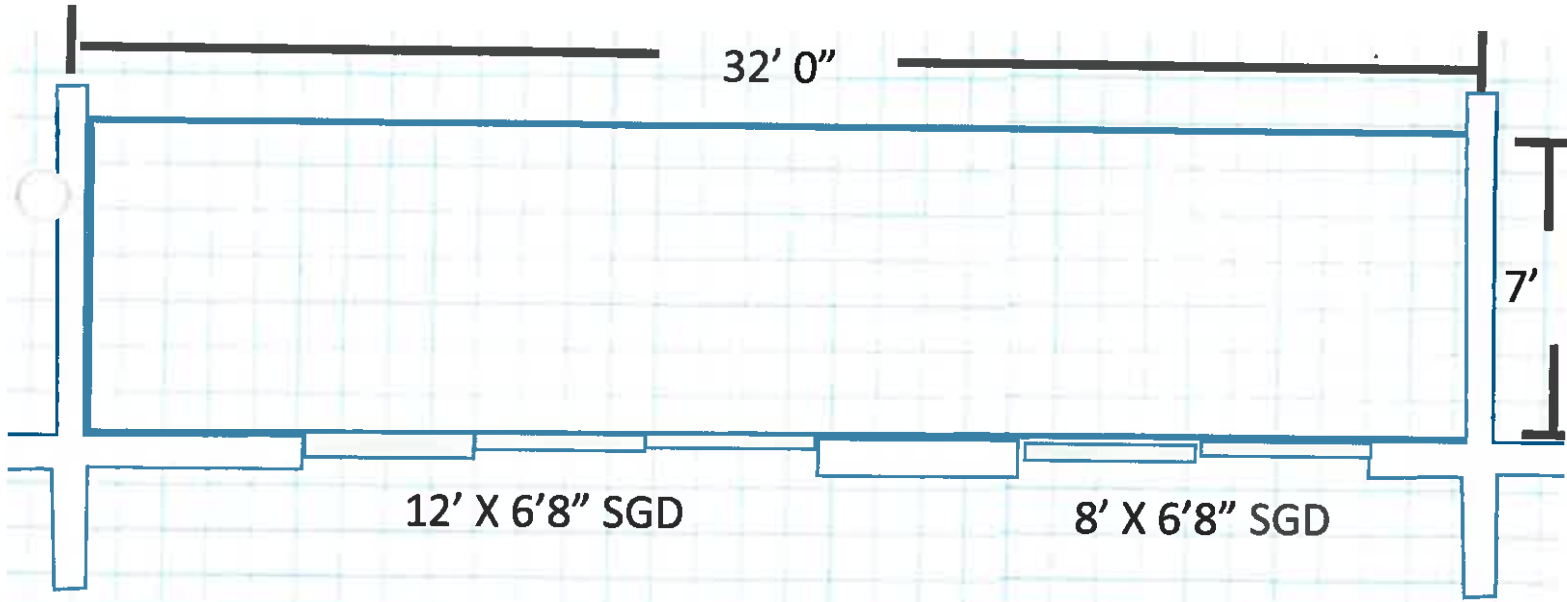
Stacks 3, 6, 8

Project: Sunset Harbor

Unit # 408

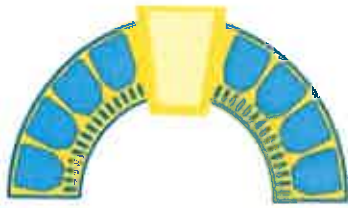
Date: November 10, 2021

LEGEND		Railings		Sliding Doors		Flooring	
	Spall Above	Code Compliant:	Yes No	Code Compliant:	Vinyl Aluminum		
	Spall Below	Condition:	Good Fair Poor	Condition:	Yes No		
	Crack	Type:	Cored Surface Mount Screen	Age:	Good Fair Poor		
	Rust Spot	Screen Shimmed:	Yes No	Age:	Older Newer		
		Shutters	Yes No	Corroded Fasteners:	Yes No		
		Shimmed	Yes No	Holes In Threshold:	Yes No		
		Edge	Door				
		Accordion	Roll Down				
				Type:	Tile Coating Pattern		



Railing Length = 32 Linear Feet
Balcony Area = 224 Square Feet

Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

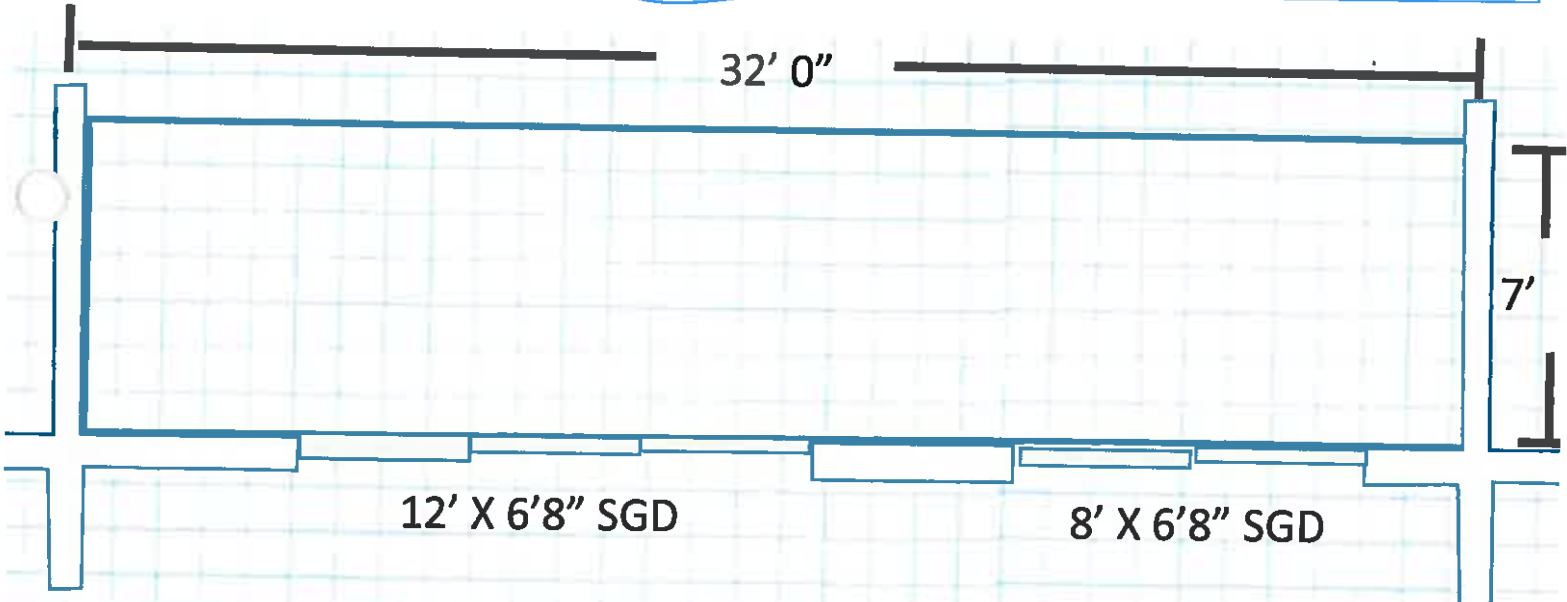
Stacks 3, 6, 8

Project: Sunset Harbor

Unit # 208

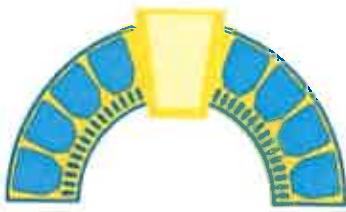
Date: November 10, 2021

LEGEND		Railings		Sliding Doors	
	Spall Above	Code Compliant: Yes	No	Vinyl	Aluminum
	Spall Below	Condition: Good	Fair	Yes	No
	Crack	Type: Cored	Surface Mount	Poor	
	Rust Spot	Screen Shimmed: Yes	No	Age: Older	Newer
				Corroded Fasteners: Yes	No
				Holes In Threshold: Yes	No
		Shutters		Flooring	
		Shimmed: Yes	No	Type: Tile	Coating
		Edge: Door	Roll Down	Pattern	
		Accordion			



Railing Length = 32 Linear Feet
Balcony Area = 224 Square Feet

Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

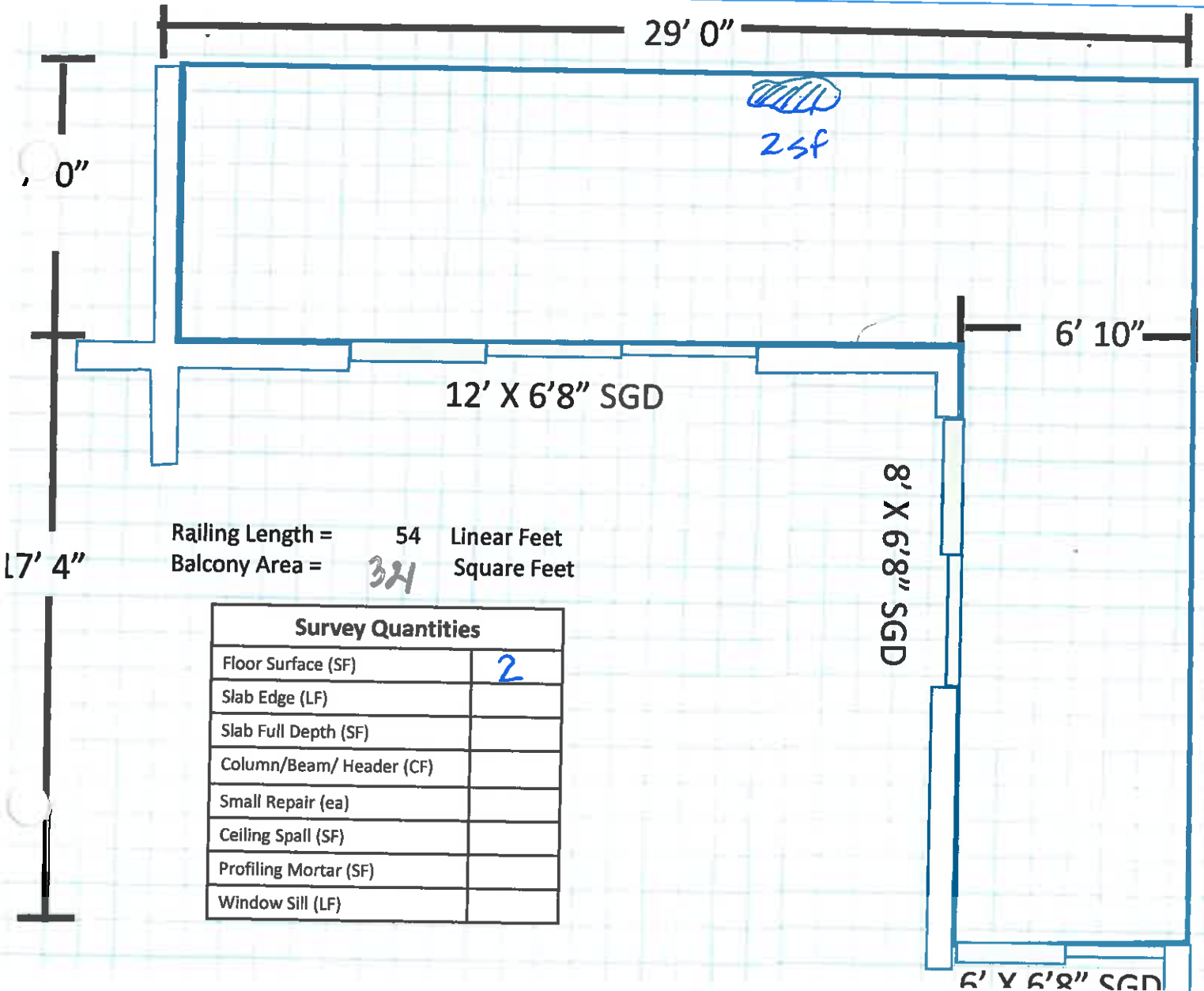
Stack 9

Project: Sunset Harbor

Unit # 509

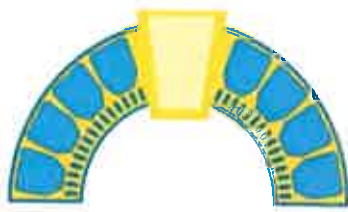
Date: November, 2021

LEGEND		Railings		Sliding Doors	
	Spall Above	Code Compliant: <u>Yes</u> No		Vinyl	Aluminum
	Spall Below	Condition: <u>Good</u> Fair Poor		Code Compliant: <u>Yes</u> No	
	Crack	Type: <u>Cored</u> Surface Mount Screen		Condition: <u>Good</u> Fair Poor	
	Rust Spot	Screen Shimmed: <u>Yes</u> No		Age: <u>Older</u> Newer	
		<u>Shutters</u>	Yes No	Corroded Fasteners: <u>Yes</u> No	
		Shimmed	Yes No	Holes In Threshold: <u>Yes</u> No	
		Edge	<u>Door</u>		<u>Flooring</u>
		Accordion	<u>Roll Down</u>	Type: Tile	<u>Coating</u> Pattern



Railing Length = 54 Linear Feet
Balcony Area = 321 Square Feet

Survey Quantities	
Floor Surface (SF)	2
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

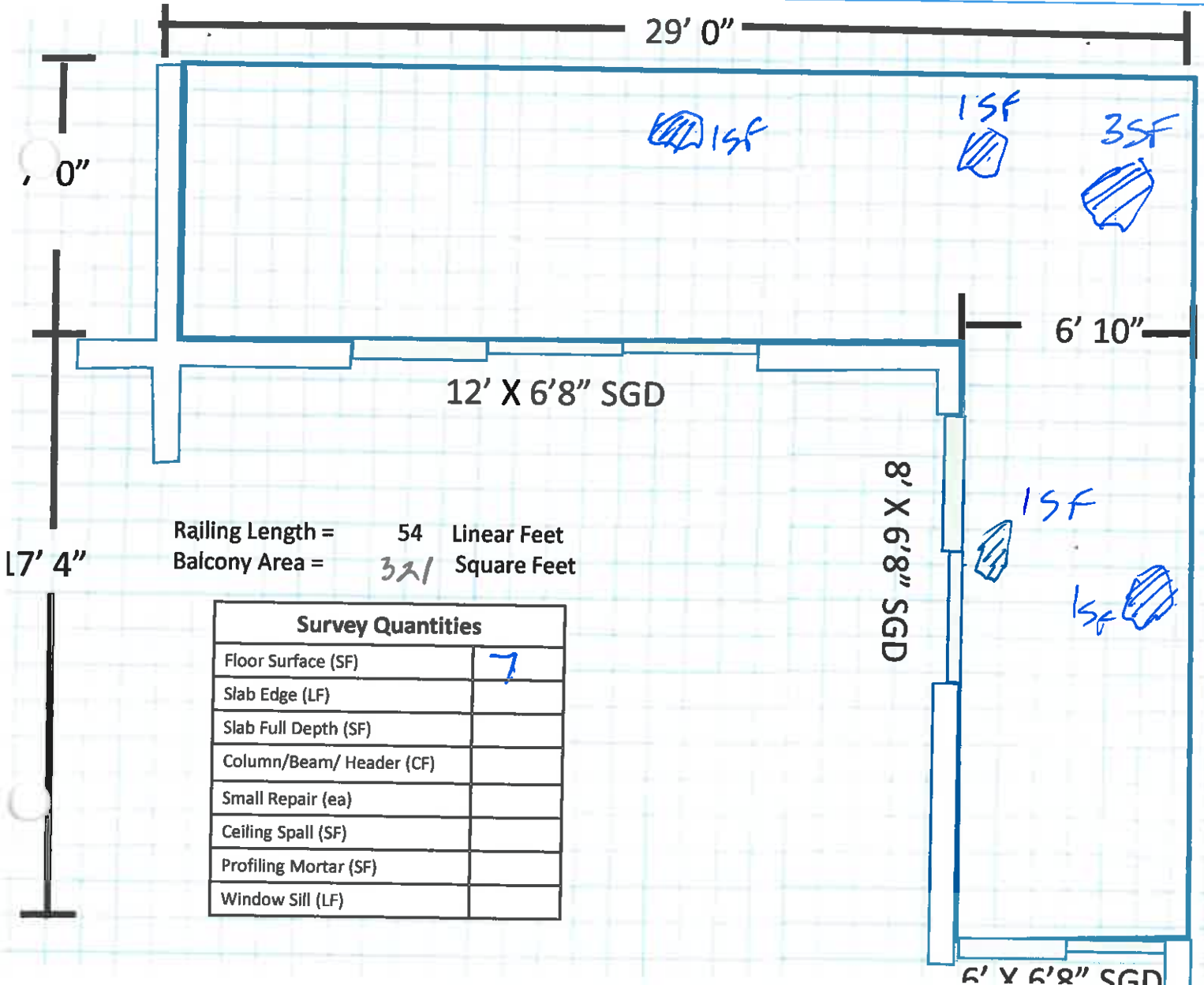
Stack 9

Project: Sunset Harbor

Unit # 409

Date: November 10, 2021

LEGEND		Railings		Sliding Doors		Flooring	
	Spall Above	Code Compliant: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Code Compliant: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Vinyl <input checked="" type="checkbox"/> Aluminum <input type="checkbox"/>		
	Spall Below	Condition: Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor <input type="checkbox"/>		Condition: Good <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Poor <input type="checkbox"/>	Older <input checked="" type="checkbox"/> Newer <input type="checkbox"/>		
	Crack	Type: Cored <input type="checkbox"/> Surface Mount <input checked="" type="checkbox"/> Screen <input type="checkbox"/>		Age:			
	Rust Spot	Screen Shimmed: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Corroded Fasteners: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
		Shutters: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Holes In Threshold: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
		Shimmed: Yes <input type="checkbox"/> No <input type="checkbox"/>					
		Edge <input checked="" type="checkbox"/> Door <input type="checkbox"/>					
		Accordion <input type="checkbox"/> Roll Down <input checked="" type="checkbox"/>					
				Type: Tile <input type="checkbox"/> Coating <input checked="" type="checkbox"/> Pattern <input type="checkbox"/>			



Survey Quantities	
Floor Surface (SF)	7
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	



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Balcony Survey Map

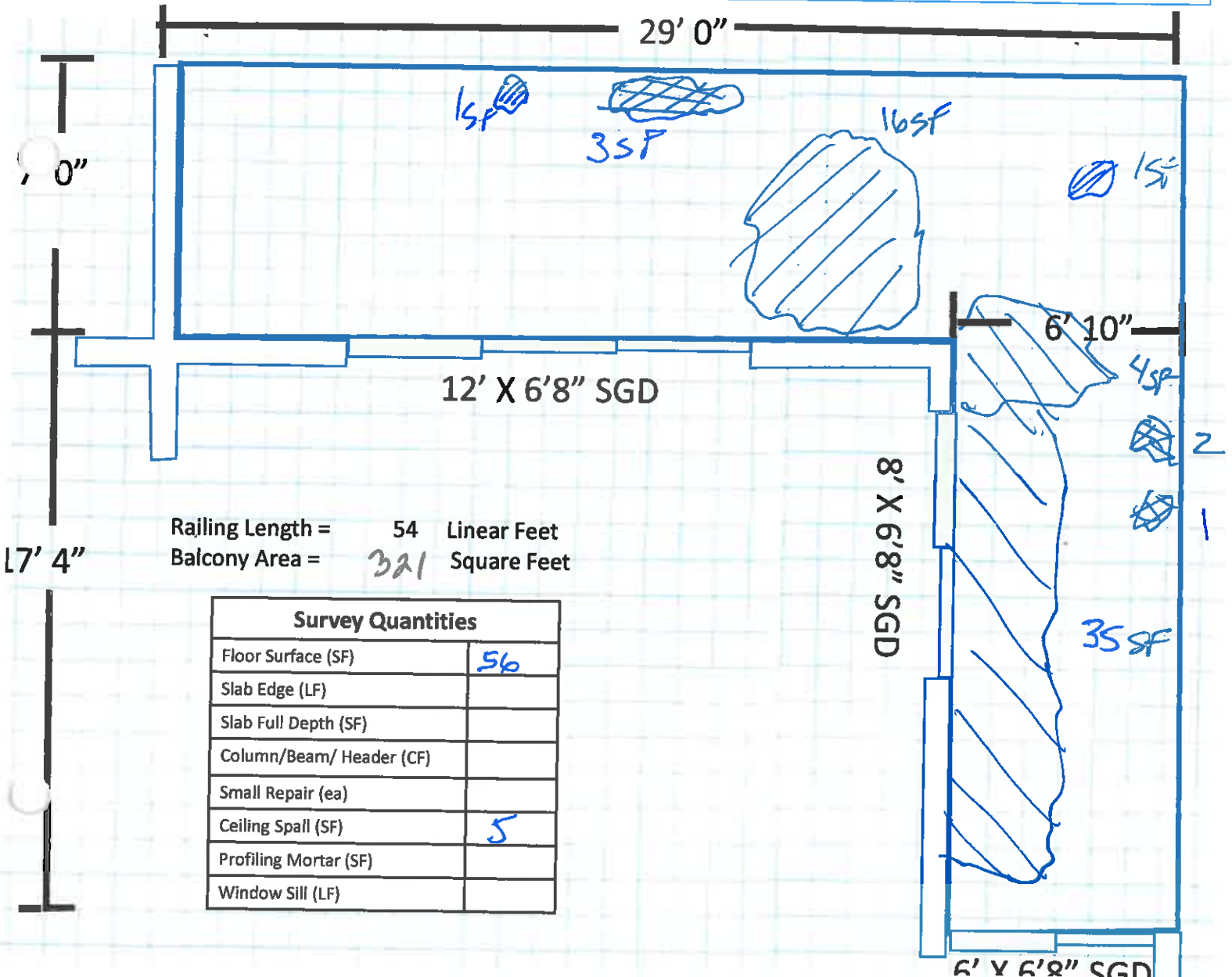
Stack 9

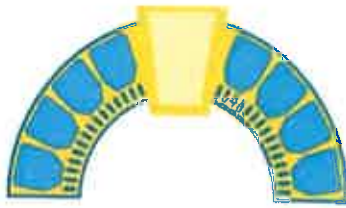
Project: Sunset Harbor

Unit # 309

Date: November 10, 2021

LEGEND		Railings			Sliding Doors		Flooring	
	Spall Above	Code Compliant: <u>Yes</u> No			Vinyl Aluminum			
	Spall Below	Condition: Good <u>Fair</u> Poor			Code Compliant: <u>Yes</u> No			
	Crack	Type: Cored <u>Surface Mount</u> Screen			Condition: <u>Good</u> Fair Poor			
	Rust Spot	Screen Shimmed: Yes No			Age: <u>Older</u> Newer			
		<u>Shutters</u>	<u>Yes</u> No			Corroded Fasteners: Yes No		
		Shimmed	Yes No			Holes In Threshold: Yes No		
		<u>Edge</u> Door						
		Accordion <u>Roll Down</u>						
					Type: Tile <u>Coating</u> Pattern			





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Balcony Survey Map

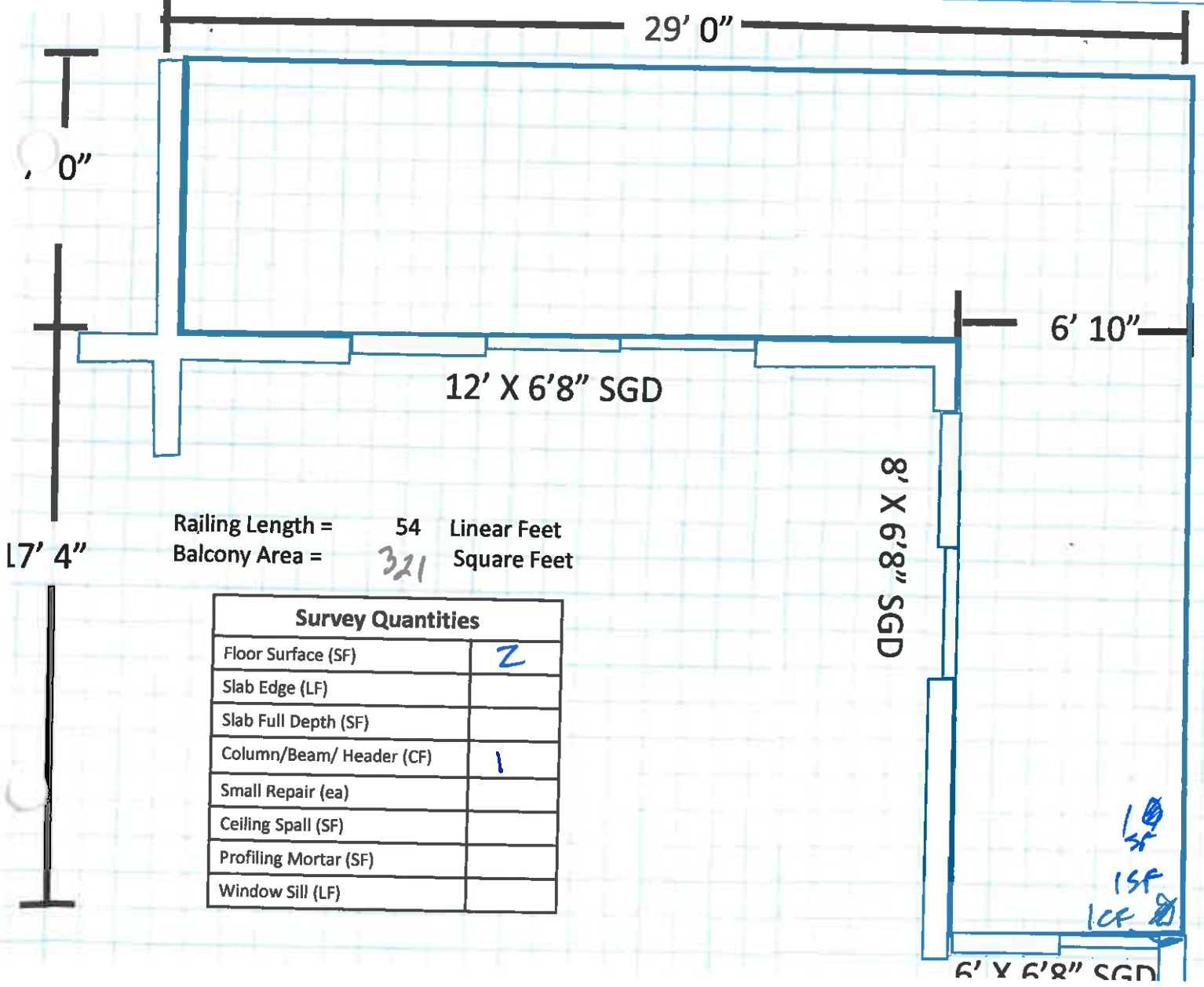
Stack 9

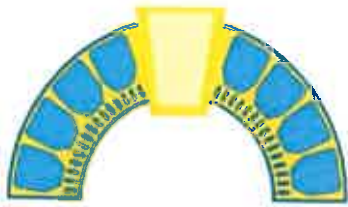
Project: Sunset Harbor

Unit # 209

Date: November, 2021

LEGEND		Railings		Sliding Doors	
	Spall Above	Code Compliant: <u>Yes</u> No		Vinyl Aluminum	
	Spall Below	Condition: <u>Good</u> <u>Fair</u> Poor		Code Compliant: <u>Yes</u> No	
	Crack	Type: Cored <u>Surface Mount</u> Screen		Condition: <u>Good</u> Fair Poor	
	Rust Spot	Screen Shimmed: Yes No		Age: <u>Older</u> Newer	
		<u>Shutters</u>	<u>Yes</u> No	Corroded Fasteners: Yes <u>No</u>	
		Shimmed	Yes No	Holes In Threshold: Yes <u>No</u>	
		<u>Edge</u>	<u>Door</u>		
		Accordion	<u>Roll Down</u>		
				Flooring	
				Type: Tile <u>Coating</u> Pattern	





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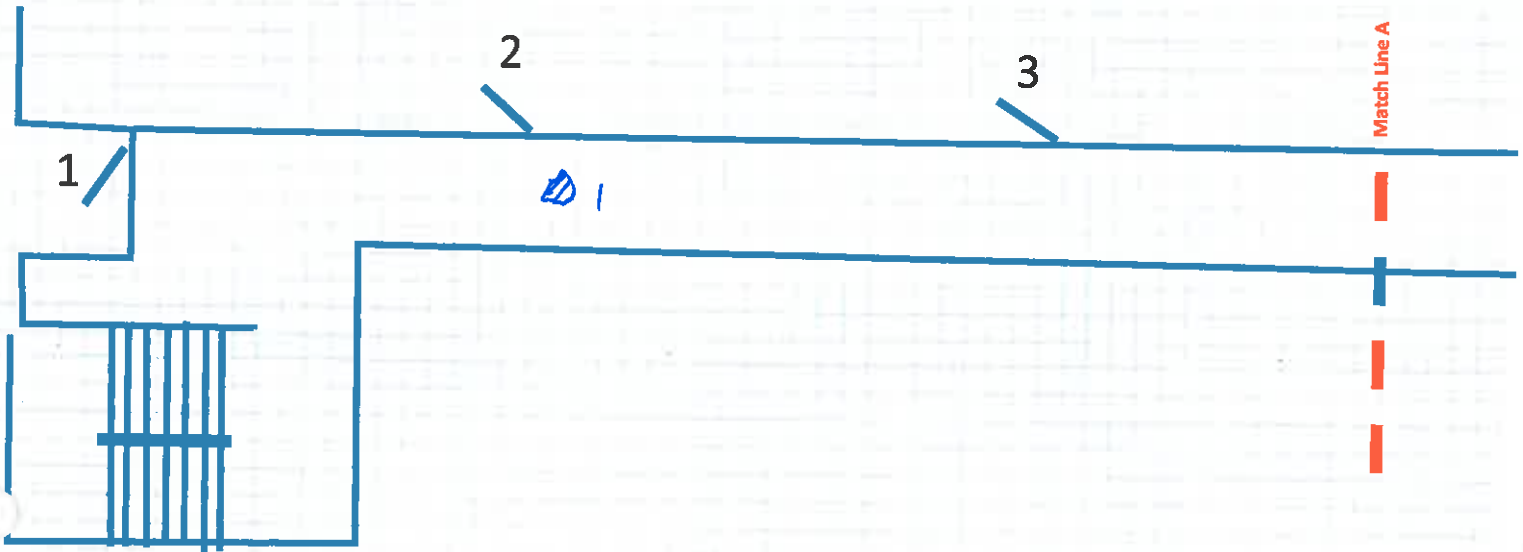
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Walkway Survey Map

Project: Sunset Harbor

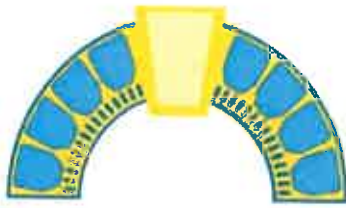
Floor # 5

Date: 4/10, 2021



Survey Quantities	
Floor Surface (SF)	1
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	

LEGEND	
	Spall Above
	Spall Below
	Crack
	Rust Spot



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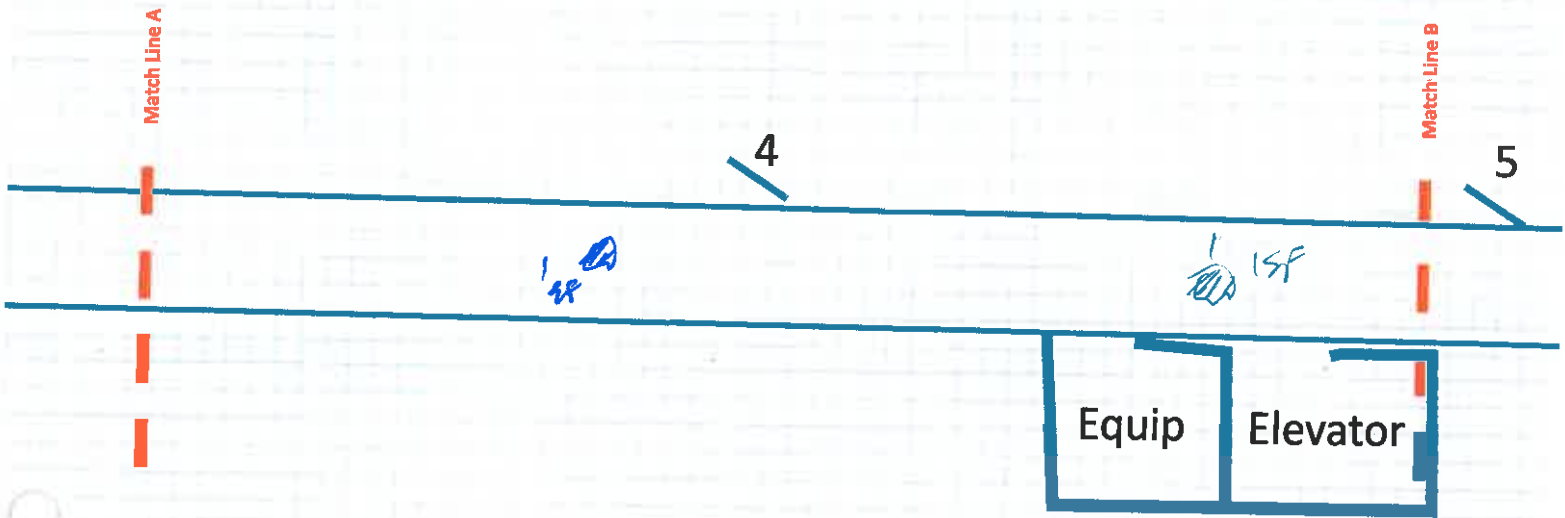
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Walkway Survey Map

Project: Sunset Harbor

Floor # 5

Date: 11/10, 2021



Survey Quantities	
Floor Surface (SF)	2
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	

LEGEND	
	Spall Above
	Spall Below
	Crack
	Rust Spot



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Walkway Survey Map

Project: Sunset Harbor

Floor # 5

Date: 11/10, 2021

Match Line B

5

6

Match Line C

evator



Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	

LEGEND



Spall
Above



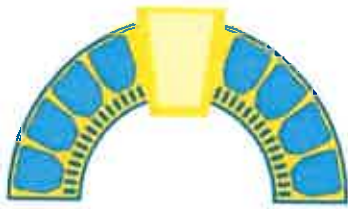
Spall
Below



Crack



Rust Spot



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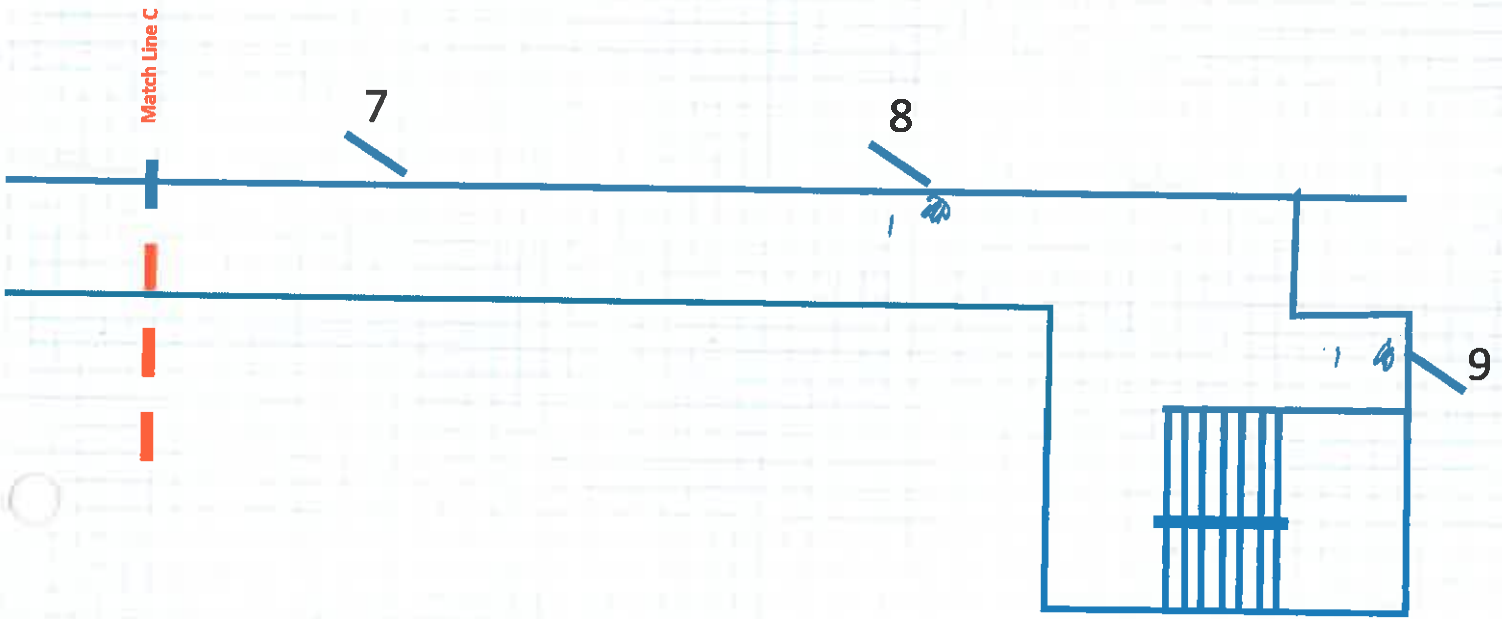
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Walkway Survey Map





Project: Sunset Harbor

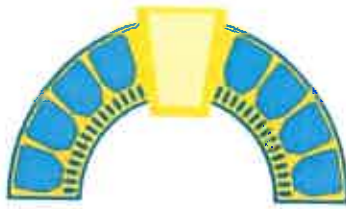
Floor # 5

Date: 11/2, 2021



Survey Quantities	
Floor Surface (SF)	2
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	

LEGEND	
	Spall Above
	Spall Below
	Crack
	Rust Spot



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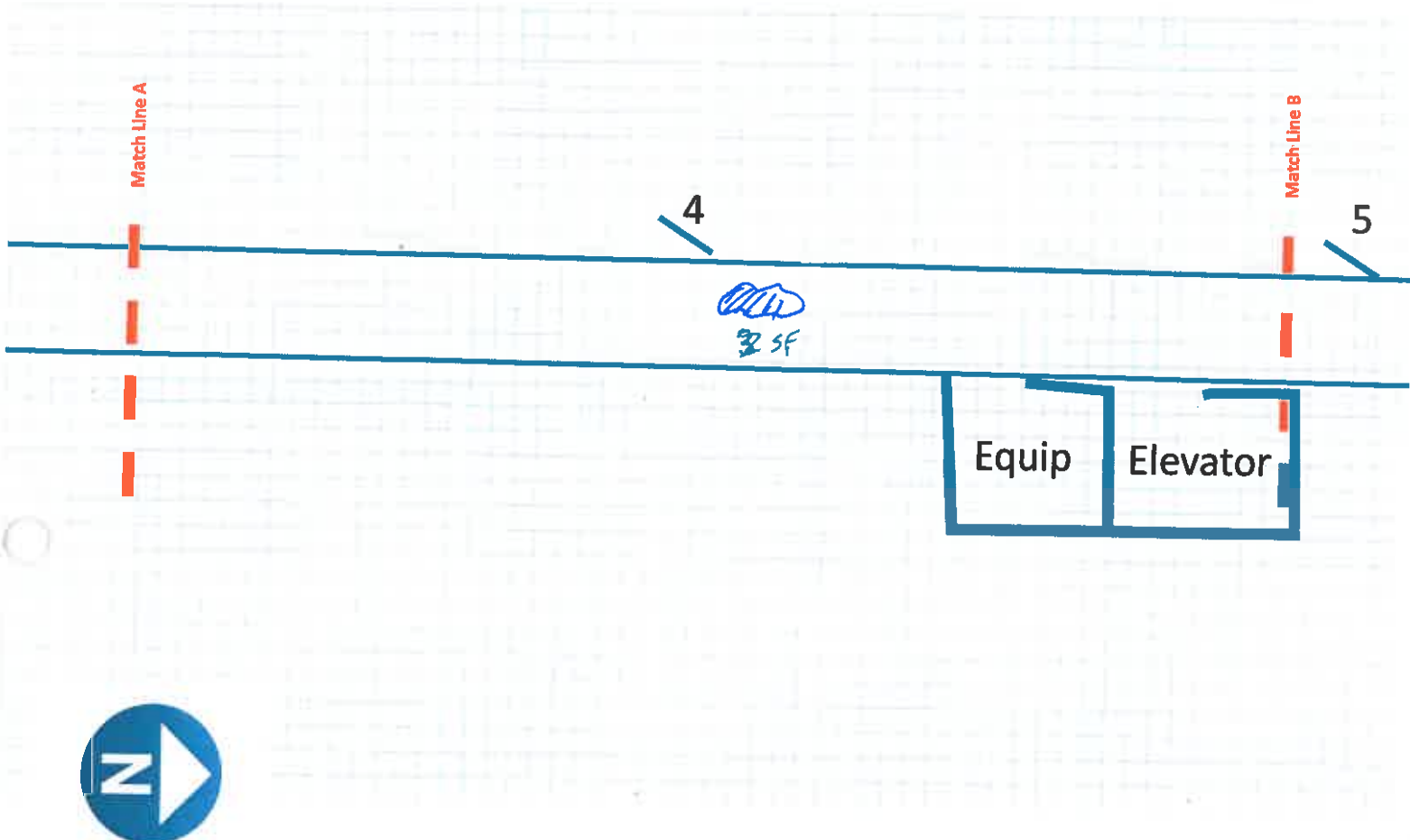
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Walkway Survey Map

Project: Sunset Harbor

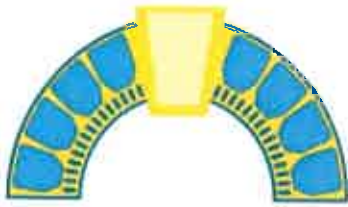
Floor # 4

Date: 11/20, 2021



Survey Quantities	
Floor Surface (SF)	3
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	

LEGEND	
	Spall Above
	Spall Below
	Crack
	Rust Spot



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Office: 321.454.7300

• KeystoneEngineeringPE.com

• Fax: 321.459.2888

Walkway Survey Map

Project: Sunset Harbor

Floor # 4

Date: 6/10, 2021

Match Line B

5

6

Match Line C

evator



Ø 0.5

Ø 1 sf



Survey Quantities	
Floor Surface (SF)	5
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	

LEGEND	
	Spall Above
	Spall Below
	Crack
	Rust Spot



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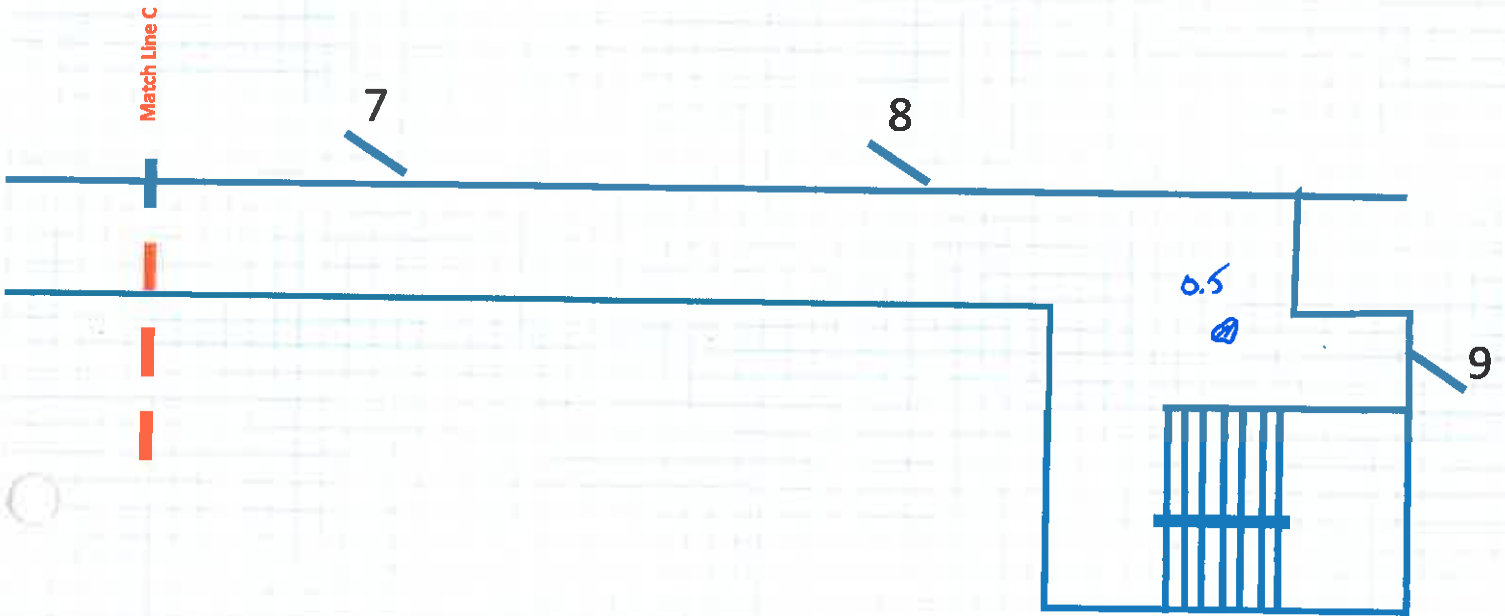
• Fax: 321.459.2888

Walkway Survey Map

Project: Sunset Harbor

Floor # 4

Date: 11/10, 2021



Survey Quantities	
Floor Surface (SF)	0.5
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	

LEGEND	
	Spall Above
	Spall Below
	Crack
	Rust Spot



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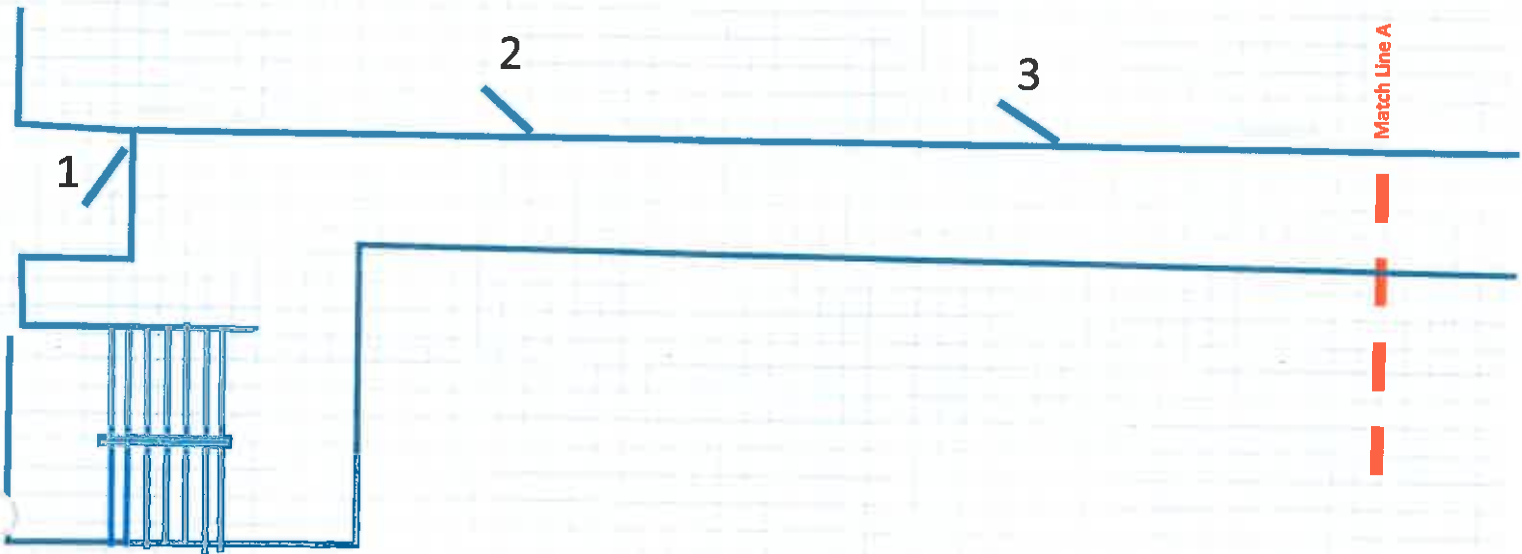
• Fax: 321.459.2888

Walkway Survey Map

Project: Sunset Harbor

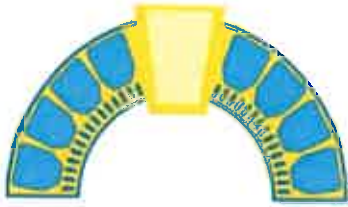
Floor # 3

Date: 11/10, 2021



Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	

LEGEND	
	Spall Above
	Spall Below
	Crack
	Rust Spot



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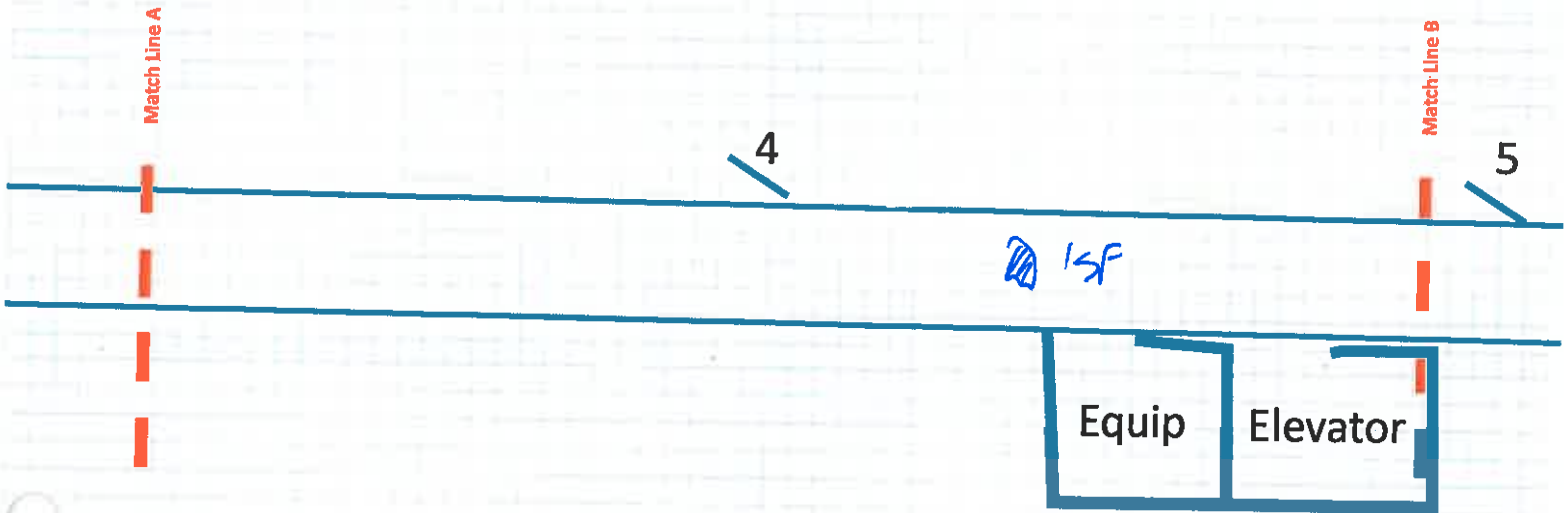
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Walkway Survey Map

Project: Sunset Harbor

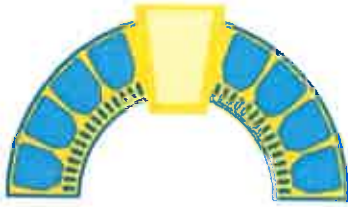
Floor # 3

Date: 11/10, 2021



Survey Quantities	
Floor Surface (SF)	1
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	

LEGEND	
	Spall Above
	Spall Below
	Crack
	Rust Spot



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Walkway Survey Map

Project: Sunset Harbor

Floor # 3

Date: 11/10, 2021

Match Line B

5





6

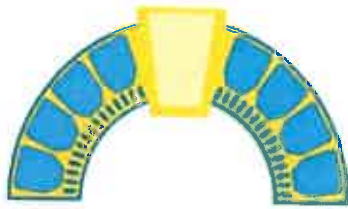
Match Line C

evator



Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	

LEGEND	
	Spall Above
	Spall Below
	Crack
	Rust Spot



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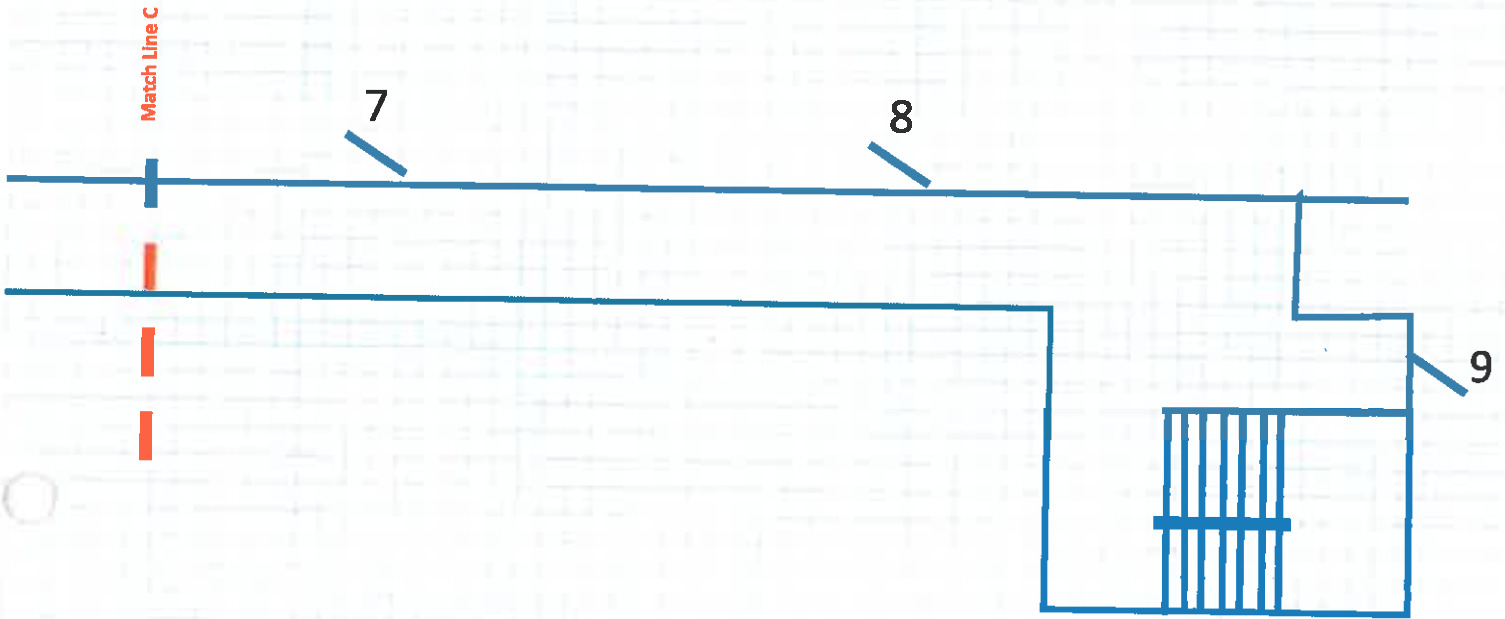
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Walkway Survey Map





Project: Sunset Harbor

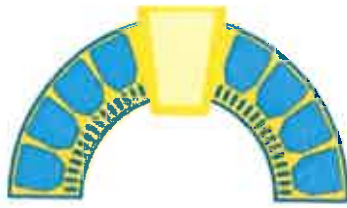
Floor # 3

Date: 11/10, 2021



Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	

LEGEND	
	Spall Above
	Spall Below
	Crack
	Rust Spot



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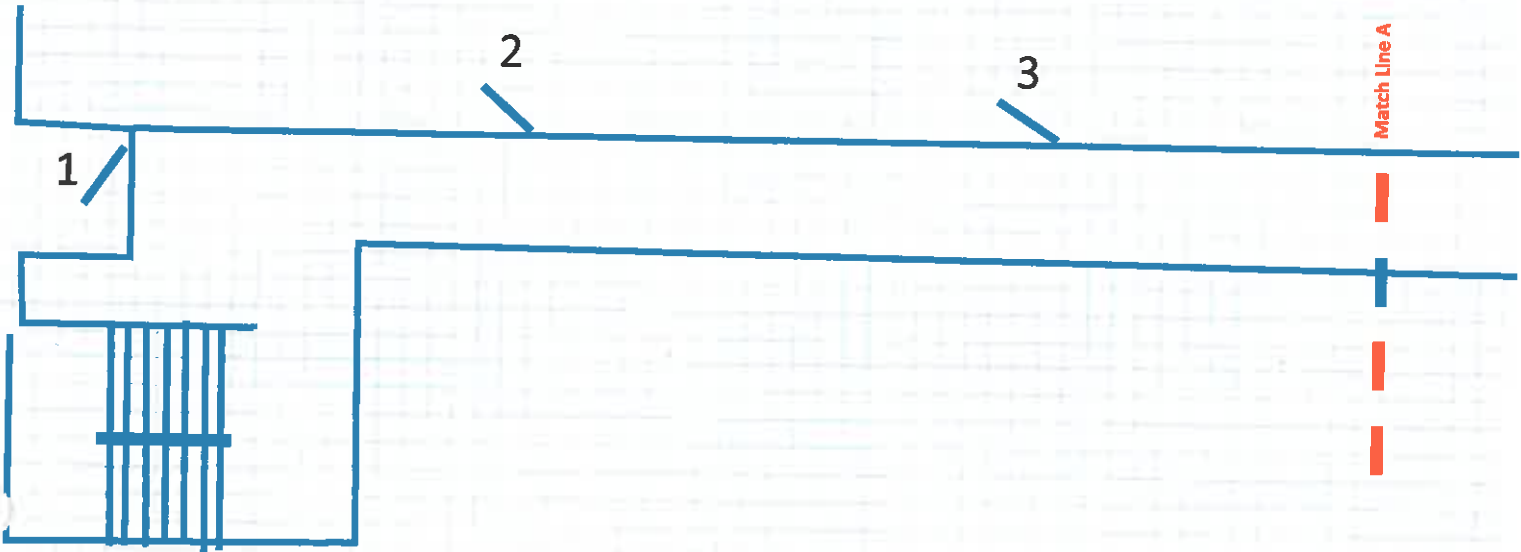
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Walkway Survey Map

Project: Sunset Harbor

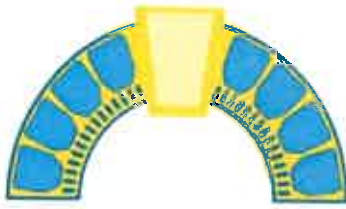
Floor # 2

Date: 11/10, 2021



Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	

LEGEND	
	Spall Above
	Spall Below
	Crack
	Rust Spot



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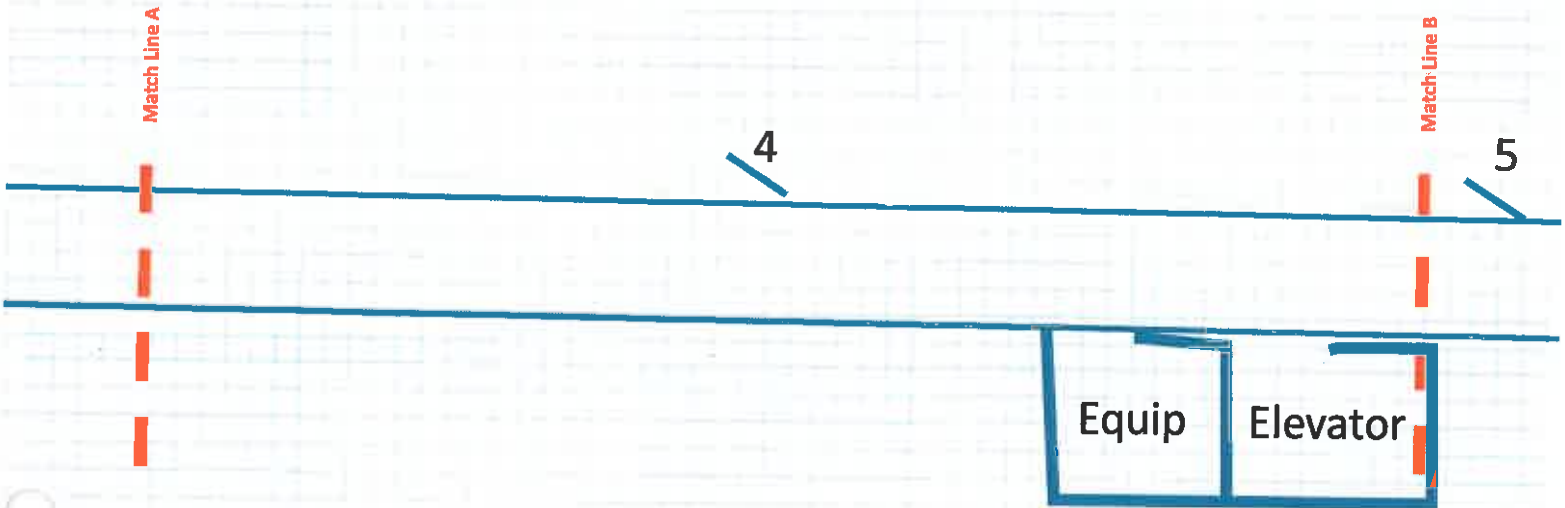
• Fax: 321.459.2888

Walkway Survey Map

Project: Sunset Harbor

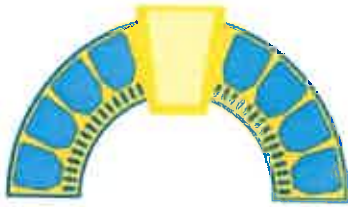
Floor # 2

Date: 4/10, 2021



Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	

LEGEND	
	Spall Above
	Spall Below
	Crack
	Rust Spot



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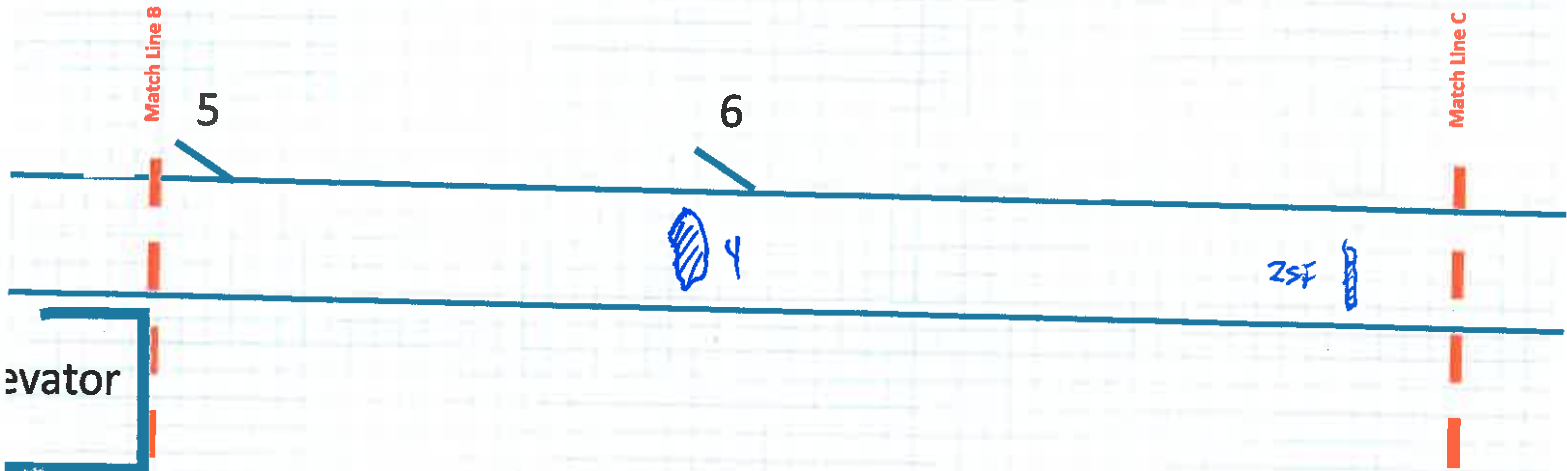
• Fax: 321.459.2888

Walkway Survey Map





Project: Sunset Harbor

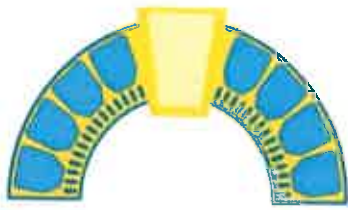
Floor # 2

Date: n/a, 2021



Survey Quantities	
Floor Surface (SF)	<u>6</u>
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	

LEGEND	
	Spall Above
	Spall Below
	Crack
	Rust Spot



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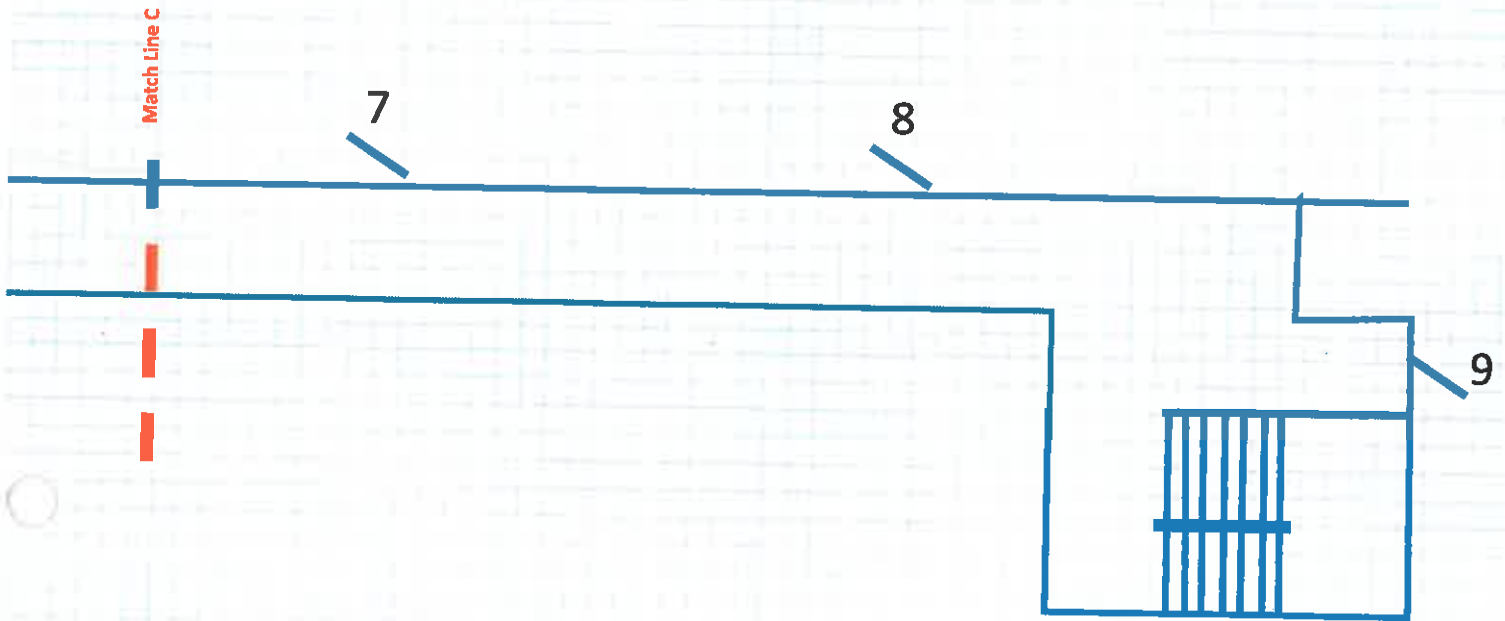
• Fax: 321.459.2888

Walkway Survey Map

Project: Sunset Harbor

Floor # 2

Date: 1/12, 2021



Survey Quantities	
Floor Surface (SF)	
Slab Edge (LF)	
Slab Full Depth (SF)	
Column/Beam/ Header (CF)	
Small Repair (ea)	
Ceiling Spall (SF)	
Profiling Mortar (SF)	
Window Sill (LF)	

LEGEND	
	Spall Above
	Spall Below
	Crack
	Rust Spot