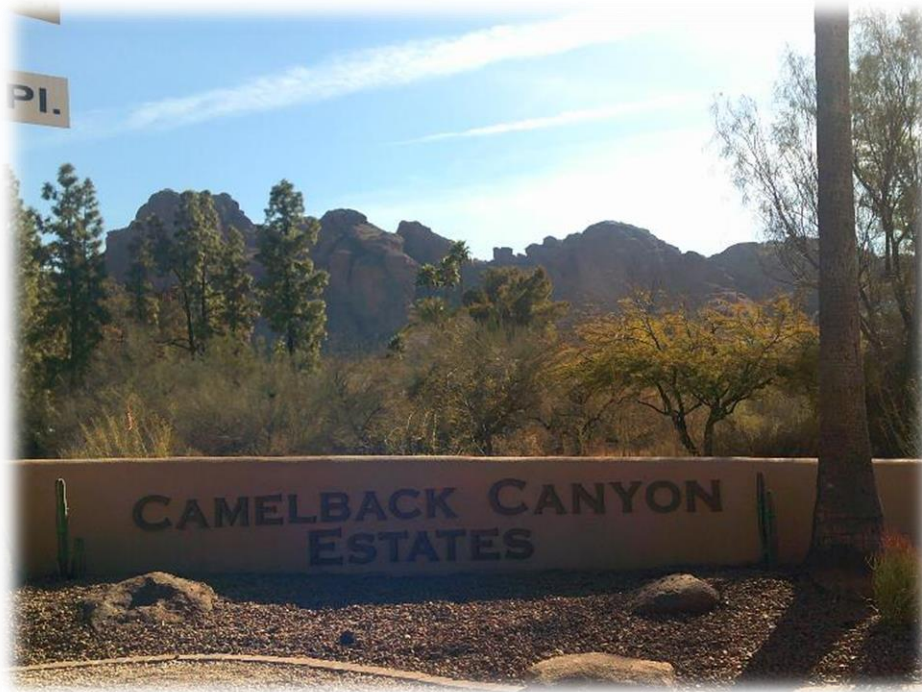


CAMELBACK CANYON ESTATES BLOCK WALL EVALUATION

Prepared for:

The Camelback Canyon Estates Board of Directors
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Table of Contents

1.0	EXECUTIVE SUMMARY.....	3
2.0	DESCRIPTION.....	3
3.0	STANDARDS AND LIMITATIONS.....	4
4.0	METHODOLOGY	5
5.0	UNDERSTANDING THE DATA.....	7
6.0	REPRESENTATIVE DEFICIENCIES AND CONDITIONS	7
7.0	OBSERVATIONS BY PRIORITY AND RECOMMENDATIONS	14
8.0	CONCLUSION	19
	ATTACHMENTS:	21
	A – LOCATION MAP AND MAP OF LOTS INSPECTED	21
	B – WALL DEFICIENCY LEGEND	21
	C –DEFICIENCIES AND PHOTO FILE	21
	D – TEAM MEMBER BIOGRAPHIES.....	21



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January 31, 2024

Camelback Canyon Estates Board of Directors
c/o Mr. Paul Ortiz, Community Manager
Cornerstone Properties, Inc
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paul@cpihoa.com

PROPERTY: CAMELBACK CANYON ESTATES COMMUNITY
PHOENIX, ARIZONA

SERVICE: 23-0433 – BLOCK WALL STRUCTURAL EVALUATION

ATTACHMENT: LIMITED STRUCTURAL BLOCK WALL INSPECTION REPORT

Dear Mr. Ortiz and the Camelback Canyon Estates Board of Directors:

At your request, Criterium-Kessler Engineers completed a structural inspection of all of the perimeter walls in Camelback Canyon Estates for which the Association is responsible. The inspection took place in January, 2024.

The primary purpose of the inspection was to evaluate the structural condition of the walls and to provide observations and recommendations on how to proceed for repair and replacement, if appropriate. This report focuses on structural deficiencies that may be affecting the performance of the walls and those that should be repaired and or replaced. This inspection included, but is not limited to:

- ✓ Overall general structural integrity of the walls
- ✓ Water intrusion
- ✓ Cracking in the walls
- ✓ Leaning / wall rotation
- ✓ Differential movement
- ✓ Foliage overgrowth impacting the walls
- ✓ General required repairs

The report that follows is based on observations made during the above on-site inspection. Following the text of this report are Attachments that provide additional detail and descriptions. These Attachments should be considered an integral part of this report.

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The inspection was performed by and report written by Timothy Furlong, E.I., Project Manager. This report was reviewed by Carl Muha, P.E., Senior Engineering Director, both of Criterium-Kessler Engineers.

1.0 EXECUTIVE SUMMARY

The primary purpose of the inspection was to evaluate the structural condition of the walls and to provide observations and recommendations on how to proceed with repair and replacement, if appropriate. This report focused on structural deficiencies that may be affecting the performance of the walls and should be repaired and or replaced.

The community walls within Camelback Canyon Estates were in generally Good to Fair condition. Selected walls and/or wall segments are Poor condition with notable deficiencies resulting in a total of twenty-five (25) lots with Priority 1 walls / wall segments that should be demolished and replaced. We also observed 15 notable Priority 2 issues. These walls should be monitored (Priority 4) since conditions may ultimately result in a Priority 1 issue as deterioration continues (and require repair / rebuilding) – although in some instances, the Association may choose to make repairs to some of these walls at this time. Addressing the Priority 3 issues, likely before painting, may extend the life of the walls. We also observed a total of 53 instances where the walls should be monitored periodically since they may eventually become more serious deficiencies requiring demolition and replacement.

For those walls that require replacement, or significant reconstruction, an engineered design should be obtained from an Arizona licensed engineer (we can provide that if required) to ensure the walls are replaced in accordance with local building requirements and for the specific conditions present at the site of the issue. Further, these walls should have periodic quality assurance (QA) inspections during the construction process (by the engineering company that provided the designs)

2.0 DESCRIPTION

The Camelback Canyon Estates Community is comprised of approximately 107 homes. The bulk of the homes were constructed in the early 1970's are approximately 50 years old. Multiple homes appear to have been significantly renovated with specific instances where their walls were constructed at the time of the renovations/repair/ builds. The Community is generally located south of McDonald Drive and east of North 44th Street.

The perimeter theme walls were primarily of Dooley construction. There are multiple instances where the walls appear to be standard block construction with multiple instances where the themed portion rests on top of a retaining wall. There were multiple lots where the perimeter wall overlooked a wash with a 4 to 6-foot view metal view fence on top of the theme portion or embedded directly into the ground(footing). The Dooley theme walls were generally comprised of 4x8x16-inch standard concrete masonry units (CMU) with a painted exterior. The Dooley columns and stand block theme walls constructed on top of a retaining portion were generally comprised of 8x8x16 painted split face CMU. The Lots with standard block construction generally measured either 6x8x16" or 8x8x16" for the theme portion. The perimeter theme walls both with and without a view fence were generally between 5.5 to 10.5-feet in height.

Depending on the Lot, there were columns that were dressed with custom brick, stucco cladding and/or welded sculptures. The columns did not occur after each lot and but generally were the expansion joint between two Dooley columns. Columns and reinforcement spacing on standard block construction could not be confirmed from the exterior with additional painted cladding.

There were numerous instances of retaining walls constructed with block walls and view fences on top throughout the community. However, the walls were only inspected from the HOA side, so it was not always possible to determine if a wall was retaining. In some instances, we determined whether walls were performing a retaining function based upon the height of the walls and the presence of weep holes.

3.0 STANDARDS AND LIMITATIONS

Criterium-Kessler Engineers performed duties to the professional standards consistent of a Licensed Professional Engineer but does not guarantee or warrant that all relevant conditions are discovered and included in the report. This report is not to be considered a guarantee of condition, and no warranty is implied.

As Professional Engineers, it is our responsibility to evaluate available evidence relevant to the purpose of this inspection. We are not, however, responsible for conditions that could not be seen or were not within the scope of our service at the time of the inspection.

Excluded from the scope is any assessment of potential environmental hazards at the site, or around the community. Our inspection was a limited visual inspection. No surface materials were removed, no destructive testing undertaken, no furnishings were moved, nor calculations performed. Without destructive testing we cannot see the interior condition of the walls or determine if the walls were constructed in accordance with design documents.

This inspection was performed only from the HOA side of the wall. We did not enter into any homeowner yard, nor did we look into back yards. Therefore, there are likely conditions that we cannot see that may be affecting the walls to include irrigation systems, water features, and landscape boxes. Additionally, we may not be able to see items such as sail shades attached to walls that may be affecting the structural integrity.

Should the community perform destructive testing (or demolish the walls for repair), it is possible additional deficiencies and issues may be discovered that could not be determined from a visual inspection. This report is **not** an exhaustive technical evaluation. Such an evaluation would cost many times more.

This inspection is a general inspection of the condition of the walls throughout the community and should **not** be considered a forensic structural inspection. Should the Association decide to pursue a construction defect claim, or other legal action to include determining the specific cause of deterioration, damage, and other issues such as water intrusion, additional more detailed and thorough inspections will be required since that is not within the scope of this project.

The scope of this inspection and report does not include a comprehensive evaluation for code compliance or repair design.

This inspection is not a geotechnical evaluation of the site. No subsurface investigation was performed, and this evaluation is not what might be referred to as a “soils report.” We can make no determination of the prior grading activity or surface preparation that may or may not have occurred without more extensive research of public records or subsurface investigation.

Determining the ownership and/or repair/replacement costs for walls in either the initial phase or future phases of the project will be determined by the Association, not Criterium-Kessler Engineers. We can provide research if required, but it is not within the scope of this project, or our responsibility, to determine wall ownership / maintenance responsibility.

The results of a wall inspection are limited to conditions and information available on the dates of the evaluation. Walls should be periodically evaluated due to continued deterioration or other conditions that may affect the walls. Further, since not all clients repair walls immediately after an inspection, additional issues and/or deficiencies may develop between the inspection and repairs – resulting in additional repairs.

4.0 METHODOLOGY

This report is the result of an on-site visual, non-invasive limited structural inspection to quantify existing wall deficiencies, severity and general / specific locations by lot number where possible. This includes walls identified by the management company as being the responsibility of the Association. A map highlighting the perimeter and exterior walls to be inspected is include in Attachment A.

Criterium-Kessler Engineers inspected the agreed-upon perimeter theme walls in Camelback Canyon Estates to identify major and minor structural distress, walls that are leaning, unusual cracks, water damage, walls that should be monitored, and other deficiencies:

Table 1 contains sample images depicting the different deficiencies in the community to assist with understanding the type of issues that we observed across the Association walls.

Table 2 provides deficiency totals across the walls inspected (rollup of deficiencies), the deficiency table that was used for all of the inspections (Priorities and Categories), and map of the community with lots inspected. Attachment B is the deficiency legand used for Camelback Canyon Estates.

Evaluations specific to each individual Lot, including observations and recommendations, and a sample set of captured photos of issues are located in Attachment C.

The walls in the community were inspected from the Homeowner’s Association side of the wall. At no time did Criterium-Kessler Engineers enter into any Homeowner’s yard to inspect the wall. This would have exceeded the scope of the project. As a result, we do not know the conditions of the walls from the Homeowner’s side – which may be useful in some instances.

There are a number of walls in the community where the grade on the homeowner side of the wall appears to be lower than the Homeowner's Association side of the wall. We have no way of knowing if there were weep holes present in the retaining walls, nor do we know if there was any efflorescence from water intrusion that was visible to the Homeowners but not apparent from the exterior wall on the Homeowner's Association side of the wall.

We have developed a rating chart unique to the Camelback Canyon Estates to categorize issues and record those issues by lot. The issue chart used for the inspection is located in Attachment B. The chart contains the categories associated with the identified problems, and a corresponding repair Priority.

Terms used in this report to decide the condition of observable components and systems are listed and defined below. It should be noted that a term applied to an overall wall system does not preclude that a part or section of the system or component may be in a different condition.

Excellent - Component or system is considered to be in a "as new" condition requiring no repair or rehabilitation and should perform in accordance with "as new" expectations.

Good - Component or system is sound and performing its function, although it may show signs of normal wear and tear. Minor repair or rehabilitation work may be required.

Fair - Component or system falls into one or more of the following categories: a) Evidence of previous repairs not in compliance with commonly accepted practice, b) Workmanship not in compliance with commonly accepted standards, c) Component or system is obsolete, d) Component or system is approaching the end of its expected performance. Repair, rehabilitation, or replacement is required to prevent further deterioration and/or to prolong the expected life.

Poor - Component or system has either failed or is in a current state of failure such that it cannot be relied upon to perform its original expected function. This is commonly a result of the component or system having exceeded its original expected performance, excessive deferred maintenance, or currently in a state of disrepair. In addition, the present condition could contribute to, or cause, the deterioration of adjoining components or systems. Repair, rehabilitation, or replacement is required.

Failure - With regard to CMU walls, the wall may be classified as failure when the wall is vertically out of plumb in excess of over half the size of the width of the block over a four-foot vertical span (for example, if the block is 8-inches wide and the wall is at least 4-inches out-of-plumb). Pertaining to post-tension walls, a component or system is experiencing a state of failure that does not necessarily mean collapse but may mean that signs of structural failure may exist leading to a loss of serviceability.

All ratings are determined by comparison to other block walls of similar age and construction type. For purposes of this report, all directions (left, right, rear, etc.) are taken from the viewpoint of an observer standing in front of the wall and facing it.

5.0 UNDERSTANDING THE DATA

Our inspections typically result in a significant amount of information, and that means it can be challenging to convey the results in a way that is clear to all parties who may review the report since people tend to analyze data and make conclusions in their own way.

Therefore, the following information should provide some insight into how the data was collected and reported. These should be considered “general guidelines” on how the data was collected and is reported since there are always variations depending upon site conditions, physical access to the walls, available data, and the resulting analysis.

Observed deficiencies are not always easily associated to a single location on a wall, or a single panel on a wall (i.e. from one control joint to another), nor is there always a single cause contributing to a deficiency. Therefore, the actual “count” of issues should be considered more of an approximation of our observations and used to assist with understanding what is happening with the walls. We have sought to record specific deficiencies that may be contributing to wall issues either now or in the future.

Typically, the instances noted in Table 1 below for either Priority 1 or Priority 2 items are counted on a per observed basis. This means that if there are two wall panels that should be replaced, and they are continuous (even if it spans across two lots), then this would typically be counted as a single instance.

Further, if there are two wall panels on a lot that require replacement, but they are separated by at least one panel, they are counted as two instances of an issue. This is because the repair or replacement would typically only include the affected wall segments individually and not the entire wall.

The deficiencies noted below are generally identified by lot. This means that if we observed wall rotation, hairline vertical and/or stair step cracks, we did not count each deficiency individually (even if the notes indicate the presence of multiple cracks), we just noted it as having occurred on the walls associated with that particular lot.

Some lots have walls that face multiple directions – east, south, southeast, etc. (corner lots would be an example). In those instances, the lot number is followed by a direction (S -Side, SS – Second Side, A- Alley) so that the specific wall being discussed can be easily identified when reading the data.

6.0 REPRESENTATIVE DEFICIENCIES AND CONDITIONS

During the on-site inspection we observed a number of different deficiencies and conditions. The following photos from within the various lots/lot segments are being provided as representative examples of the different deficiencies and conditions observed during our inspection.

These representative examples are meant to enable the Board and Homeowner’s to better understand the various conditions observed during the inspection and noted in this report.

Table 1 – Representative Deficiencies and Conditions

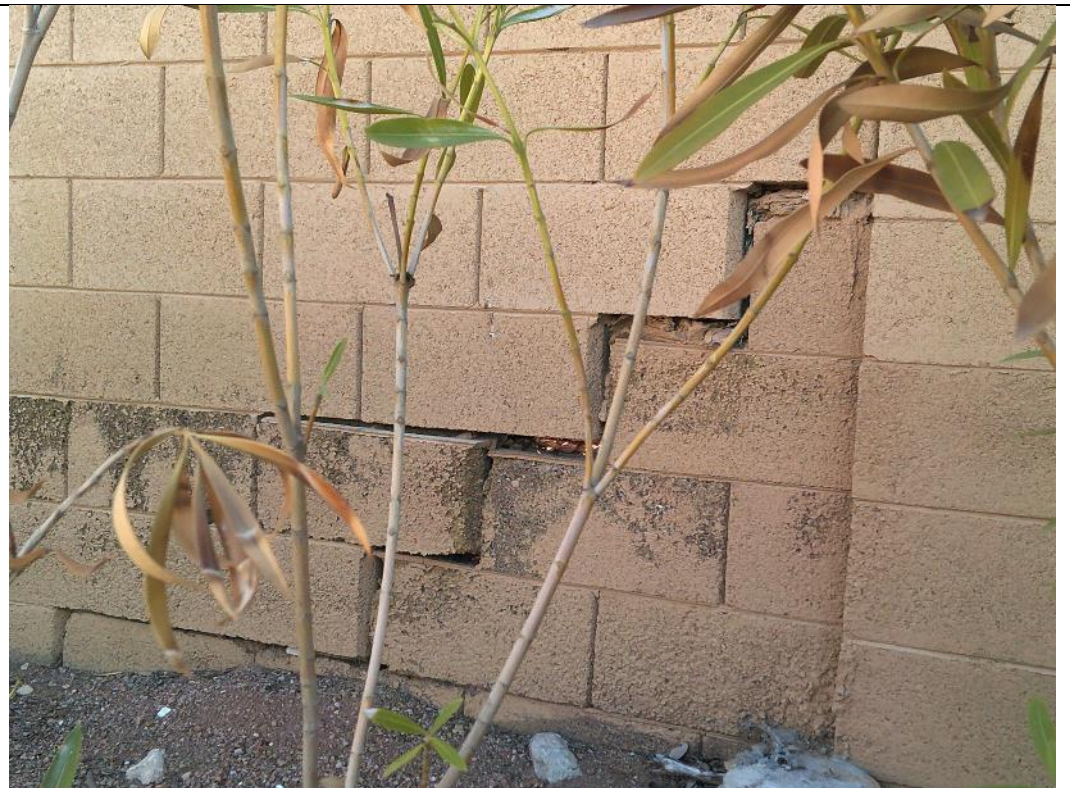
- ✓ Water intrusion leading to block delamination

Water intrusion is sometimes visibly observed by the presence of efflorescence and may result in the delamination and block degradation, eventually leading to structural failure.



- ✓ Stair step cracking

Stair step cracking is typically a result of movement in the block wall foundation, tree roots, and/or the wall experiencing a permanent lean or "tilting". The condition becomes exacerbated when moisture intrusion exists in addition to the movements described above.



✓ Vertical Cracking

Vertical cracking is typically a result of either control joints that are too far apart, wall rotation / leaning, or some type of external element such as tree roots or tree branches. Water intrusion into the wall can exacerbate the condition.



✓ Leaning or "tilting" wall segments and view fence

Leaning or "tilting" wall segments typically occur due to missing vertical reinforcement, insufficient footings, or structural failure of the internal wall elements (such as at the bond beam).



✓ Exposed Footings
Through Erosion or
Construction

Exposed footings are typically of two types – either because they were constructed in a way that they were never fully covered (which is not usually a problem for the walls), or footings that are exposed due to erosion. If the footings are exposed from erosion, this may result in significant structural deficiencies or wall failure.



✓ General Wall
Repairs

General wall repairs include corroded wrought iron, broken blocks, missing/broken top caps, holes in the walls, broken CMU blocks, missing bolts on wrought iron fencing, missing column top caps, missing trim on columns, and other similar repair issues.



✓ Landscape Overgrowth and Irrigation Systems

Landscape planters, shrubs, and tree overgrowth can allow moisture penetration into the wall and in the case of trees, the roots can undermine the footing system causing failure. In addition, many times irrigation systems will be a source for masonry walls to be constantly soaked leading to delamination and ultimate failure.



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Landscape planters, shrubs, and tree overgrowth can allow moisture penetration into the wall and in the case of trees, the roots can undermine the footing system causing failure. In addition, many times irrigation systems will be a source for masonry walls to be constantly soaked leading to delamination and ultimate failure.



✓ Uplift

Roots from vegetation and settlement of the wall can cause uplifting conditions for a portion or all of the wall. Portions of the walls grout can debonded and separate the CMU courses and limiting the integrity of the wall.



✓ Built-Up Wall

Landscape When the wall is increased in height, the wall is built up. A built-up wall may be overloading the wall below from the vertical reinforcing and the footing size may be improperly sized with respect to the wall height. Wall rotation and partial collapse has potential to occur.



Please see the individual photos files that are associated with each individual lot segment included in Attachment C. We did not take photos of every condition and deficiency, but the photos in each sub-lot correspond to the identified issues in the deficiency tables.

The deficiencies noted below are generally identified by lot. This means that if we observed wall rotation, hairline vertical and/or stair step cracks, we did not count each deficiency individually (even if the notes indicate the presence of multiple cracks), we just noted it as having occurred on the walls associated with that particular lot.

The types of walls are described in the "Description" section above. We have sought to identify the type of wall associated with each lot, but since we can only see from the HOA side of the wall, we do not have a view of the entire wall. The types of abbreviations include:

- ✓ D – Dooley Wall (no attached view fence or observable retaining portion and typically about 5 to 6-feet tall)
 - ✓ R/D – Retaining Wall with Dooley Wall (typically at least 2 – 3 courses of a retaining wall with a Dooley Wall on top)
 - ✓ R/D/V – Retaining Dooley Wall with View Fence (typically 2-3 courses of retaining wall with a standard block wall of another 4-6 courses with integrated wrought iron view fence on top)
 - ✓ SB – Standard Block wall (no attached view fence or observable retaining portion and typically about 5 to 6-feet tall)
 - ✓ R/SB – Retaining Standard Block (typically at least 2 – 3 courses of a retaining wall with a standard block wall on top)
 - ✓ R/SB/V – Retaining Standard Block with View Fence (typically 2-3 courses of retaining wall with a standard block wall of another 4-6 courses with integrated wrought iron view fence on top)
 - ✓ V – View fence only.
- ✓ Attachment B, Reference Documents, includes a table explaining Priority 1, Priority 2, Priority 3, and Priority 4 deficiencies. This table also provides "issue types." This means the issues observed with the wall that result in the priority rating. This chart also includes a reference to the type of walls that were associated with each lot (where it could be determined).

The Community also has a list of deficiencies and the observed counts associated with each. Attachment C includes a reference to the lot in which the issue was observed. Attachment C also includes the associated photo number in the photo file (if there is one), the conditions that were observed (i.e., the issues that resulted in the priority rating), and in some cases, comments related to our observations.

The Table 2 is a rollup of all priority ratings and observed issues across Camelback Canyon Estates. The table is intended to provide insight into the total number of issues observed. These numbers are derived from totaling all of the priorities and issues in each individual phase.

7.0 OBSERVATIONS BY PRIORITY AND RECOMMENDATIONS

Our site inspection revealed that the walls were in generally Good condition, with selected walls and/or wall segments in Fair to Poor condition and experiencing significant or moderate structural deficiencies, deterioration from water infiltration, and general repairs. There are also a number of walls throughout that should be monitored since deterioration will continue, but for which no immediate action is recommended.

The Camelback Canyon Estates walls has a Community map in Attachment A. The table below provides a rollup of the results of our inspection with a table that summarizes the priority ratings and observed issues across the Community.

This following table is intended to provide insight into the overall scope of observed issues.

Table 2 – Issue Rollup Across the Community

PRIORITY / CODE	DEFICIENCY CATEGORY	INSTANCES	COMMENTS
ISSUES BY PRIORITY			
1	Major Structural Deficiency	25	Significant step cracking, leaning walls, major structural issue
2	Moderate Structural Deficiency	15	Several leaning walls, significant cracking and water damage
3	Routine Repairs	131	Holes, top caps, efflorescence, wrought iron corrosion
4	Monitor for Future Issues	53	Monitor for continued deterioration (typically Priority 2 or multiple issues)
SPECIFIC DEFICIENCIES OBSERVED			
5	View Fence Deficiencies	3	Corrosion on view fence, broken member on view fence, missing top cover, view fence is loose (at post)
6	Water Damage	79	Efflorescence, delamination, discoloration
7	Leaning / Rotation	36	1/2" over 4-feet or greater
8	Vertical or Stair Step Cracking	65	Hairline and significant cracking
9	Overgrowth / Tree Issues	111	HOA or Homeowner
10	General Repairs / Issues	72	Loose, damaged, or missing top caps, missing weep holes, foundation wall exposed, holes in walls, and similar

OBSERVATIONS BY PRIORITY AND RECOMMENDATIONS

Priority 1 – Major Structural Deficiency

Observations: Criterium-Kessler identified twenty-five (25) Lots with walls or wall segments with issues classified as Major Structural Deficiencies (Priority 1). The primary issues observed for the Priority 1 were column/wall rotation and/or walls with significant stair step cracking, horizontal cracking and/or vertical cracking that appeared to be leading towards a wall failure. For both Dooley and standard block construction, some cracking was more significant than others, however, previous repairs were taken into consideration when making these assumptions. Overall, for an area of a community this size, there are many lots with Dooley or standard block walls identified as Priority 1 walls.

Another primary Priority 1 issue was significant delamination of the courses (Category 6) that has debonded and exposed the CMU from water intrusion. The open course allows water intrusion while limiting the water from escaping. The water will cause corrosion to develop on the internal reinforcement on both column and footing.

Recommendations: It is recommended that these walls segments be demolished and rebuilt. At this time, we do not know if the footings of the walls are structurally sound or properly sized for either the standard wall or the wall common rear walls with view fences. For the walls with view fences, we do not know if the fence is embedded properly and/or the material condition of the metal.

Both should be observed and determined by a qualified party during demolition and if acceptable, the wall can be reconstructed using the existing footing. If the footing is not structurally sound or improperly sized (or deteriorated), it should be replaced at the same time as the rest of the wall.

If specific walls have a view fence, then sections may be able to salvaged and reconstructed by removing the heavily corroded portions and inspecting the embedded view fence posts within the CMU during demolition. The corrosion should be removed before reinstalling salvaged metal posts.

Walls that require replacement or significant reconstruction should be performed using an engineered design obtained from an Arizona licensed engineer (we can provide that service) to ensure the walls are replaced in accordance with local building requirements and for the specific conditions present at the site of the issue. Further, these walls should have periodic quality assurance inspections during the construction process to ensure compliance to the design documents.

Priority 2 – Moderate Structural Deficiency

Observations: Criterium-Kessler identified 15 Lots with walls or segments of walls, with issues classified as Moderate Structural Deficiencies (Priority 2). The primary issue observed, at these lots, was moderate delamination (Category 6). While these walls do not appear to be at immediate risk of failing, the CMU courses will continue to delaminate and will likely exacerbate corrosion on the reinforcement. The cracking will continue to propagate which will allow more water intrusion.

It is possible that water intrusion has affected the interior structural components on some of the structurally deficient walls and without an invasive inspection, we could not make that determination. Water intrusion, which leads to efflorescence and/or block delamination in some instances, has a significant long-term negative affect on walls that will lead to a Priority 2 and then Priority 1 rating in the future (which is why many of those should be monitored).

Other Priority 2 issues include tree branches leaning on walls and/or view fence creating damage, significant stair step and/or vertical cracks, or in some cases a large number of stair/step and vertical cracks (Category 8) on a single wall panel i.e., between expansion joints). It also appeared that a number of the Priority 2 issues were being caused by tree roots from foliage (Category 9) causing uplift on the wall.

There were multiple instances where structurally deficient walls (standard and walls with view fences) had a significant portion of the footings exposed (Category 10) from scour. The bottom of the footing was exposed in these instances and likely is no longer functioning as designed and either is or will cause rotation (Category 7), and vertical and staircase cracking (Category 8).

Recommendations: The deficiencies for Priority 2 walls are not as pressing as the Priority 1 walls. Monitoring is recommended since the observed issues will likely continue to deteriorate, eventually creating the need to replace the wall, or segments of the wall.

Walls that have significant vertical, horizontal, and/or stair step cracking should be monitored since the cracking may continue to increase over time and may eventually become a Priority 1 issue and require replacement. The cracking has begun to decrease the structural integrity of the wall and with continued water intrusion, the wall will have a decreased the life cycle from degraded structural components.

Foliage near the walls in the form of trunks and branches may be creating loading on the wall that it was not designed to resist. Observable deficiencies from the foliage included stair step cracking, vertical cracking, uplift, and wall rotation on both standard theme walls and walls with view fences. Branches leaning on or near the walls that may be affecting the walls and view fences should be removed. Overgrowth of foliage should be removed to ensure there is no overgrowth directly on the either the main exterior wall or the retaining portion of the wall from either side.

Priority 3 – Routine Repairs

Observations: Criterium-Kessler identified 131 Lots with walls or segments of walls, experiencing issues that were classified as Routine Repairs (Priority 3). The most common items observed were water damage in the form of efflorescence and block delamination (Category 6). Other items that could be classified are: loose or missing top caps and top courses (Category 10), hairline stair step and/or vertical cracks (Category 8), leaning walls of up to 1-inch (Category 7), exposed rebar and/or exposed footing (category 10), and foliage overgrowth (Category 9) that is overhanging the perimeter walls.

Many wall segments that included view fences experienced issues that were also categorized as routine repairs. These deficiencies were primarily identified and documented in Category 5, which generally were loose view fence post, corrosion and/or broken view fence members and view fence rotation.

While many of the walls overlooked and backed up to a wash, many of the walls were observed to have efflorescence and/or delamination (some very minor and some moderate) along the lower portions of the block walls and retaining portion of the walls. We did observe a number of areas with minor discoloration and some delamination of the block. In most instances, it appears that the efflorescence and water damage is infiltrating from the homeowner side of the walls and is likely due to overwatering, a lack of waterproofing material or membrane on the retaining portion of the wall, or the grade of the homeowner side is above the retaining wall.

This section also included retaining walls and non-retaining walls that happened to be retaining that did not contain any weep holes. While we did not have access to the original design documents, we would expect the presence of weep holes approximately every 48 – 96-inches (depending upon the design plans) for retaining walls constructed of two courses or more in height. The lack of weep holes (or inoperable weep holes, which could be the result of improper fill behind the wall that does not properly drain water) can result in water infiltration into the walls due to the buildup of hydrostatic pressure since the water has nowhere to drain effectively. This leads to efflorescence, block delamination, and over time, can lead to failure of wall components and internal structural components.

Please note that there were multiple instances where the soil on the homeowner side of the wall was believed to be lower than the HOA side. We did not have any access to observe the walls and to determine if there are a lack of weep holes and/or significant efflorescence and/or water infiltration.

We also noted a number of walls and columns that had missing and/or damaged top caps. There were multiple instances where loose top caps should be reinstalled to their original designed location. Some walls have experienced their top courses are no longer secure to the wall. Both loose top caps on columns and loose top courses should be reinstalled to their original designed location to protect the structural components within. Any corrosion present on reinforcement should be removed before repair.

Other general repair items included exposed rebar, exposed footing, hole in course and exposed and corroded dur-o-wire. The exposed rebar regardless of location (footing at grade or exposed on top of wall) will corrode and expand over time. The corroded reinforcement will expand and crack the structural components that the reinforcement is bonded to. Over time, this reduces the reinforcement's integrity and decreases wall performance. The exposed footing may not be performing as designed, because it no longer has anticipated grade depth forces acting on the footing. The hole in a course may have occurred from a construction defect, impact, and/or delamination. The hole should be covered to prevent deterioration of the internal structural components of the wall.

Exposed and corroded dur-o-wire is thin gauged lateral reinforcement that has been exposed due to delaminated grout, or improper construction application. The corrosion should be removed before covering and painting.

Recommendations: Please note that although we noted efflorescence / block delamination or discoloration as a "Priority 3, Repair," we recognize repairs would be difficult since it requires the cooperation of the homeowner.

Repair includes removing the soil on the high side of the wall (i.e. the side being retained), allowing it to fully dry, then applying a waterproof barrier up to the top of the retaining portion of the wall, then replacing the soil and ensuring that no soil is above the top of the retaining wall (and the waterproofed block).

Further, all trees, shrubs, grass, and plants should be moved at least 3-5 feet away from the walls and there should be no overspray onto the walls from the irrigation system. If there are water features making the wall wet, changes should be made (or the water feature moved) so that water does not contact and infiltrate the wall. Flower boxes adjacent to the block wall should be removed or else an additional row of block should be installed with a gap of at least one (1) inch between the back of the flowerbox and the perimeter rear wall.

Broken top caps on the walls, top caps on the columns, and missing trim on the columns should be repaired to eliminate water intrusion into the walls which degrade the structural components. The loose top caps and loose top courses should be reinstalled.

The view fences that were identified as loose likely do not have their embedded posts secured. The loose view fence will move over time with weather and obstruction and will cause further cracking within the imbedded courses. The cracks will likely propagate which creates more advanced staircase cracking, spalling of courses and water infiltration.

The corroded and/ broken members on the view fence should be repaired. The corrosion and debris should be removed down to the exposed metal before a reapplication of the designed protective coating. The corrosion free exposed metal should then be sealed and painted to the original designed specification to prevent further deterioration of the metal view fence.

The exposed rebar should be ground down without damaging any of the components of the wall. Corrosion should be removed, and the exposed rebar should be covered with a weather resistant coating. Exposed footings should be covered back to the original design documents with proper grade depth. The exposed and corroded dur-o-wire should have the corrosion removed before returning to the original condition (grouted over and in place). The holes in courses should be grouted over to prevent water intrusion. The repairs should be performed before a painting project.

Priority 4 – Monitor

Observations: Criterium-Kessler identified 53 Lots with walls or segments of walls, with issues that should be Monitored (Priority 4). These walls were identified previously with respect to a specific issue. For example, all of the Priority 2 walls have deficiencies that will likely become worse over time, but for which we did not recommend replacement at this time. The primary issue observed on the walls to be monitored was leaning (wall rotation).

Walls with rotation of $\frac{3}{4}$ -inch or less lean is not typically considered significant, or cause for immediate concern. This indicates that the wall is rotating, which does not usually stop. Rotation may be caused by several issues including, but not limited to, an insufficient footing (which cannot be observed in a visual non-invasive inspection), tree roots affecting the footing, tree branches leaning against a wall and pushing it, or failure of internal structural wall components.

Further, walls with water intrusion and/or efflorescence should also listed be monitored. These issues are difficult to repair since it requires homeowner participation, which means that the issues creating the water intrusion are likely to continue, and over time, continue to degrade the walls.

Walls with stair step and/or vertical cracking at or over 1/16-inch wide should be monitored since these cracks will likely worsen over time. Additionally, walls with either a large number of vertical and stair step cracks (even hairline) should be monitored since it could indicate overall weakness and / or external forces, such as tree roots, affecting the walls.

The walls segments identified to have a negative slope towards wall should be monitored because water on the exterior may be infiltrating the wall and may not have been designed to drain the pooling water. The pooling water without proper drainage will likely infiltrate and reduce the lifecycle of the courses and internal structural components. If in a wash, scour likely has occurred and likely will occur in the future by exposing and degrading the footing. This can create an environment that enables wall rotation and cracking.

The wall segments identified to have an exposed footing from scour should also be monitored. The removal of grade changes how the wall can perform to resist loading. Because grade and rock have been removed, after the Priority 3 repairs of returning back to original condition, scour will likely continue because of the proximity to the wash and because the wall segments are in the wash.

Recommendations: All of these items should be monitored approximately every two-to-three years depending upon severity, and corrective action taken if the condition worsens.

There were a number of lots for which we did not identify any specific issues. This does not guarantee that these walls are without issues, only that no identifiable issues were visible at the time of the inspection. While the walls appear in good condition, periodic inspections should be performed.

For further detail of deficiencies broken down by Lot Number, please refer to the spreadsheets that follow.

8.0 CONCLUSION

Criterion-Kessler Engineers was on-site to perform a structural evaluation of the walls located within Camelback Canyon Estates and to provide a written report on our findings.

The community walls within the Camelback Canyon Estates Community were in generally Good to Fair condition with selected walls and/or wall segments in Poor condition with some notable deficiencies resulting in Priority 1 issues that should be demolished and replaced. We also observed some notable Priority 2 issues. These walls should be monitored (Priority 4) since conditions may ultimately result in a Priority 1 issue over time. Repairing the Priority 3 issues will extend the life cycle of the walls.

Please note that this report is the result of a limited visual structural evaluation of the walls and is provided only for the use of the Board of Directors, Community Management Company for this community, or affected homeowners. There are internal wall components that we cannot see or assess that may be directly related to why failures are occurring and related to the appropriate way to repair the walls.

Further, this report is not to be considered a repair specification. It should not be provided to any company (such as general contractors and block wall vendors) to be used as guidance or direction on how to repair the walls.

For those walls that require replacement, or significant reconstruction, an engineered design should be obtained from an Arizona licensed engineer (we can provide that) to ensure the walls are replaced in accordance with local building requirements and for the specific conditions present at the site of the issue. Further, these walls should have periodic quality assurance inspections throughout the construction process.

The above presented opinions in this report are given to a reasonable degree of engineering certainty and probability and are based on our visual observations at the time of the inspection. Criterium-Kessler reserves the right to modify our opinions, conclusions, and recommendations if additional pertinent information becomes available.

We appreciate the opportunity to be of assistance and look forward to working with you on the next steps to address the repairs.

Sincerely,



Timothy Furlong, E.I.
Project Engineer
Criterium-Kessler Engineers



Dan Kessler
President
Criterium-Kessler Engineers



Carl Muha, P.E. (AZ)
Senior Engineering Director
Criterium-Kessler Engineers



Date: January 31, 2024

Project #: 23-0433

ATTACHMENTS:

A – COMMUNITY MAP OF LOTS INSPECTED

B – WALL DEFICIENCY LEGEND

C – DEFICIENCIES AND PHOTO FILE

D – TEAM MEMBER BIOGRAPHIES

Attachment A

Community Map of Lots Inspected

Camelback Canyon Estates



Attachment B

Wall Deficiency Legend

Issue Legend and Summary

Code	Condition	Issue / Action
1	Major Structural Deficiency	Rebuild major section of wall, including the footing, major structural deficiencies noted, major diagonal cracks impacting wall, able to move entire wall
2	Moderate Structural Deficiency	Major diagonal cracking, minor subsidence, partial rebuild of wall (but not the footing), minor structural repair, replace segments of the view fence. No major structural issues,
3	Routine Repairs	No structural issues. Broken top caps, rusted/ broken/not connected view fences, holes in blocks, missing grout, visible Duro-Wall structural wiring, significant delamination.
4	Monitor	Crack or wall movement that should be monitored - no repairs currently recommended
5	View Fence Deficiencies	Corrosion on view fence Broken member on view fence Missing top cover View fence loose (at post)
6	Water Damage	Discoloration Delamination Deterioration with holes
7	Leaning / Rotation	Wall rotation or leaning, typically more than 1/2-inch out of plumb over 4-feet
8	Stair step and Vertical Cracks	Includes both notable hairline cracks as well as more significant cracking in the walls
9	Overgrowth / Tree Issues	Overgrowth associated with Association or homeowner foliage that needs to be cut back for painting--or is causing wall damage
10	Top Caps/ Top Course Missing Weep Holes. Exposed Rebar or Footing. Exposed Dur-O-Wire View Fence Deficiencies	Loose, damaged, or missing Weep holes not identified in retaining walls. Foundation and/or rebar was exposed. Exposed Dur-O-Wire (corroded) Corrosion on view fence Broken member on view fence Missing top cover View fence loose (at post)
Wall Type		
SB - Standard Block Masonry R/SB - Retaining with Standard Block SB/V - Standard Block View R/SB/V - Retaining Standard Block View		D - Dooley Wall R/D - Retaining Wall with Dooley on Top R/D/V - Retaining Wall with Dooley and View Fence. V - View Fence (Stand Alone)

Attachment C

Deficiencies, and Photo file

Lot	Type	Photo	1	2	3	4	5	6	7	8	9	10	Comments / Issue Description / Quantity
1S	D	1-4			X	X			X	X		X	Column rotation up to approximately 1/2". Multiple hairline stair case crack. Exposed and corroded dur-o-wire. Loose top cap. Potential uplift.
1	D		X		X	X				X	X		Hairline staircase crack. Hairline vertical crack at column. Overgrowth.
2	D				X					X	X	X	Vertical crack up to approximately 1/8". Overgrowth. Loose top crack. Hole in course.
3	D				X						X		Overgrowth.
3S	D			X	X	X		X	X	X	X	X	Delamination and efflorescence. Column rotation up to approximately 1-1/2". Vertical crack up to approximately 1/16". Overgrowth. Exposed footing. Previous repairs.
4S	D/R				X			X	X	X		X	Delamination. Column rotation up to approximately 1/2". Hairline staircase crack. Loose top crack.
4	D/R				X			X		X	X		Moderate delamination. Hairline vertical crack at column. Overgrowth.
5	D	5,6			X			X				X	Moderate delamination. Hole in course with pipe. Exposed and corroded dur-o-wire.
6	D	7-11	X					X	X	X	X	X	Moderate and significant delamination. Column rotation up to approximately 1/2". Staircase crack up to approximately 3/4". Overgrowth. Multiple missing top caps. Column separation up to approximately 1/2".
7	D				X			X		X	X	X	Moderate delamination. Overgrowth in multiple locations with limited access. Hole in course. Hairline vertical crack on multiple columns.
8	D	12,13		X	X	X		X				X	Significant delamination. Overgrowth.
8S	D	14,15	X					X	X	X		X	Significant delamination. Column rotation up to approximately 1". Loose top cap. Holes in course. Separation up to approximately 1". Multiple staircase cracks.
9	D				X	X		X			X	X	Moderate delamination. Overgrowth. Loose top cap. Hole in course.
10	D				X					X	X		Column hairline vertical crack. Overgrowth. Previous repair newer cladding.
10S	D				X					X			Column hairline vertical crack. Overgrowth.
11S	D	16			X			X		X		X	Moderate delamination. Hairline staircase crack. Hole in course.



Lot	Type	Photo	1	2	3	4	5	6	7	8	9	10	Comments / Issue Description / Quantity
11	D				X					X			Hairline staircase crack. Newer wall.
12	D	17-26	X		X	X		X		X	X	X	Delamination. Column rotation up to approximately 2 1/4". Overgrowth. Offset 1". Uplift 2". Built up 8-foot wall. Overgrowth.
13	D	27-30	X		X	X		X			X	X	Significant delamination. Overgrowth. Loose top cap. Exposed and corroded dur-o-wire. Uplift at 2-1/2".
13S	D	31,32			X			X				X	Delamination. Exposed and corroded dur-o-wire.
14S	D				X			X				X	Efflorescence. Exposed and corroded dur-o-wire.
14	D	33,34	X		X	X		X			X	X	Significant delamination. Overgrowth. Loose top cap.
15	D				X			X		X	X	X	Delamination. Column rotation up to approximately 1/2". Column vertical crack up to approximately 1/8". Overgrowth. Loose top cap. View fence
15S	R/D	35			X	X		X			X		Moderate delamination. Overgrowth.
16S	D	36,37			X			X			X	X	Delamination. Overgrowth. Exposed footing.
16	D	38-40	X		X	X		X		X	X	X	Significant delamination on multiple panels. Column rotation up to approximately 1/2". Overgrowth. Loose top cap.
17	D	41,42			X	X		X			X	X	Moderate delamination. Overgrowth. Exposed footing. Loose top cap. Scour near wall.
18	D/V												Portion with limited wall.
19	D	43			X						X	X	Overgrowth. Exposed footing. Loose top cap. Footing at 7" out 5" deep. Previous repair staircase crack up to approximately 1/2". Missing top cap.
20	D	44,45			X						X		Overgrowth.
21	D	46			X			X		X	X	X	Delamination. Hairline horizontal crack. Overgrowth. Loose top cap. Partial yellow stucco.
22	V	47			X						X		Overgrowth.
23	D	48,49	X		X	X			X		X		Separation of courses with large staircase crack. Overgrowth. Potential uplift.
24	V	50											No wall.
24S	R/D	51			X			X					Moderate delamination.
25S	SB	52			X						X		Overgrowth.



Lot	Type	Photo	1	2	3	4	5	6	7	8	9	10	Comments / Issue Description / Quantity
25	SB	53			X						X		Overgrowth.
26	D	54			X						X	X	Overgrowth. Loose top cap.
27	D	55-61	X		X			X			X		Delamination. Overgrowth.
28	D	62-67	X		X	X		X	X	X	X		Significant delamination. Uplift up to approximately 2". Column rotation up to approximately 1.5" on a 6'foot wall. Potential tree falling on wall. Staircase crack up to approximately 1/2". Overgrowth.
29	R/SB/V												New clad wall.
30	D/V	68			X		X		X	X			Column rotation. Corrosion on view fence. Vertical cracks on column.
31	D				X						X		Overgrowth.
31S	D				X						X		Overgrowth. Newer cladding.
32S	SB				X						X		Overgrowth.
32	SB				X						X		Overgrowth.
33	D	69,70		X	X	X		X		X	X	X	Moderate delamination. Staircase crack up to approximately 1/2". Overgrowth. Missing top cap. Potential uplift.
34	R/D	71-73			X			X	X		X	X	Moderate delamination. Efflorescence. Column rotation up to approximately 1.5" on a 7-foot wall. Overgrowth. Delaminated grout with negative slope towards wall.
34S	D				X	X						X	Exposed and corroded dur-o-wire. Negative slope towards wall. Previous repairs.
35S	R/D	74			X			X		X			Delamination. Hairline staircase crack.
35	R/D				X	X		X		X	X		Delamination. Hairline vertical crack at column. Staircase crack up to approximately 1/4". Overgrowth.
36	D	75-77		X	X	X				X	X		Staircase crack up to approximately 1/4". Overgrowth.
37	D&VF	78,79	X		X	X		X		X	X		Delamination. Staircase crack up to approximately 3/4". Overgrowth. Staircase crack on two panels is likely uplift.
38	SB				X	X		X		X	X	X	Delamination. Staircase crack up to approximately 1/16". Overgrowth. Negative slope towards wall.
39	SB				X						X		Overgrowth.
39S	SB				X					X	X		Hairline vertical crack. Overgrowth.
40S	SB												Previous repair on stucco clad exterior. No deficiencies noted.



Lot	Type	Photo	1	2	3	4	5	6	7	8	9	10	Comments / Issue Description / Quantity
40	SB				X					X	X		Hairline staircase crack. Overgrowth.
41	SB	80,81			X	X				X	X	X	Staircase crack up to approximately 1/4". Hairline vertical crack. Overgrowth. Exposed footing. Previous repairs.
42	SB	82,83				X						X	Staircase may bear upon wall.
43	R/SB/V	84			X			X			X		Delamination. Overgrowth.
44	D				X			X			X		Delamination. Overgrowth. Access limited.
44S	D	85											No issues to report.
45S	D/V	86			X			X			X		Delamination. Overgrowth.
45	D/V	87,88			X			X					Delamination.
46													No wall.
46S													No wall.
47S	D				X			X			X	X	Delamination. Overgrowth. Exposed footing.
47	D/V				X			X			X		Delamination. Overgrowth. Blue painted stucco.
48	D/V				X			X		X	X	X	Delamination. Hairline staircase crack. Overgrowth. Loose top cap. Hairline staircase crack. Painted stucco.
49	D				X			X			X	X	Moderate delamination. Overgrowth. Loose top cap. Hole in course.
50	SB				X			X			X		Delamination. Overgrowth.
50S	SB	89-91	X		X	X			X	X	X		Wall rotation up to approximately 2" over 4-feet on 7-foot wall. Overgrowth. Multiple hairline staircase cracks.
51S	SB	92,93			X						X	X	Overgrowth. Exposed footing. On-going wall repairs.
51	SB	94			X				X		X	X	Wall rotation up to approximately 1/4". Overgrowth. Hole in course.
52	D	95-98	X		X	X				X		X	Multiple staircase cracks up to approximately 1/4". Exposed footing. Multiple loose top caps. Exposed electrical wires from debonded conduit.
53	R/SB/V	99,100		X	X	X		X	X			X	Moderate delamination. Column rotation up to approximately 3" on a 5-foot wall. Negative slope towards wall. Exposed and corroded dur-o-wire. Multiple panel with exposed courses.
54	R/SB				X					X	X		Hairline staircase crack. Overgrowth. Painted stucco.
55	R/D				X				X		X	X	Wall rotation up to approximately 3/4". Overgrowth. Loose top cap. Hole in course.



Lot	Type	Photo	1	2	3	4	5	6	7	8	9	10	Comments / Issue Description / Quantity
56	D				X						X		Overgrowth. No access.
56S	D				X						X	X	Overgrowth. Negative slope towards wall.
57S													No wall.
57	R	101		X				X					Wall is retaining. Some water damage and delamination.
58	R/SB	102			X					X	X		Wall is retaining. Staircase crack. Overgrowth.
59	R/SB				X						X		Wall is retaining. Overgrowth.
60	V	103											View fence. No issues.
60S	SB	104			X						X		Overgrowth. Painted stucco.
61S	SB				X			X			X		Delamination. Overgrowth.
61	SB				X			X			X	X	Delamination. Overgrowth.
62	SB	105			X						X	X	Overgrowth. Hole in course. Broken top courses.
63	SB/V	106-110	X		X	X			X	X	X	X	Column rotation up to approximately 6" on a 5.5-foot wall. Multiple hairline staircase crack. Overgrowth. Rotation likely from tree. Exposed reinforcement. Limited access.
64	D	111,112	X		X	X	X	X	X	X	X	X	Corrosion on view fence. Significant delamination on multiple panels. Staircase crack up to approximately 3/4". Overgrowth. Loose top cap. Uplift up to approximately 1". Exposed footing. Missing top cap.
64S	D	113			X	X		X		X	X	X	Moderate delamination. Hairline vertical crack. Overgrowth. Exposed footing.
65S	D	114			X				X		X		Overgrowth. Potential wall rotation.
65	SB	115			X				X	X	X		Column rotation up to approximately up to approximately 1" on a 6-foot wall. Staircase crack. Overgrowth.
66	D				X				X	X	X	X	Column rotation up to approximately 3/4". Hairline vertical crack. Overgrowth. Exposed footing.
66S	D				X			X		X	X		Delamination. Hairline staircase crack. Overgrowth.
67S	R/D				X			X			X		Delamination. Overgrowth.
67	R/D	116		X	X	X		X	X		X		Delamination. Column rotation up to approximately 2.75" on a 5.5-foot column on 3 panels. Overgrowth. Painted stucco. View fence on panel.
68	D	117			X			X				X	Delamination. Negative slope towards wall. Built up wall with open cells.

Lot	Type	Photo	1	2	3	4	5	6	7	8	9	10	Comments / Issue Description / Quantity
69	D	118			X			X			X	X	Moderate to significant delamination. Overgrowth. Hole in course. Loose top cap. Animal feces in immediate everywhere.
70	D	119-123	X		X	X		X		X	X	X	Significant delamination. Hairline vertical crack. Overgrowth. Negative slope towards wall. Multiple holes in course. Loose top cap. Exposed top cell.
71	D/V	124,125			X						X	X	Multiple locations of overgrowth. Negative slope towards wall. Multiple loose top caps. Very limited access in multiple locations.
72	D/V	126,127	X		X	X	X	X			X		Corrosion on view fence. Significant delamination. Overgrowth.
73	R/D	128			X			X					Delamination and efflorescence. Wet grade while on site.
74	D				X			X			X	X	Delamination and efflorescence. Overgrowth. Loose top cap. Exposed rebar.
75	R/D				X						X	X	Overgrowth. Built up and exposed courses.
75S	R	129											No issues to report.
76S	D			X	X	X				X	X	X	Multiple hairline staircase cracks. Vertical crack up to approximately 3/8". Overgrowth. Loose top cap. Partial stucco.
76	D	130			X			X		X			Moderate delamination. Hairline crack on column.
77	R/D	131											Minimal wall with steps. No issues to report.
78	D	132-134	X		X	X			X	X	X		Wall rotation up to approximately 3/4" on a 6-foot wall. Vertical crack. Overgrowth. Potential missing lateral bracing.
79	D&D/V	135		X	X	X		X			X	X	Moderate delamination. Overgrowth. Exposed footing. Exposed and corroded dur-o-wire. Loose top caps.
80	V&D				X						X		Limited visibility from oleander overgrowth.
81	D	136-138	X		X	X		X	X	X	X	X	Moderate and significant delamination with holes in course. Efflorescence. Column rotation up to approximately 1" on three 5.5-foot columns. Vertical crack up to approximately 1/16". Overgrowth. Loose top cap.
82	D	139,140	X		X	X		X	X		X		Moderate delamination. Overgrowth. Multiple loose top caps. Built up wall. Uplift. Staircase crack up to approximately 1".
83	SB	141		X	X	X		X		X	X	X	Delamination. Staircase crack up to approximately 1/4". Hairline staircase cracks. Multiple segments with rotation up to approximately 1.25" on a 5-foot wall. Overgrowth. Exposed footing.
84	SB				X					X	X	X	Hairline vertical crack. Overgrowth. Exposed footing.



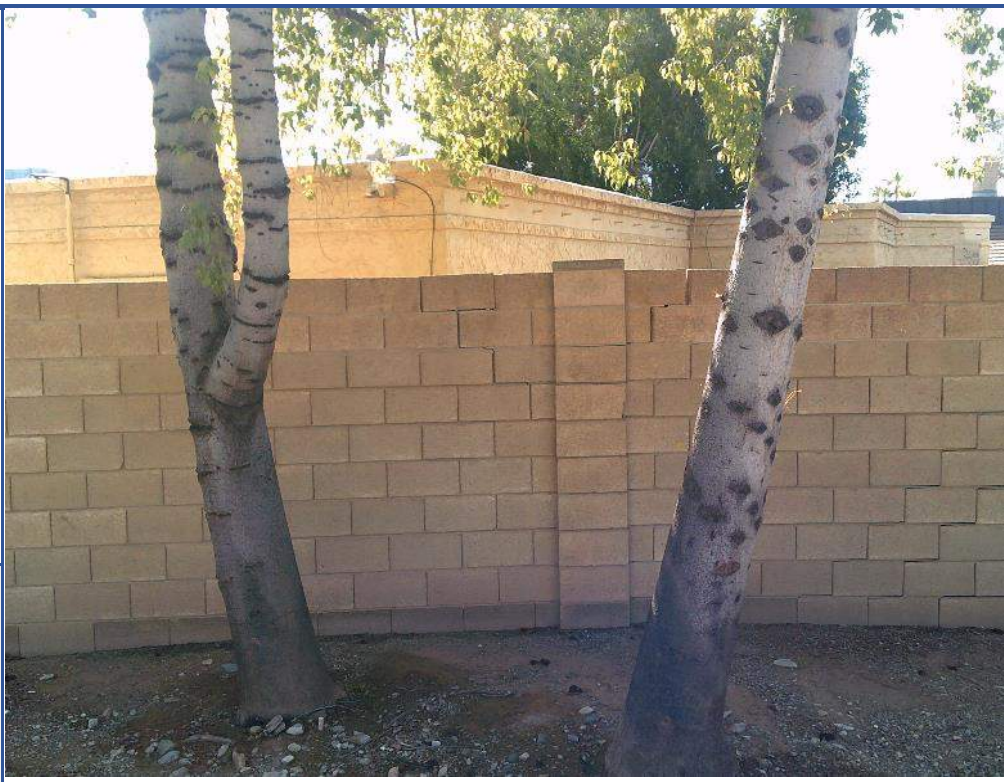
Lot	Type	Photo	1	2	3	4	5	6	7	8	9	10	Comments / Issue Description / Quantity
85	D/V	142		X	X	X		X	X	X	X		Delamination. Column rotation up to approximately 1" on a 5.5-foot column. Vertical crack up to approximately 1/8". Overgrowth. Cracking in stucco.
85S	D				X				X		X		Column rotation up to approximately 3/4". Overgrowth.
86S	D				X					X			Overgrowth. Painted stucco.
86	D				X					X			Overgrowth. Painted stucco.
87	R/D				X				X		X		Wall rotation up to approximately 1/2". Overgrowth.
88	SB				X	X		X	X	X	X		Moderate delamination. Wall rotation up to approximately 1/2". Staircase crack up to approximately 1/16". Overgrowth.
89	SB				X			X			X	X	Moderate delamination. Overgrowth. Exposed footing.
90	D	143,144		X	X	X		X	X	X	X	X	Delamination. Staircase crack up to approximately 1/2". Overgrowth. Exposed footing. Exposed and corroded dur-o-wire. Loose top cap. Potential uplift. Previous repair staircase crack.
91	D	145-147	X		X	X		X	X	X		X	Moderate delamination. Wall rotation up to approximately 1.5" on a 6-foot wall. Column rotation up to approximately 1.5" on a -foot wall. Vertical crack. Staircase crack up to approximately 1/4". Built up wall. Exposed and corroded dur-o-wire.
92	D	148		X	X	X				X	X	X	Staircase crack. Overgrowth. Negative slope towards wall.
93	D	149			X	X				X	X	X	Staircase crack. Overgrowth. Exposed and corroded dur-o-wire. Built up wall.
94	D	150		X	X	X		X			X	X	Delamination. Overgrowth. Negative slope towards wall.
95	D	151,152			X	X		X	X	X	X	X	Moderate delamination. Column rotation up to approximately 3/4" on a 6-foot wall. Hairline staircase crack. Overgrowth. Exposed and corroded dur-o-wire. Built up wall.
95S	D	153	X		X	X		X	X		X	X	Moderate delamination. Corner column rotation up to approximately 2" over four feet on 7.5-foot wall. Exposed and corroded dur-o-wire. Overgrowth.
96S	R/SB				X			X			X	X	Delamination. Overgrowth. Loose top cap.
96	D	154,155		X	X	X		X			X	X	Moderate delamination with delaminated grout. Overgrowth. Exposed and corroded dur-o-wire. Previous repair with built up wall.



Lot	Type	Photo	1	2	3	4	5	6	7	8	9	10	Comments / Issue Description / Quantity
97	R/D				X			X		X	X	X	Delamination. Overgrowth. Negative slope towards wall. Staircase crack at wall. Between tree and wall.
98	SB				X						X	X	Overgrowth. Negative slope towards wall. Newer wall up to approximately 10-feet.
99	D	156-158	X		X	X			X	X	X		Multiple hairline staircase cracks. Two columns with rotation up to approximately 10" with one column with 6" near trees on an 8-foot wall. Overgrowth.
100	D			X	X	X		X	X	X	X	X	Moderate delamination. Efflorescence. Column rotation up to approximately 1/2". Multiple staircase crack up to approximately 1/8". Overgrowth. Exposed footing. Multiple loose top cap.
101S	D				X			X		X			Moderate delamination. Staircase crack up to approximately 1/16". Overgrowth.
101	D	159-164	X		X	X		X		X	X	X	Significant delamination. Staircase crack up to approximately 1/4". Overgrowth. Exposed footing. Exposed and corroded Dur-O-Wire. Panel offset up to approximately 1/2". Holes in course.
102S	D				X	X		X	X		X		Moderate delamination. Efflorescence. Wall rotation up to approximately 1/2 at 6-foot wall. Overgrowth.
102	D/V	165-167			X			X	X	X	X		Moderate delamination. Staircase crack. Overgrowth. Potential uplift.
103	SB				X	X		X		X		X	Delamination. Staircase crack up to approximately 1/16". Grade on wall for swale.
104	D	168-173	X		X	X		X	X	X	X	X	Significant delamination. Staircase crack up to approximately 1/4". Overgrowth. Exposed footing. Loose top cap. Exposed and corroded dur-o-wire. Uplift.
105	R/D	174			X	X		X	X	X	X		Moderate delamination. Hairline staircase crack. Overgrowth. Column rotation up to approximately 3/4" on a 5 foot column. Uplift up to approximately 1/2".
106	D				X			X			X	X	Moderate delamination. Overgrowth. Loose top cap.
107	D				X			X		X	X	X	Moderate delamination. Hairline staircase crack. Overgrowth. Exposed footing. Loose top cap.
107S	R/D				X						X		Overgrowth.
Totals for Issues			25	15	131	53	3	79	36	65	111	72	



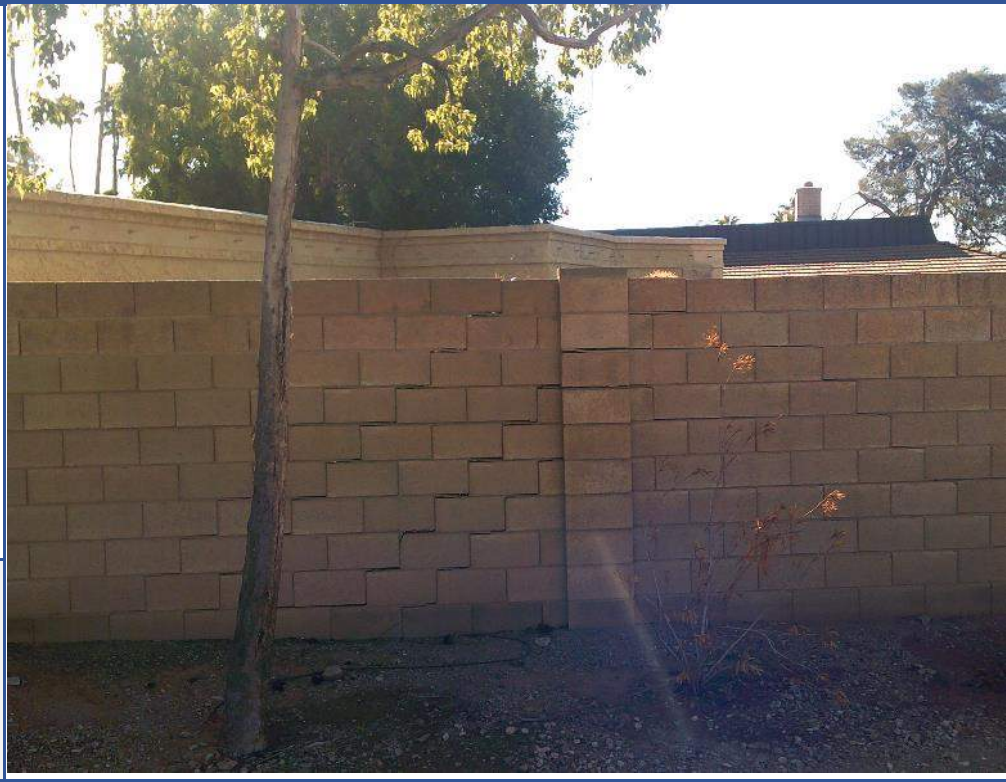
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<p>1</p>		

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 1S - Column rotation up to approximately 1/2". Multiple hairline stair case crack.</p>
<p>2</p>		

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 1S - Multiple hairline stair case crack. Potential uplift.</p>
<p>3</p>		

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 1S - Multiple hairline stair case crack. Potential uplift.</p>
<p>4</p>		

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER



Description:

Lot 5 - Elevation.

5

PHOTO NUMBER



Description:

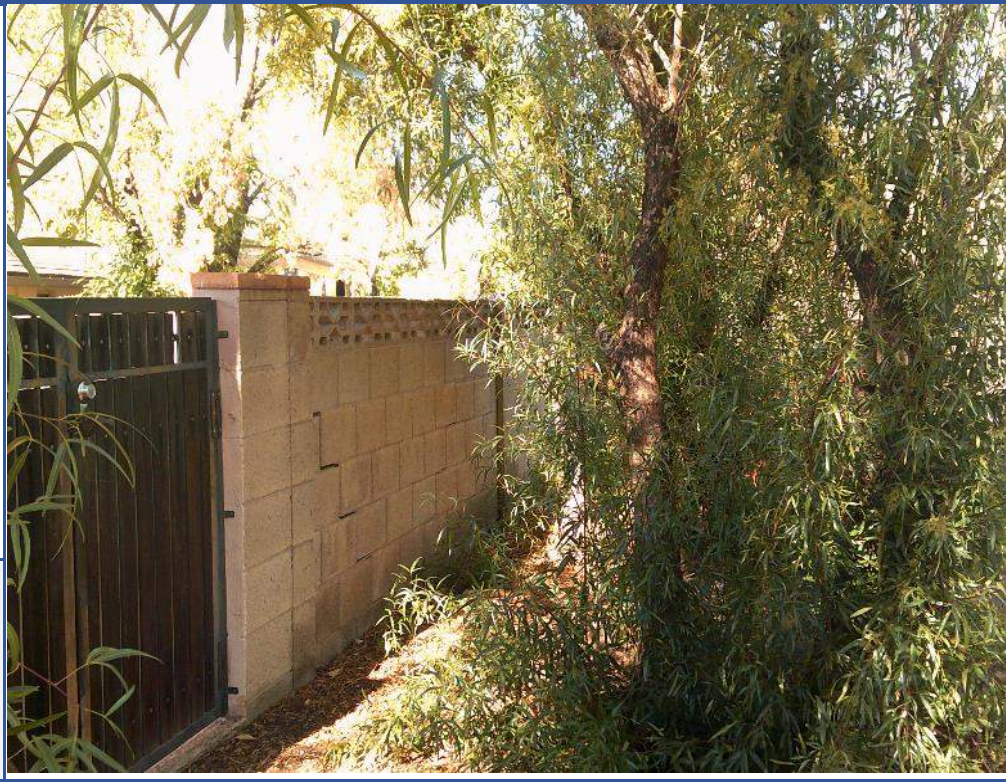
Lot 5 - Moderate delamination. Hole in course with pipe.

6

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 6 - Elevation.</p>
<p>7</p>		

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 6 - Moderate delamination.</p>
<p>8</p>		

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER

9



Description:

Lot 6 - Moderate delamination.

PHOTO NUMBER

10

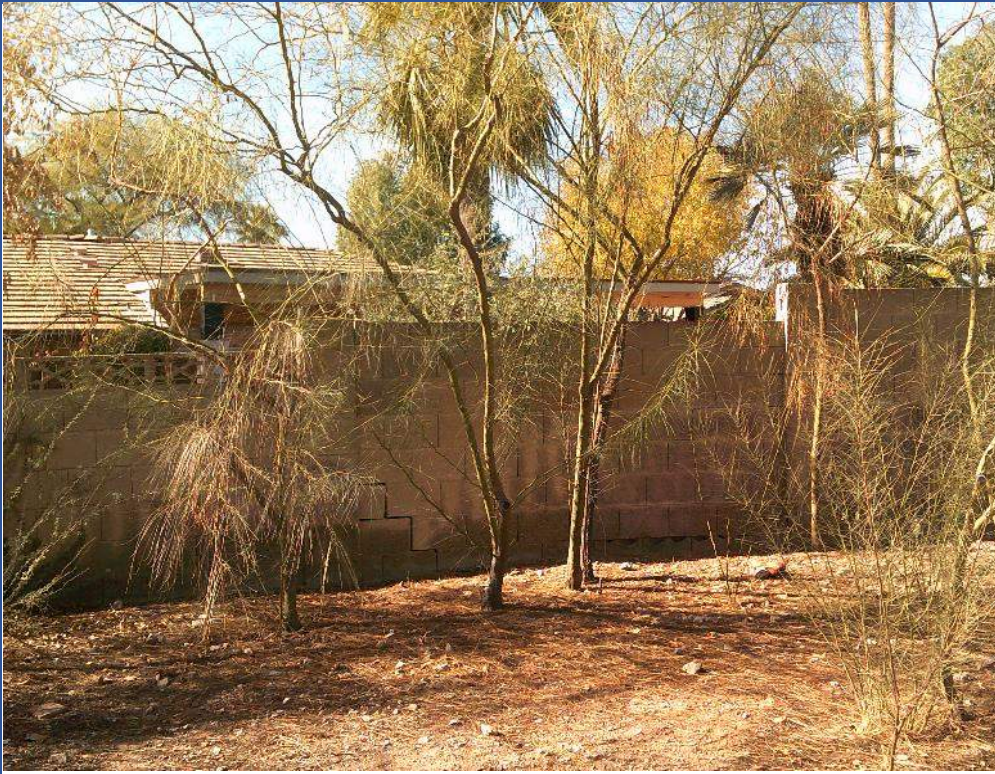


Description:

Lot 6 - Column separation up to approximately 1/2". Multiple hairline staircase cracks.

PHOTO NUMBER

11

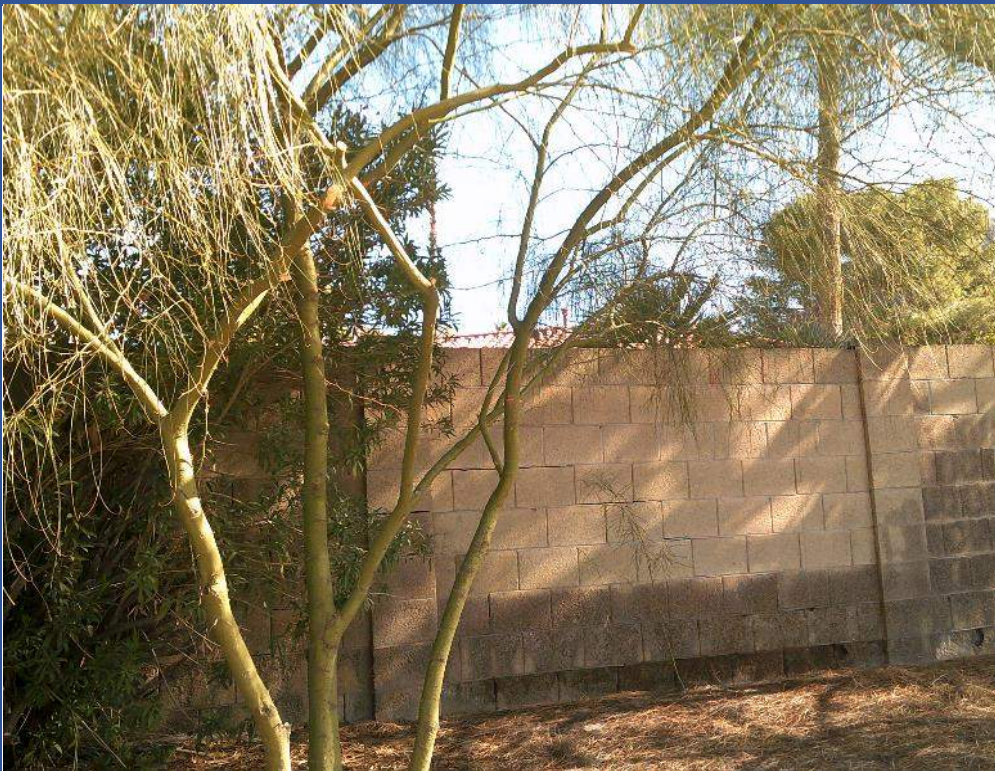


Description:

Lot 6 - Significant delamination. Column rotation up to approximately 1/2". Staircase crack up to approximately 3/4". Overgrowth.

PHOTO NUMBER

12



Description:

Lot 8 - Significant delamination. Overgrowth.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER

13

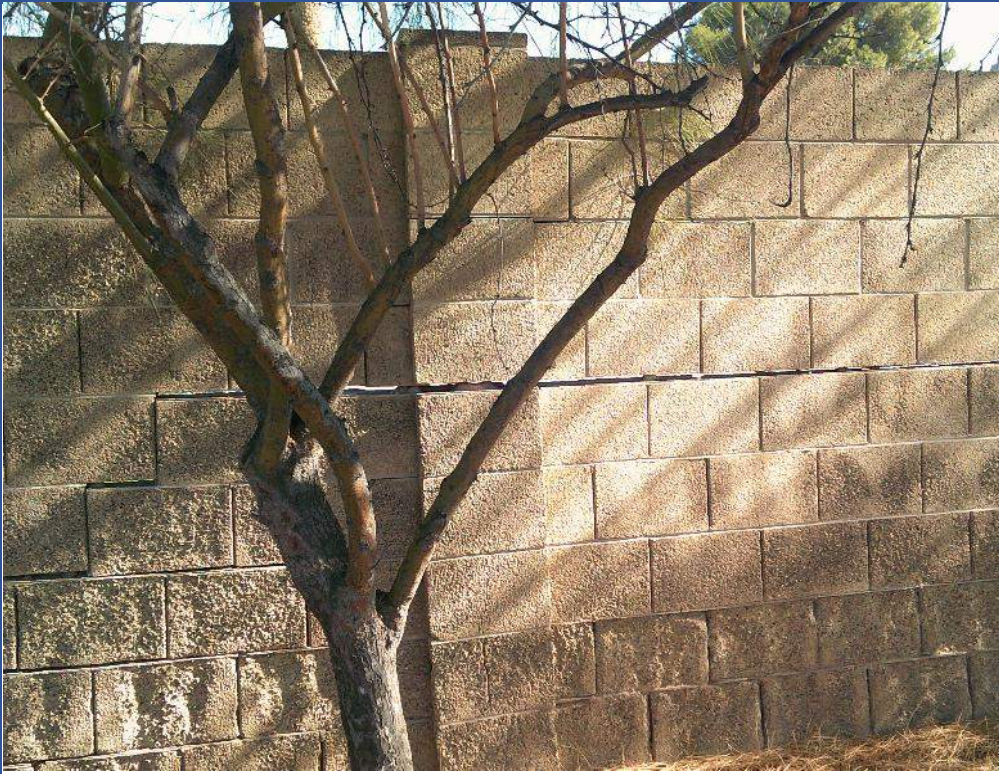


Description:

Lot 8 - Significant delamination.

PHOTO NUMBER

14



Description:

Lot 8S - Staircase crack and column separation.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER



Description:

Lot 8S - Significant delamination.

15

PHOTO NUMBER



Description:

Lot 11S - Moderate delamination. Hairline staircase crack. Hole in course.

16

PHOTO NUMBER

17



Description:

Lot 12 - Elevation.

PHOTO NUMBER

18



Description:

Lot 12 - Significant delamination. Holes in course.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER

19

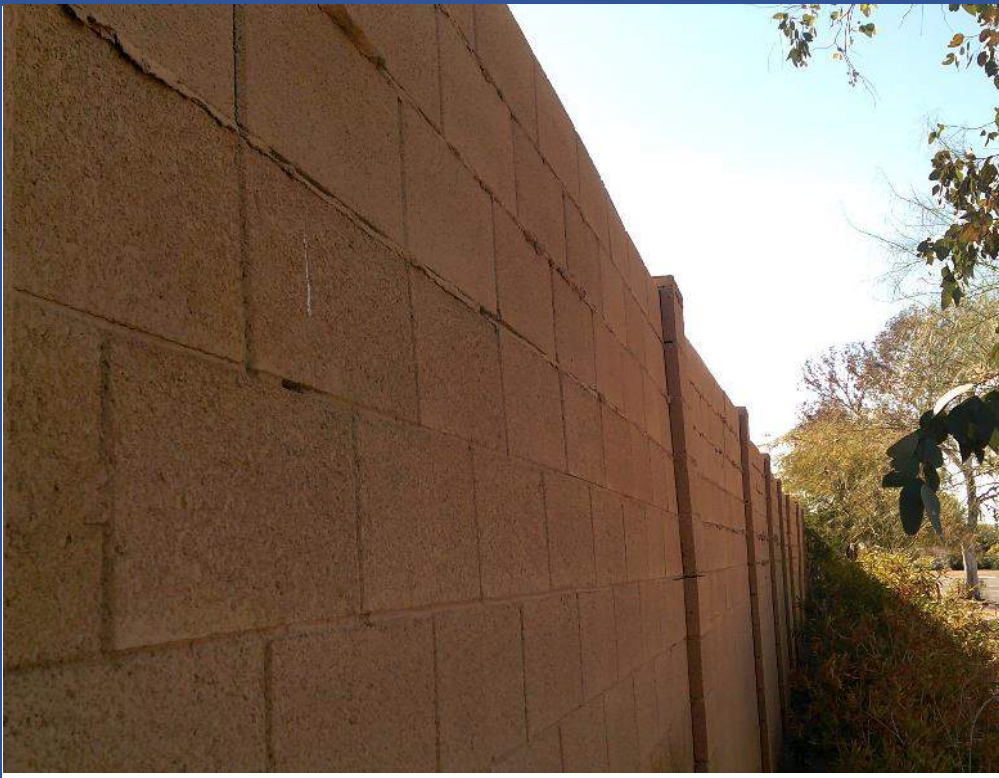


Description:

Lot 12 - Delamination.
Column rotation up to
approximately 2 1/4".

PHOTO NUMBER

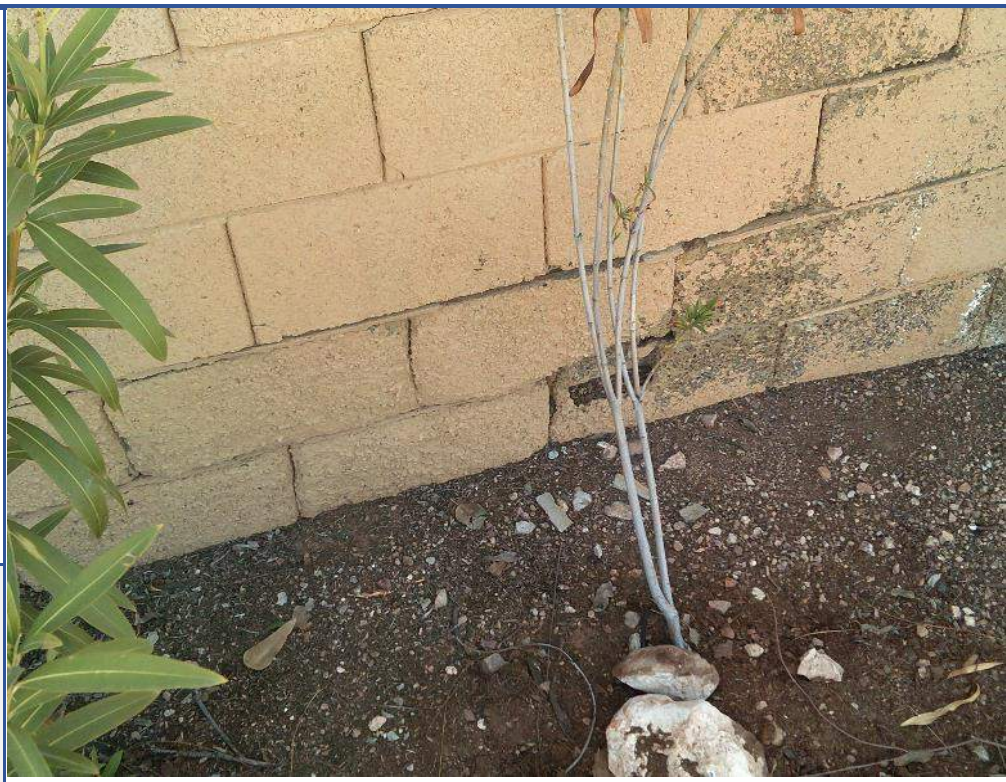
20



Description:

Lot 12 - Built up 8-foot
wall.


<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 12 - Delamination. Offset 1".</p>
<p>21</p>		

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 12 - Delamination.</p>
<p>22</p>		

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 12 - Delamination. Offset 1".</p>
<p>23</p>		


<p style="writing-mode: vertical-rl; transform: rotate(180deg);">PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 12 - Delamination. Offset 1".</p>
<p>24</p>		

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 12 - Delamination. Uplift 2".</p>
<p>25</p>		

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 12 - Delamination. Uplift 2".</p>
<p>26</p>		

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER



Description:

Lot 13 - Elevation.

27

PHOTO NUMBER



Description:

Lot 13 - Delamination.
Hole in course.

28

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER



Description:

Lot 13 - Overgrowth.
Loose top cap. Uplift at
2-1/2".

29

PHOTO NUMBER



Description:

Lot 13 - Uplift at 2-
1/2".

30

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER

31



Description:

Lot 13S - Elevation.

PHOTO NUMBER

32



Description:

Lot 13S - Delamination.
Exposed and corroded
dur-o-wire.

PHOTO NUMBER

33



Description:

Lot 14 - Elevation.

PHOTO NUMBER

34



Description:

Lot 14 - Significant delamination.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER

35



Description:

Lot 15S - Moderate delamination. Overgrowth.

PHOTO NUMBER

36



Description:

Lot 16S - Elevation. Delamination. Overgrowth.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER



Description:

Lot 16S - Delamination.
Overgrowth. Exposed
footing.

37

PHOTO NUMBER



Description:

Lot 16 - Elevation.

38

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER

39



Description:

Lot 16 - Significant delamination.

PHOTO NUMBER

40



Description:

Lot 16 - Delamination.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER

41



Description:

Lot 17 - Moderate delamination. Overgrowth. Exposed footing. Scour near wall.

PHOTO NUMBER

42



Description:

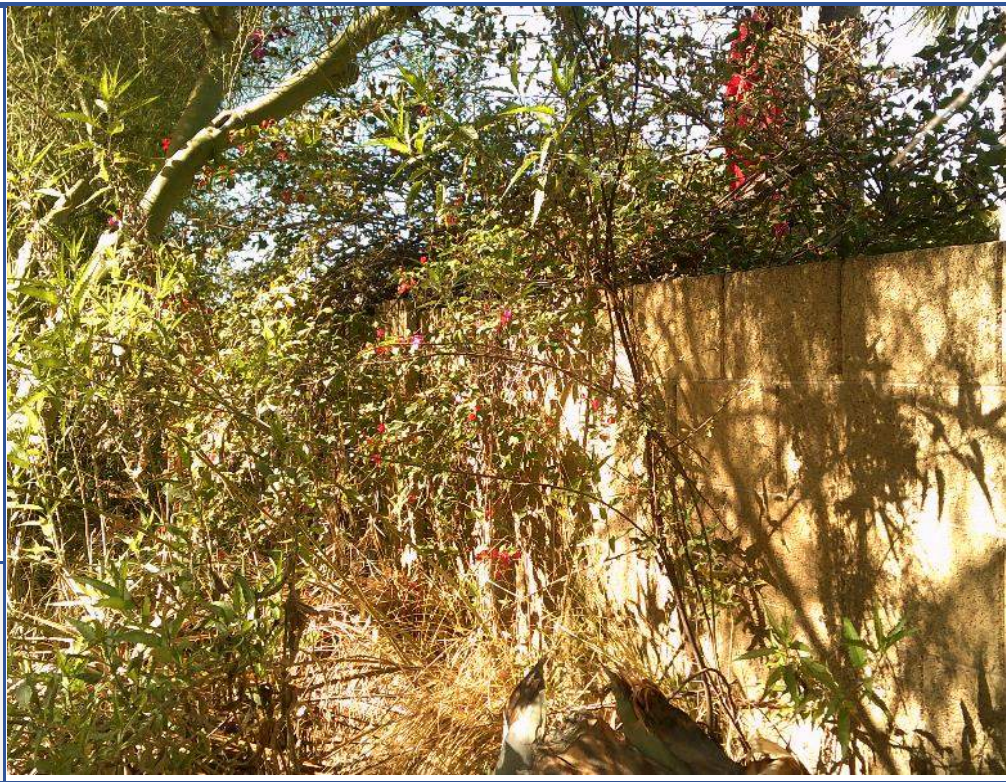
Lot 17 - Elevation. Metal view fence.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 19 - Delamination. Hairline staircase crack. Hairline vertical crack.</p>
<p>43</p>		

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 20 - Overgrowth.</p>
<p>44</p>		

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER

45



Description:

Lot 20 - Overgrowth.

PHOTO NUMBER

46



Description:

Lot 21 - Delamination.
Overgrowth.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER

47



Description:

Lot 22 - Built up wall.

PHOTO NUMBER

48



Description:

Lot 23 - Separation of courses with large staircase crack. Potential uplift.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER



Description:

Lot 23 - Separation of courses with large staircase crack. Potential uplift.

49

PHOTO NUMBER



Description:

Lot 24 - No wall. View fence.

50

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER

51



Description:

Lot 24S - Moderate delamination.

PHOTO NUMBER

52



Description:

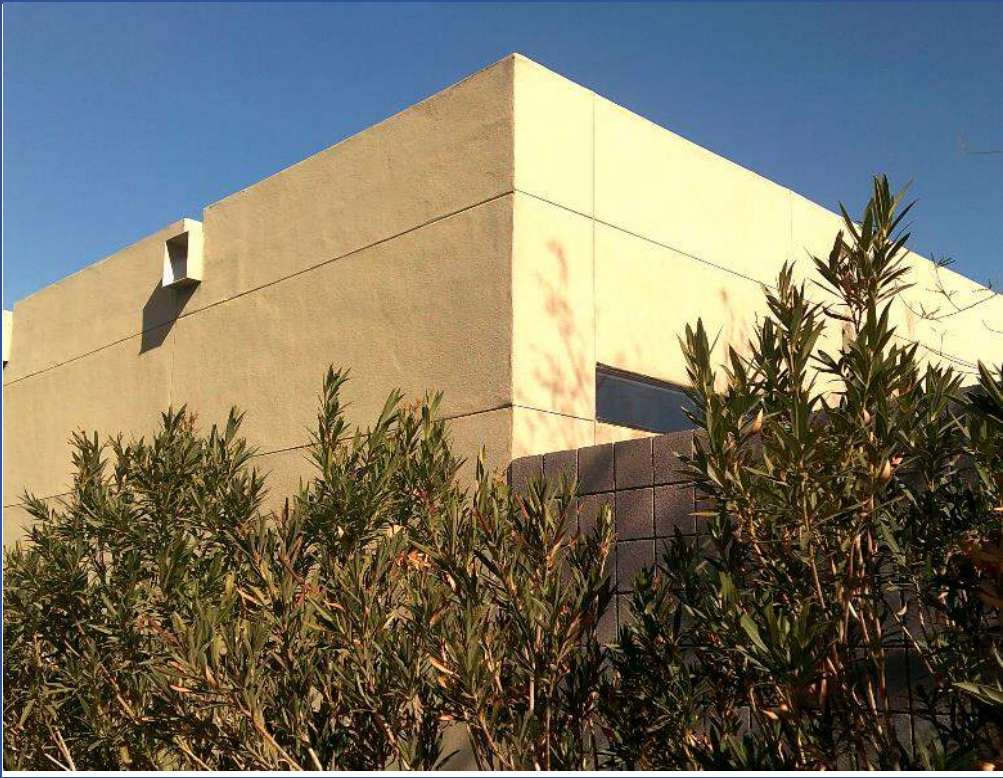
Lot 25S - Overgrowth.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER



Description:

Lot 25 - Overgrowth.

53

PHOTO NUMBER



Description:

Lot 26 - Overgrowth.
Loose top cap.

54

PHOTO NUMBER



55

Description:

Lot 27 - Overgrowth.

PHOTO NUMBER



56

Description:

Lot 27 - Delamination.
Overgrowth. Staircase
crack.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER

57



Description:

Lot 27 - Delamination. Overgrowth. Hole in course.

PHOTO NUMBER

58



Description:

Lot 27 - Separation of column courses.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER

59



Description:

Lot 27 - Staircase crack. Delamination.

PHOTO NUMBER

60



Description:

Lot 27 - Staircase crack. Delamination.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 27 - Overgrowth.</p>
<p>61</p>		

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 28 - Elevation.</p>
<p>62</p>		

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 28 - Uplift up to approximately 2". Column rotation up to approximately 1.5" on a 6-foot wall. Potential tree falling on wall. Staircase crack up to approximately 2".</p>
<p>63</p>		

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 28 - Previous repairs.</p>
<p>64</p>		

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER
65



Description:

Lot 28 - Uplift and staircase crack.

PHOTO NUMBER
66



Description:

Lot 28 - Delamination staircase crack with previous repairs.

PHOTO NUMBER

67



Description:

Lot 28 - Column rotation up to approximately 1.5" on a 6-foot wall. Potential tree falling on wall. Staircase crack up to approximately 1/2".

PHOTO NUMBER

68



Description:

Lot 30 - Column rotation. Cracking on column.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER

69



Description:

Lot 33 - Elevation.

PHOTO NUMBER

70



Description:

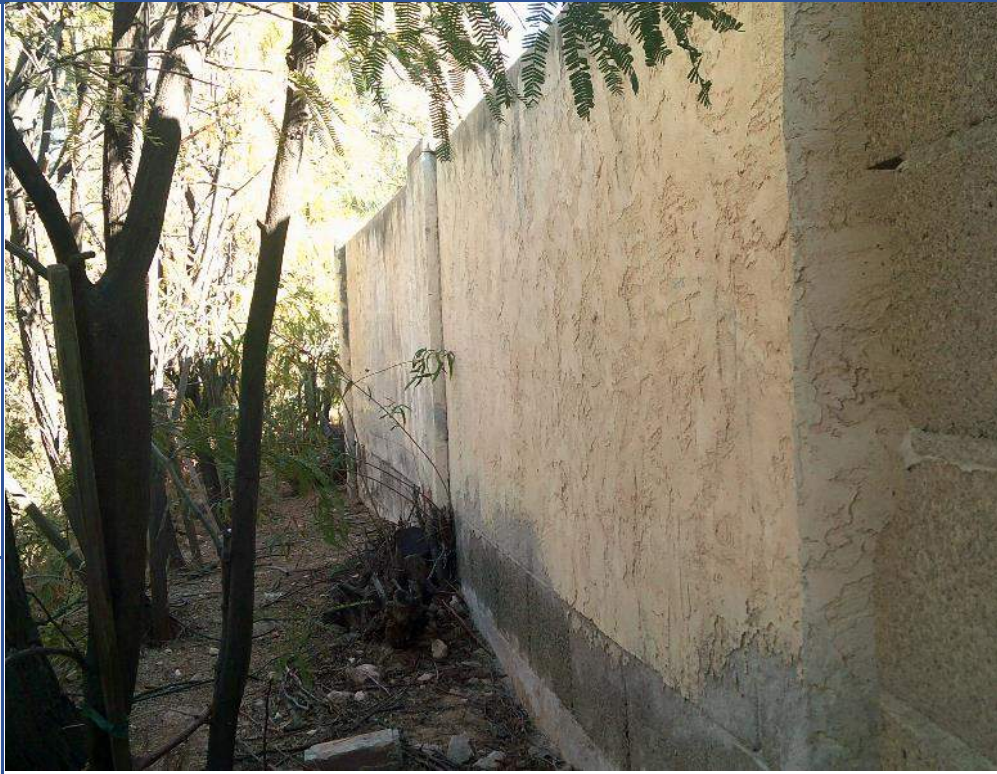
Lot 33 - Moderate delamination.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER



Description:

Lot 34 - Moderate delamination. Efflorescence. Column rotation up to approximately 1.5" on a 7-foot wall. Overgrowth.

71

PHOTO NUMBER



Description:

Lot 34 - Column rotation up to approximately 1.5" on a 7-foot wall. Overgrowth.

72

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER

73



Description:

Lot 34 - Moderate delamination.

PHOTO NUMBER

74



Description:

Lot 35S - Hairline staircase crack.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER

75



Description:

Lot 36S - Delamination.
Overgrowth.

PHOTO NUMBER

76



Description:

Lot 36 - Elevation.

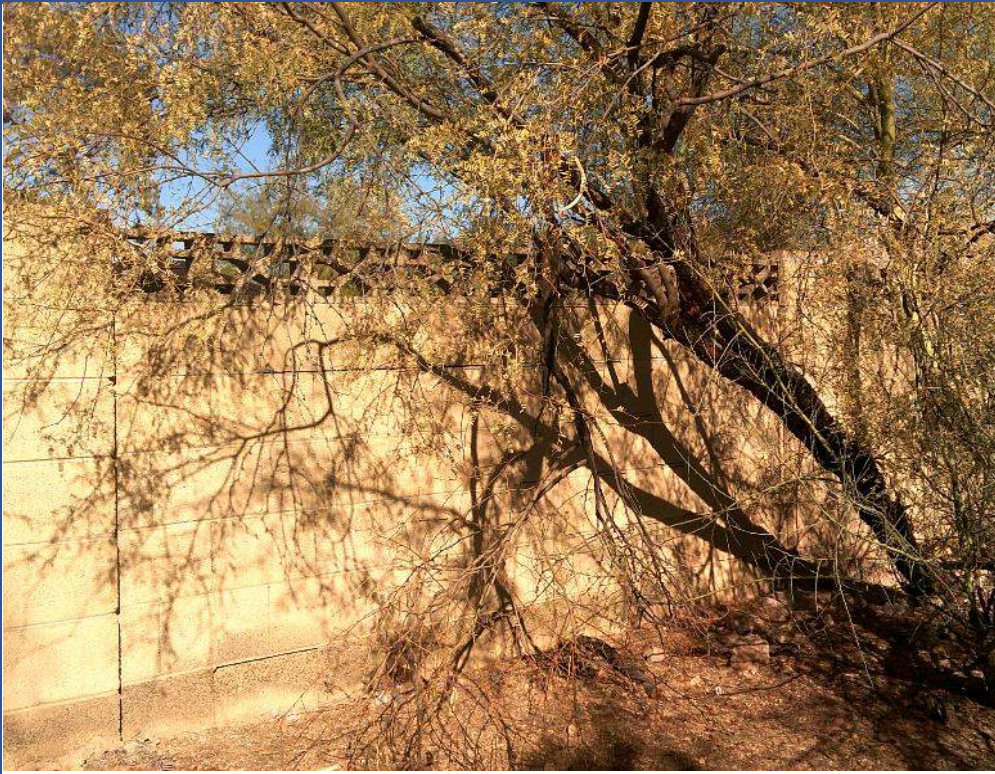
Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER

77



Description:

Lot 36 - Staircase crack up to approximately 1/4". Overgrowth.

PHOTO NUMBER

78



Description:

Lot 37 - Delamination. Staircase crack up to approximately 3/4". Overgrowth. Staircase crack on two panels is likely uplift.

PHOTO NUMBER

79

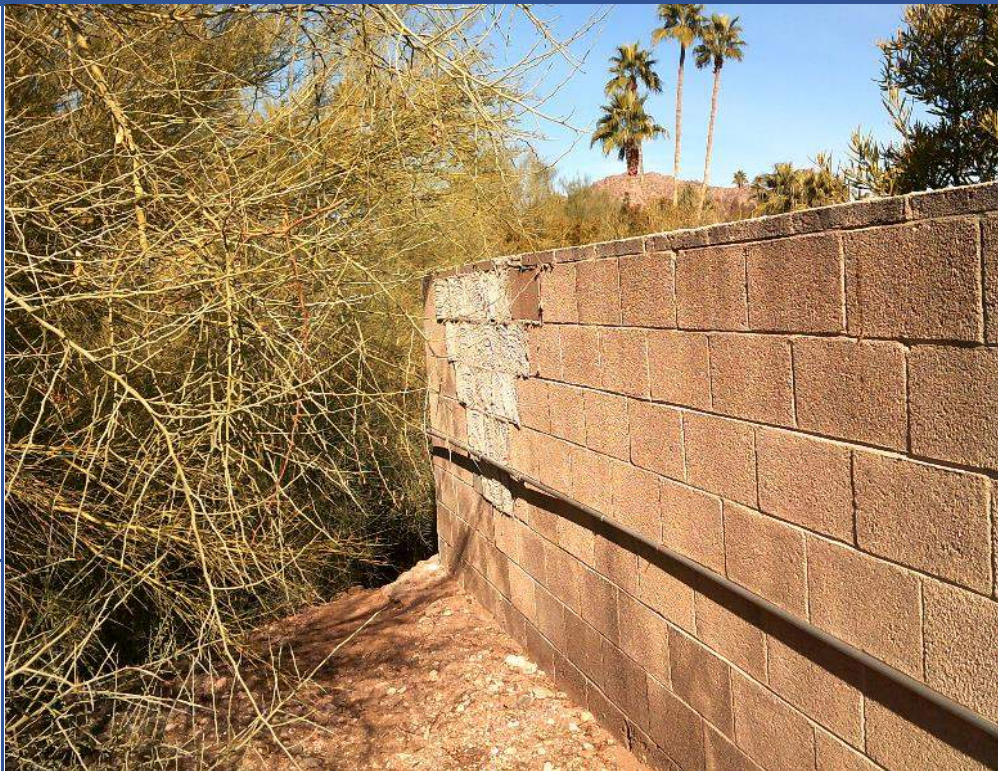


Description:

Lot 37 - Staircase crack up to approximately 3/4". Overgrowth. Staircase crack on two panels is likely uplift.

PHOTO NUMBER

80



Description:

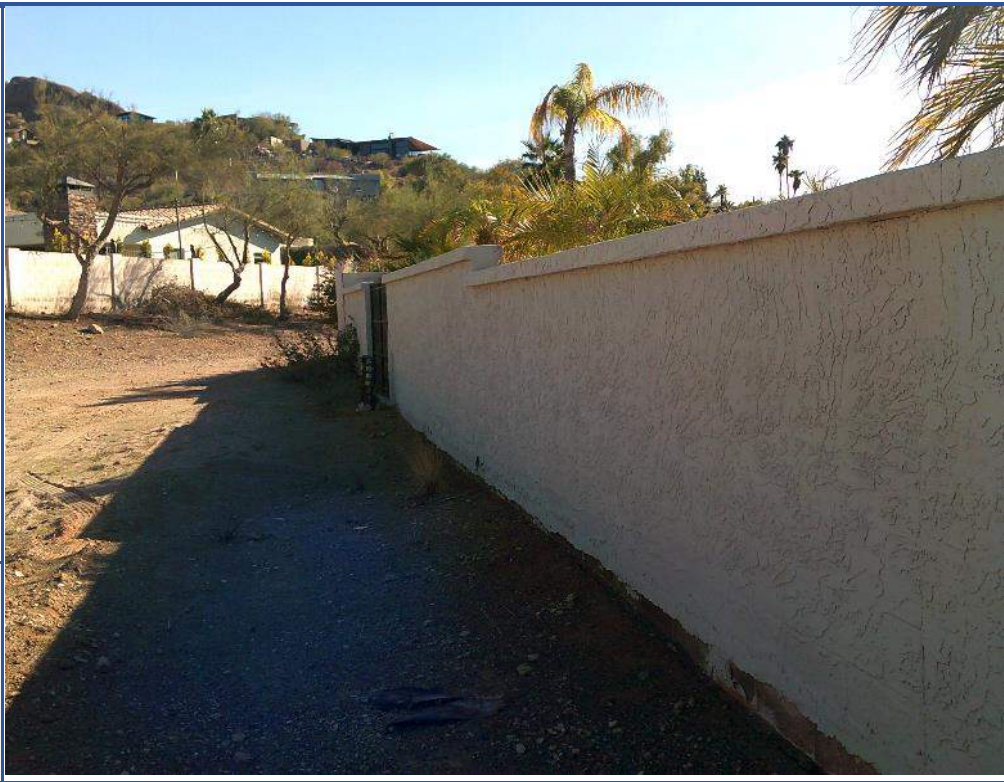
Lot 41S - Previous repairs.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 41 - Elevation. Overgrowth.</p>
<p>81</p>		

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 42 - Elevation.</p>
<p>82</p>		

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER



Description:

Lot 42 - Staircase may bear upon wall.

83

PHOTO NUMBER



Description:

Lot 43 - Delamination. Overgrowth.

84

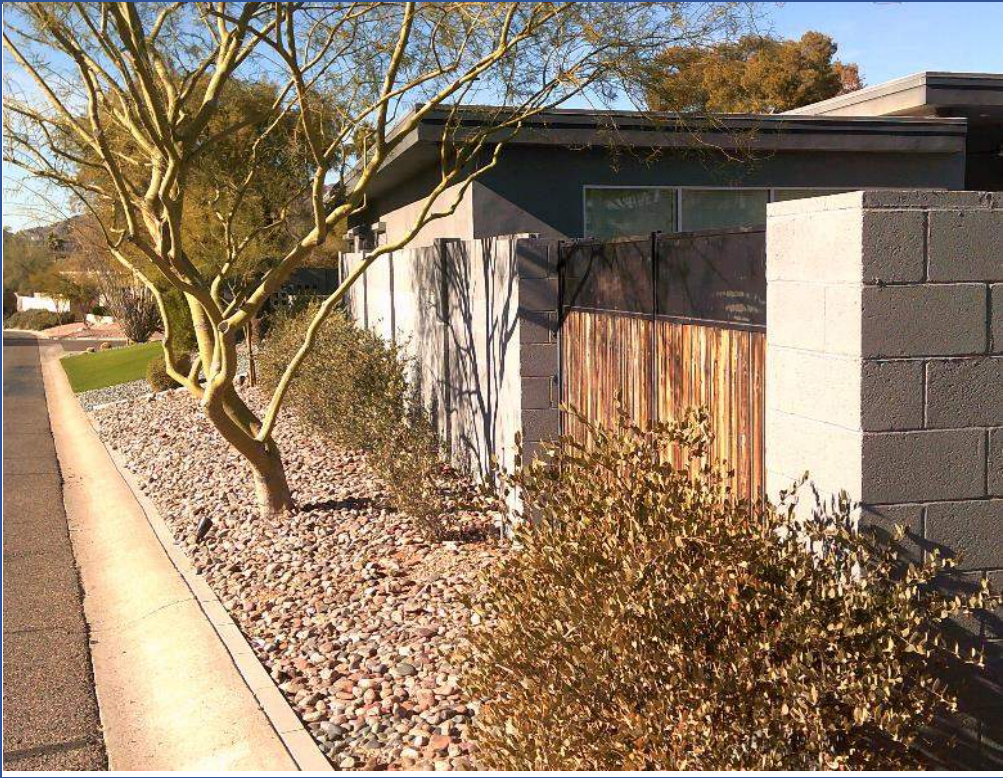
Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER

85

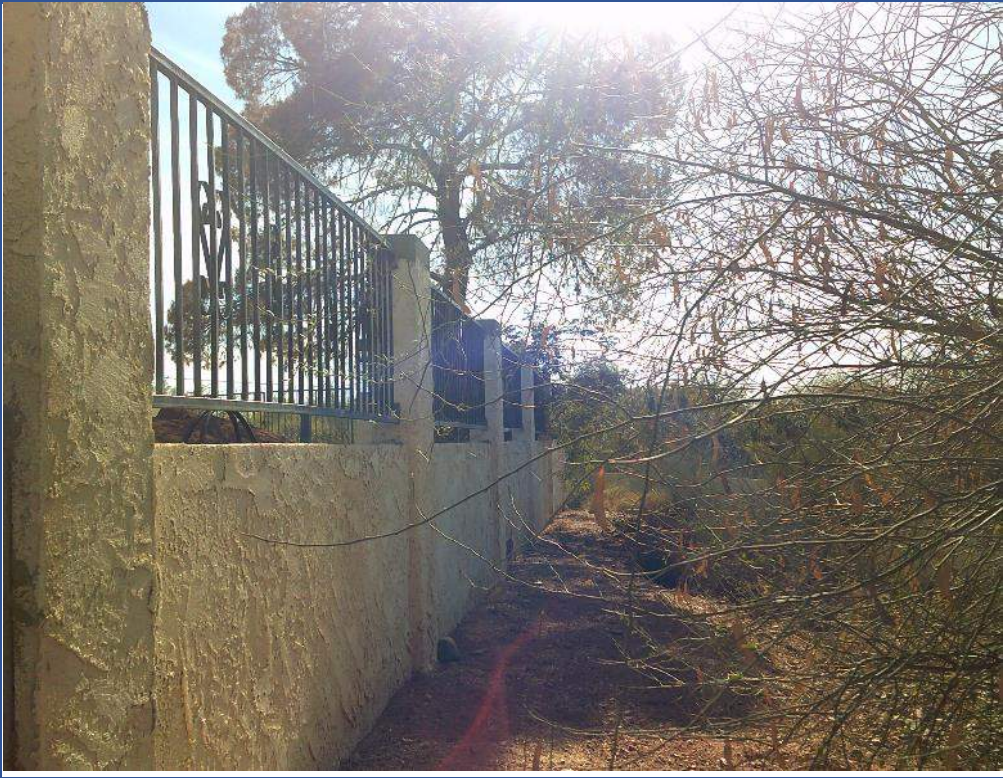


Description:

Lot 44S - Elevation.

PHOTO NUMBER

86



Description:

Lot 45S - Delamination.
Overgrowth.

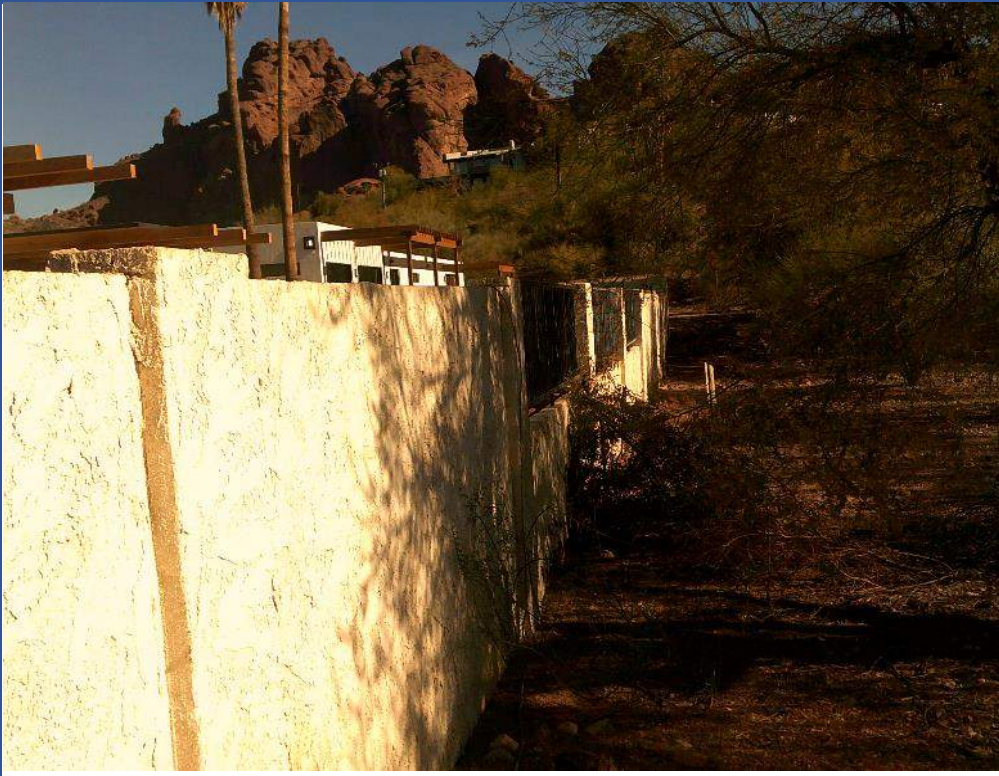
Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 18, 2024

PHOTO NUMBER

87



Description:

Lot 45S - Delamination.
Overgrowth.

PHOTO NUMBER

88

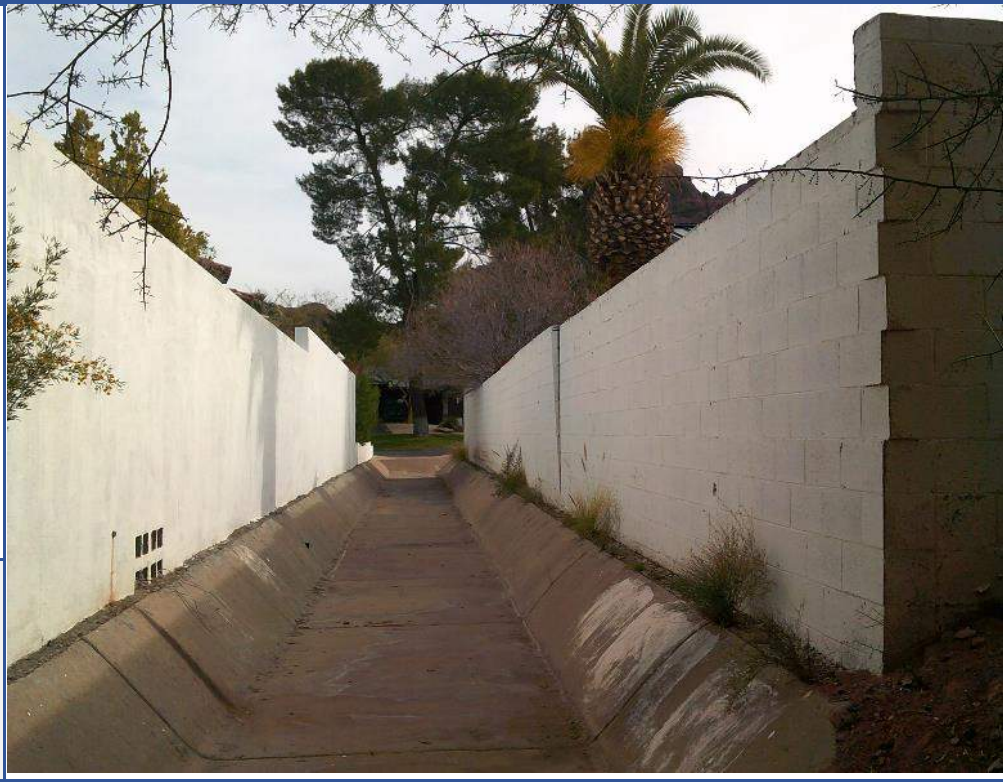


Description:

Lot 45 - Delamination.

PHOTO NUMBER

89



Description:

Lot 50S - Wall rotation up to approximately 2" over 4-feet on 7-foot wall. Overgrowth. Multiple hairline staircase cracks.

PHOTO NUMBER

90



Description:

Lot 50S - Multiple hairline staircase cracks.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 50S - Elevation.</p>
<p>91</p>		

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 51S - Overgrowth.</p>
<p>92</p>		

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 51S - Elevation. On-going wall repairs.</p>
<p>93</p>		

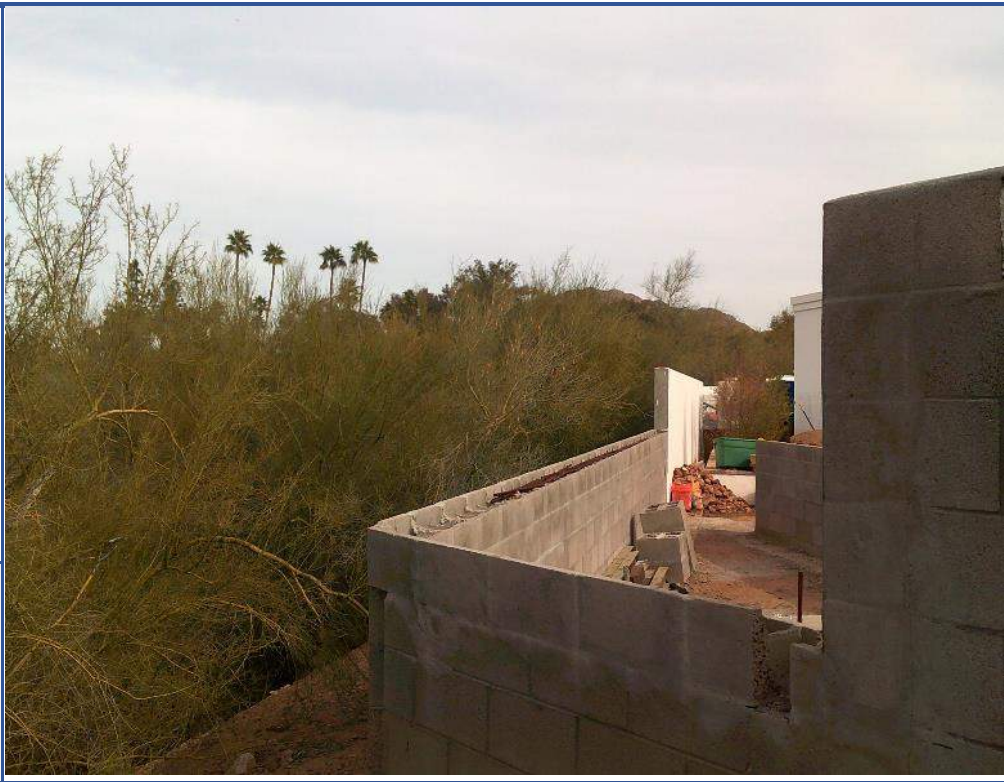
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 51 - On-going wall repairs.</p>
<p>94</p>		

PHOTO NUMBER

95

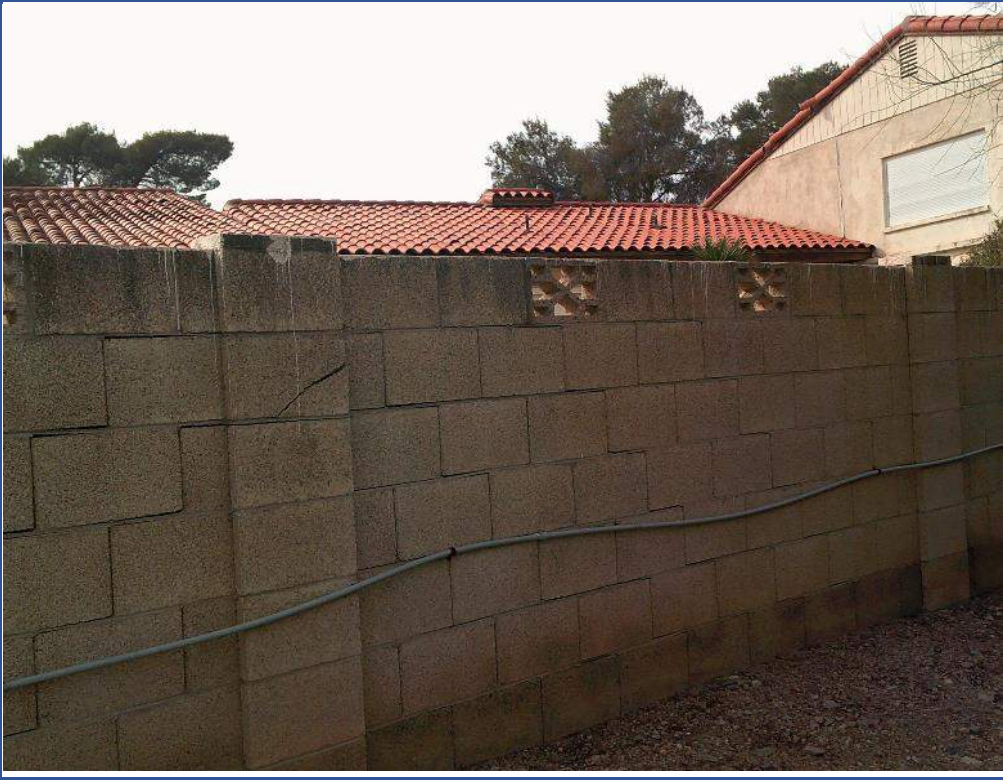


Description:

Lot 52 - Elevation.

PHOTO NUMBER

96



Description:

Lot 52 - Multiple staircase cracks up to approximately 1/4".

PHOTO NUMBER

97



Description:

Lot 52 - Exposed electrical wires from debonded conduit.

PHOTO NUMBER

98



Description:

Lot 52 - Multiple staircase cracks up to approximately 1/4". Multiple loose top caps.

PHOTO NUMBER

99



Description:

Lot 53 - Elevation.
Moderate delamination.

PHOTO NUMBER

100



Description:

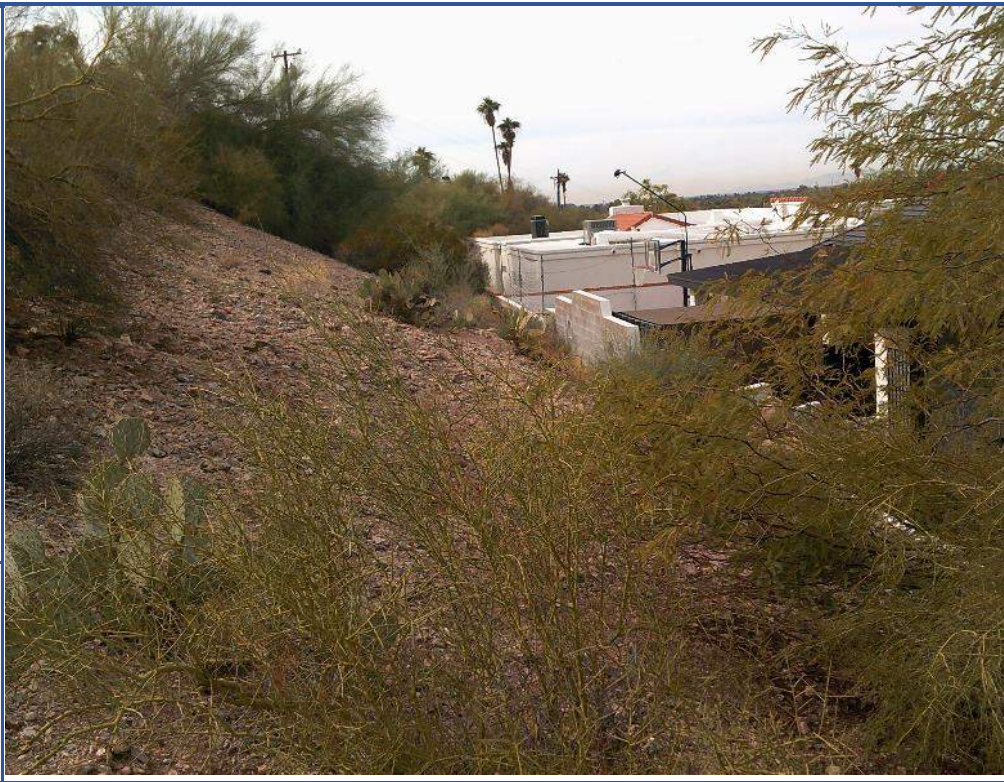
Lot 53 - Column
rotation up to
approximately 3" on a 5-
foot wall. Negative slope
towards wall. Multiple
panel with exposed
courses.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 57 - Wall is retaining.</p>
<p>101</p>		

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 59 - Overgrowth. Retaining wall.</p>
<p>102</p>		

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 60 - View fence</p>
<p>103</p>		

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 60S - Overgrowth. Painted stucco.</p>
<p>104</p>		

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

PHOTO NUMBER
105



Description:

Lot 62 - Overgrowth.
Broken top courses.

PHOTO NUMBER
106



Description:

Lot 63 - Elevation.

PHOTO NUMBER



Description:

Lot 63 - Exposed rebar.

107

PHOTO NUMBER



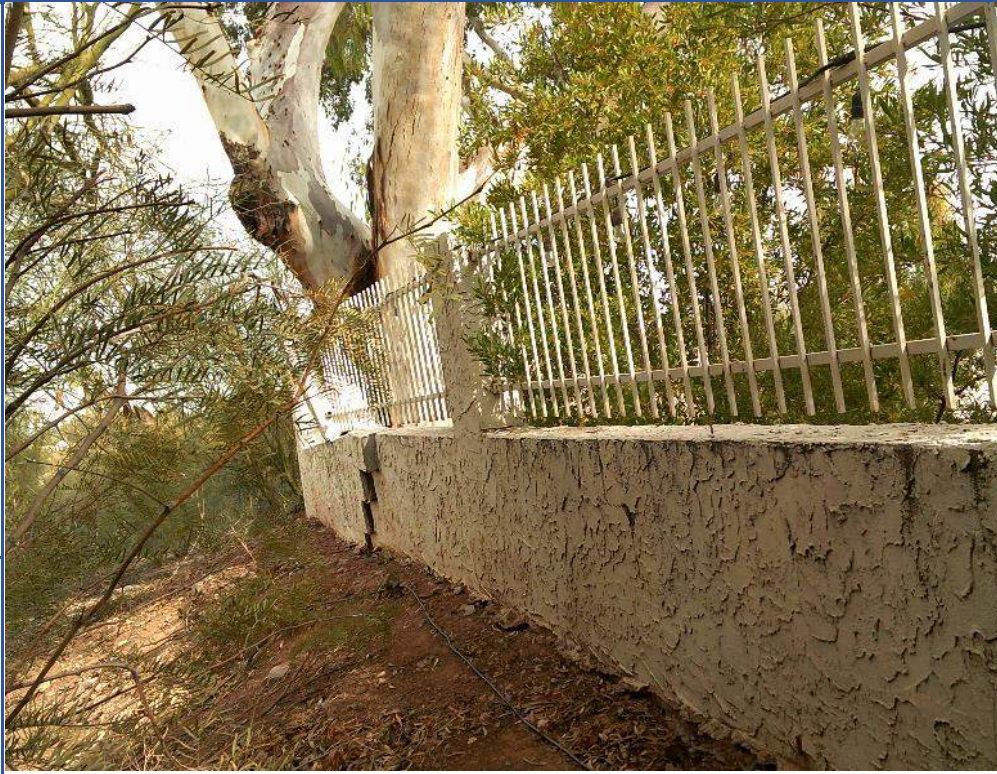
Description:

Lot 63 - Column rotation elevation.

108

PHOTO NUMBER

109



Description:

Lot 63 - Wall is offset by approximately 3".

PHOTO NUMBER

110



Description:

Lot 63 - Column rotation up to approximately 6" on a 5.5-foot wall. Wall is offset by approximately 3".

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

PHOTO NUMBER

111



Description:

Lot 64 - Elevation.
Significant delamination.
Overgrowth.

PHOTO NUMBER

112



Description:

Lot 64 - Staircase crack
up to approximately
3/4". Uplift up to
approximately 1".

PHOTO NUMBER

113

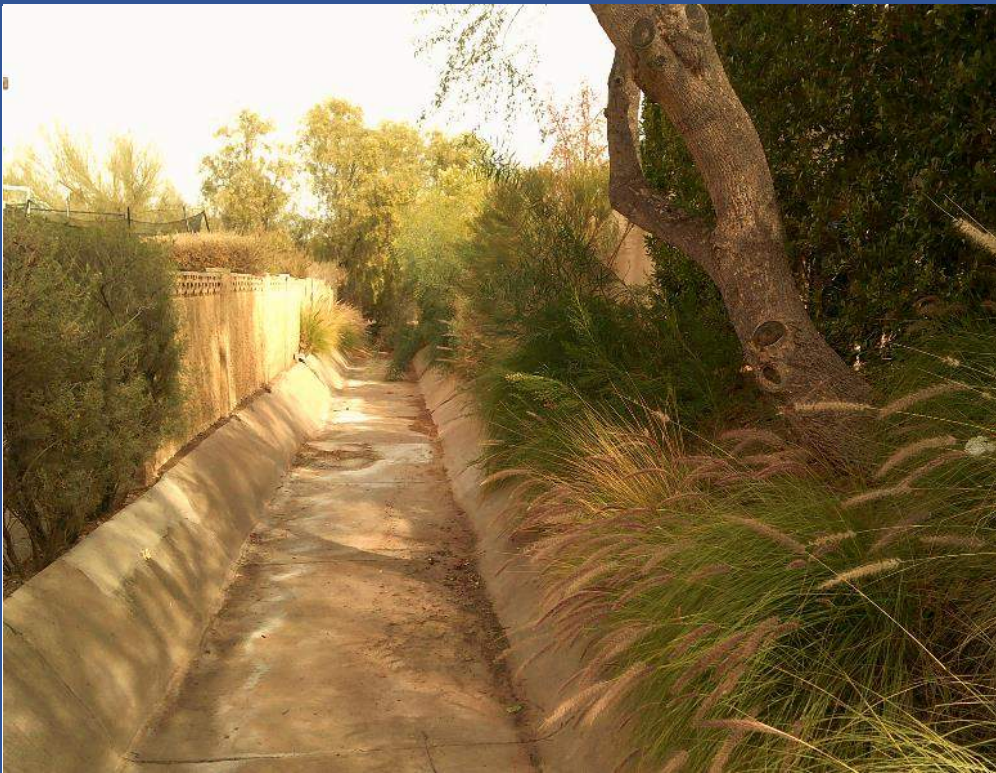


Description:

Lot 64S - Moderate delamination. Hairline vertical crack. Overgrowth.

PHOTO NUMBER

114



Description:

Lot 65S - Overgrowth. Potential wall rotation.

PHOTO NUMBER



Description:

Lot 65 - Column rotation up to approximately up to approximately 1" on a 6-foot wall.

115

PHOTO NUMBER



Description:

Lot 67 - Elevation. Column rotation up to approximately 2.75" on a 5.5-foot column on 3 panels at rear. Overgrowth. Painted stucco.

116

PHOTO NUMBER

117



Description:

Lot 68 - Delamination.
Negative slope towards
wall. Built up wall with
open cells.

PHOTO NUMBER

118



Description:

Lot 69 - Moderate to
significant delamination.
Overgrowth. Hole in
course. Loose top cap.
Animal feces in
immediate everywhere.

PHOTO NUMBER
119



Description:

Lot 70 - Significant delamination. Hairline vertical crack. Overgrowth. Negative slope towards wall.

PHOTO NUMBER
120



Description:

Lot 70 - Significant delamination. Multiple holes in course.

PHOTO NUMBER

121



Description:

Lot 70 - Significant delamination. Multiple holes in course.

PHOTO NUMBER

122



Description:

Lot 70 - Exposed top cell.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

PHOTO NUMBER

123

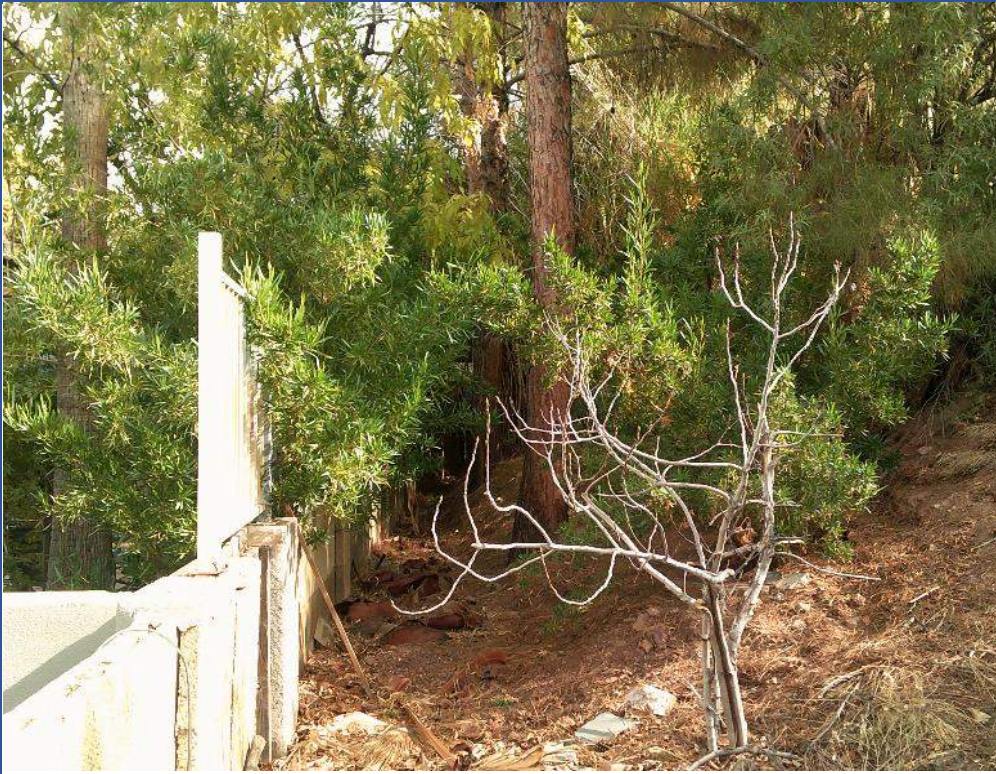


Description:

Lot 70 - Exposed top cell.

PHOTO NUMBER

124



Description:

Lot 71 - Elevation.
Overgrowth.

PHOTO NUMBER



Description:

Lot 71 - Multiple locations of overgrowth. Negative slope towards wall. Very limited access in multiple locations.

125

PHOTO NUMBER



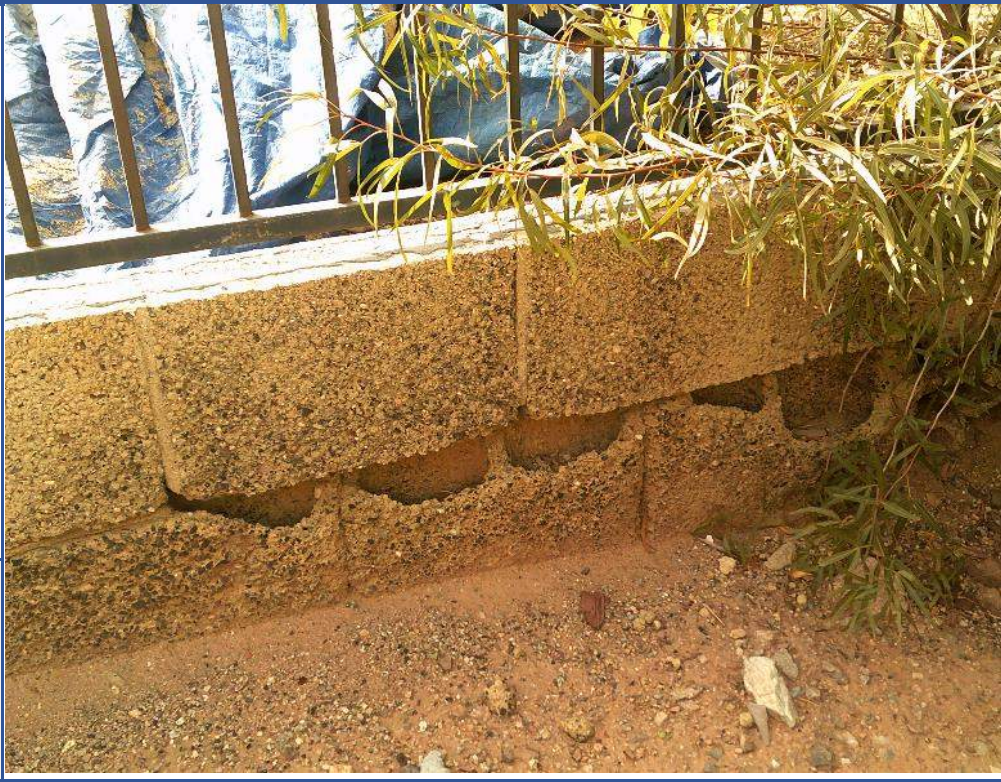
Description:

Lot 72 - Corrosion on view fence. Significant delamination.

126

PHOTO NUMBER

127



Description:

Lot 72 - Significant delamination. Overgrowth.

PHOTO NUMBER

128



Description:

Lot 73 - Delamination and efflorescence. Wet grade while on site.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

PHOTO NUMBER



Description:

Lot 75S - Elevation.

129

PHOTO NUMBER



Description:

Lot 76 - Vertical crack
at column.

130

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

PHOTO NUMBER

131



Description:

Lot 77 - Minimal wall with staggered elevation.

PHOTO NUMBER

132



Description:

Lot 78 - Elevation. Overgrowth.

PHOTO NUMBER

133



Description:

Lot 78 - Wall rotation up to approximately 3/4" on a 6-foot wall. Vertical crack. Overgrowth. Potential missing lateral bracing.

PHOTO NUMBER

134



Description:

Lot 78 - Staircase crack. Potential missing lateral bracing.

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 79 - Moderate delamination. Exposed and corroded dur-o-wire.</p>
<p>135</p>		

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 81 - Significant delamination with holes in course. Efflorescence. Vertical crack up to approximately 1/16".</p>
<p>136</p>		

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

PHOTO NUMBER

137



Description:

Lot 81 - Moderate delamination. Efflorescence. Column rotation up to approximately 1" on three 5.5-foot columns. Overgrowth.

PHOTO NUMBER

138



Description:

Lot 81 - Moderate delamination. Efflorescence. Vertical crack up to approximately 1/16".

PHOTO NUMBER



Description:

Lot 82 - Elevation. Built up wall.

139

PHOTO NUMBER



Description:

Lot 82 - Staircase crack up to approximately 1".

140

PHOTO NUMBER

141



Description:

Lot 83 - Delamination. Staircase crack up to approximately 1/4". Hairline staircase cracks. Multiple segments with rotation up to approximately 1.25" on a 5-foot wall. Exposed footing.

PHOTO NUMBER

142



Description:

Lot 85 - Delamination. Column rotation up to approximately 1" on a 5.5-foot column. Overgrowth. Cracking in stucco.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

PHOTO NUMBER

143



Description:

Lot 90 - Delamination.
Exposed footing.

PHOTO NUMBER

144



Description:

Lot 90 - Staircase crack
up to approximately
1/2". Overgrowth.
Exposed footing.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

PHOTO NUMBER

145



Description:

Lot 91 - Moderate delamination. Wall rotation up to approximately 1.5" on a 6-foot wall. Column rotation up to approximately 1.5" on a 6-foot column. Staircase crack up to approximately 1/4". Exposed and corroded dur-o-wire.

PHOTO NUMBER

146



Description:

Lot 91 - Built up wall.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

PHOTO NUMBER

147



Description:

Lot 91 - Moderate delamination. Exposed and corroded dur-o-wire.

PHOTO NUMBER

148



Description:

Lot 92 - Staircase crack. Overgrowth. Negative slope towards wall.

PHOTO NUMBER

149



Description:

Lot 93 - Built up wall.

PHOTO NUMBER

150



Description:

Lot 94 - Delamination.
Overgrowth. Negative
slope towards wall.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

PHOTO NUMBER

151



Description:

Lot 95 - Moderate delamination. Column rotation up to approximately 3/4" on a 6-foot wall. Hairline staircase crack. Overgrowth. Exposed and corroded dur-o-wire. Built up wall.

PHOTO NUMBER

152



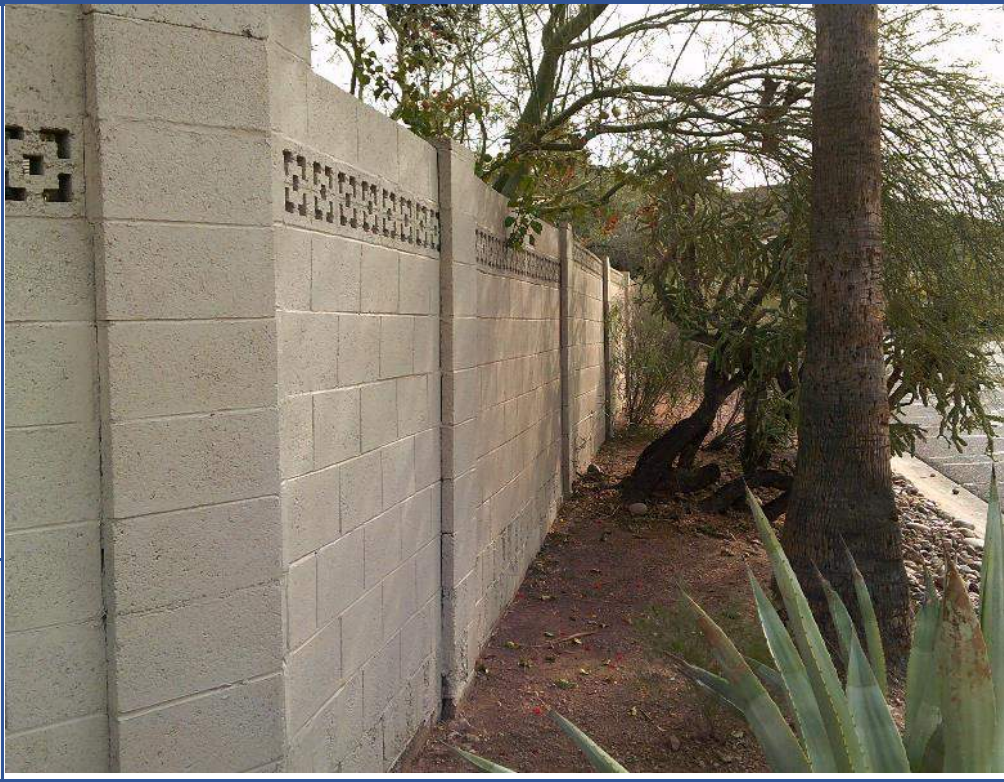
Description:

Lot 95 - Moderate delamination with delaminated grout. Overgrowth. Previous repair with built up wall.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 95S - Delamination. Overgrowth.</p>
<p>153</p>		

<p>PHOTO NUMBER</p>		<p>Description:</p> <p>Lot 96 - Overgrowth. Previous repair with built up wall.</p>
<p>154</p>		

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

PHOTO NUMBER



Description:

Lot 96 - Moderate delamination with delaminated grout. Exposed and corroded dur-o-wire.

155

PHOTO NUMBER



Description:

Lot 99 - Elevation.

156

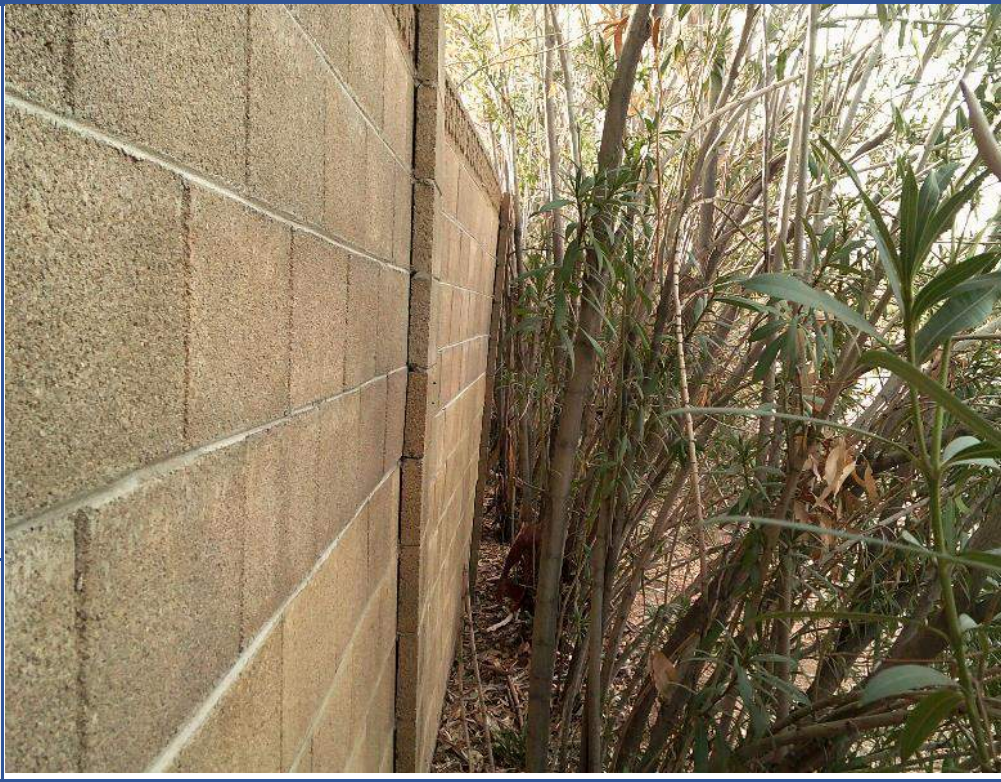
Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

PHOTO NUMBER

157

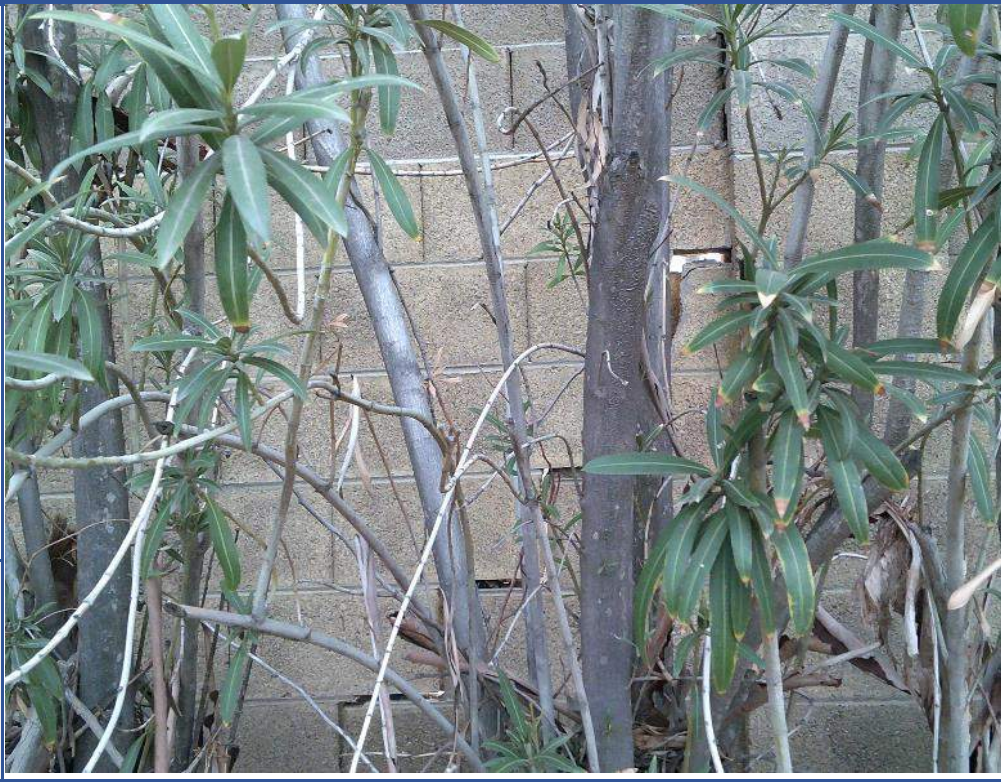


Description:

Lot 99 - Multiple hairline staircase cracks. Two columns with rotation up to approximately 10" and one column with 6" near trees on an 8-foot wall. Overgrowth.

PHOTO NUMBER

158



Description:

Lot 99 - Multiple staircase cracks.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

PHOTO NUMBER

159



Description:

Lot 101 - Staircase
crack up to
approximately 1/4".

PHOTO NUMBER

160



Description:

Lot 101 - Panel offset
up to approximately
1/2". Holes in course.

PHOTO NUMBER

161



Description:

Lot 101 - Significant delamination. Holes in course.

PHOTO NUMBER

162



Description:

Lot 101 - Staircase crack up to approximately 1/4". Overgrowth. Exposed and corroded dur-o-wire. Panel offset up to approximately 1/2".

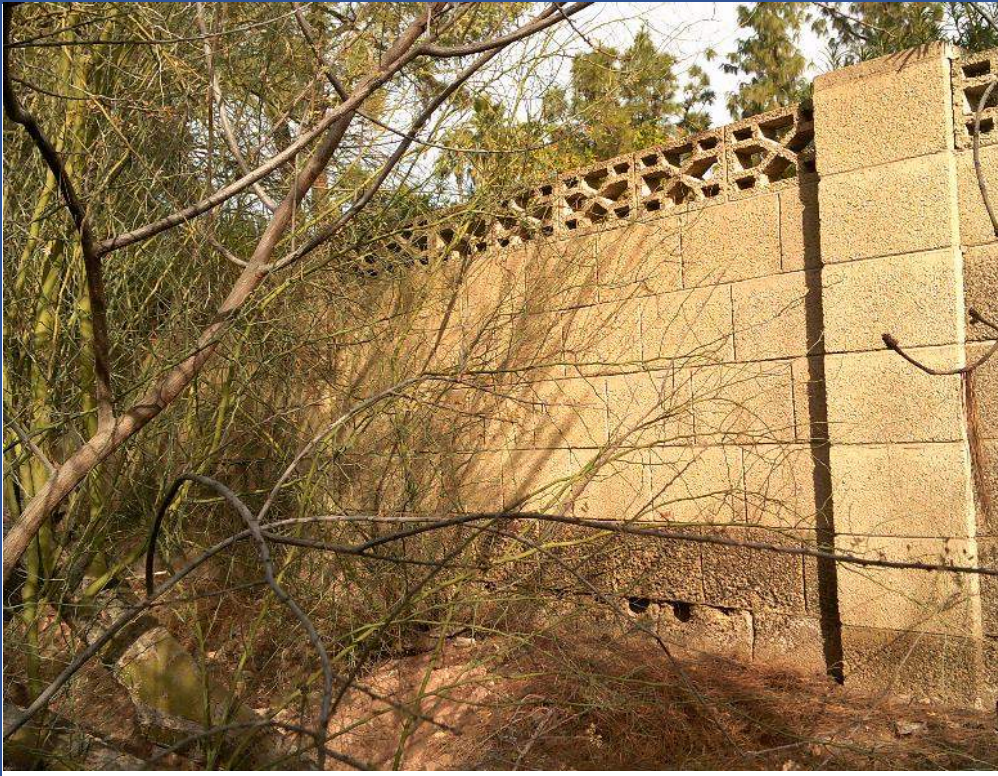
Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

PHOTO NUMBER

163



Description:

Lot 101 - Significant delamination. Holes in course.

PHOTO NUMBER

164



Description:

Lot 101 - Significant delamination. Holes in course.

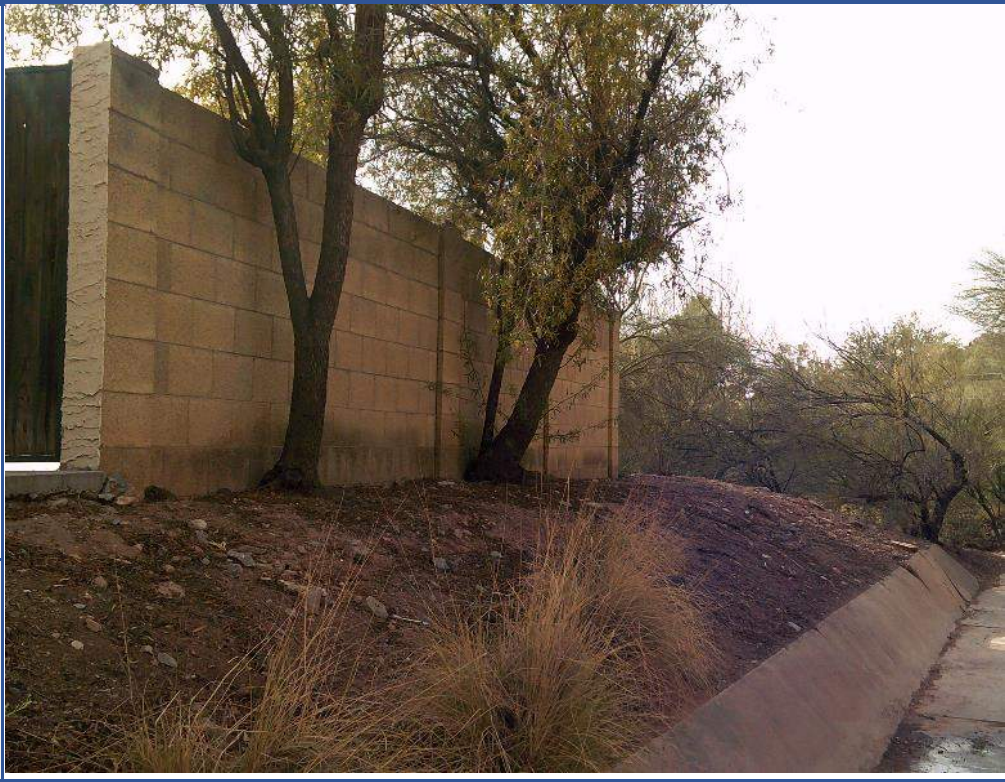
Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

PHOTO NUMBER

165



Description:

Lot 102S - Moderate delamination. Overgrowth. Potential uplift.

PHOTO NUMBER

166



Description:

Lot 102 - Elevation. Overgrowth. Potential uplift.

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

PHOTO NUMBER



Description:

Lot 102 - Moderate delamination. Staircase crack. Overgrowth.

167

PHOTO NUMBER



Description:

Lot 104 - Elevation.

168

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

PHOTO NUMBER



Description:

Lot 104 -
Delamination. Diagonal
crack on column.

169

PHOTO NUMBER



Description:

Lot 104 - Staircase
crack up to
approximately 1/4".

170

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

PHOTO NUMBER



Description:

Lot 104 - Staircase
crack up to
approximately 1/4".

171

PHOTO NUMBER



Description:

Lot 104 - Significant
delamination. Exposed
and corroded dur-o-
wire. Uplift.

172

Location:
Camelback Canyon Estates
Phoenix, Arizona

Photo Taken By:
CKE

Photo Date:
January 19, 2024

PHOTO NUMBER

173



Description:

Lot 104 - Significant delamination.

PHOTO NUMBER

174



Description:

Lot 105 - Column rotation up to approximately 3/4" on a 5-foot column. Uplift up to approximately 1/2".

Attachment D

Team Member Biographies

DAN KESSLER, *PRESIDENT & OWNER*



Dan is the President and Owner of Criterium-Kessler Engineers, with offices located in Phoenix, Arizona and Las Vegas, Nevada. Criterium-Kessler Engineers began operating in 2016 and serves a diverse client base that includes the entire Phoenix metro area, all of Arizona, Southern Nevada, and the Southwestern portion of the United States.

With a strong focus on understanding and meeting client requirements, Dan has grown Criterium-Kessler Engineers into one of the three largest Criterium Affiliate offices in the United States in less than five years. This was accomplished by developing a strong and technically diverse team that works effectively with a broad range of clients on everything from structural evaluation and design to building deficiency diagnostics; block wall evaluations, design, and QA oversight, to property conditions assessments; and cost segregation studies to complex reserve studies for both HOA's and commercial entities.

Dan is a proven, customer and employee-centric executive leader with over 30 years of engineering, program and project management, senior leadership, military, and Intelligence Community experience.

Prior to becoming an affiliate owner with Criterium Engineers, Dan was an executive with Lockheed Martin where he held numerous positions of increasing responsibility in engineering development, engineering operations, program management, and executive leadership—culminating in his role as Executive Director of Engineering for a nationwide team of 5,500+ technically diverse engineers that included data systems, space systems, intelligence operations, and software development. Dan is also a US Air Force veteran.

EDUCATION & PROFESSIONAL AFFILIATIONS

- ✓ National Louis University, Evanston, Illinois
 - Bachelors of Business Management
- ✓ Community College of the Air Force, Birmingham, Alabama
 - AAS, Remote Sensing
- ✓ Community Associations Institute
 - Reserve Study Specialist (RS)
- ✓ Nevada Certified Reserve Specialist

PRIMARY SKILLS & COMPETENCIES

- ✓ Business Development / Client Engagement
- ✓ Reserve Studies – Standard & Enhanced
- ✓ Cost Segregation Studies
- ✓ Due Diligence Building Inspections and Property Condition Assessments
- ✓ Block Wall Evaluations
- ✓ Capital Needs Assessments
- ✓ Budgeting & Cost Control

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WHY I DO WHAT I DO

"We live in an exciting age when seemingly nothing is beyond our ability to create through proper engineering—and that means constant change, even to some of the most common elements of our society. Whether we realize it or not, we have a symbiotic relationship with buildings and structures, and it's fascinating to understand how all of the different elements work together to form the landscape we interact with each day. Most important though, is the opportunity to develop strong relationships and partner with clients to help them understand their structures in a way that can alleviate concerns, instill confidence, and ultimately succeed in their endeavors."

WHY CRITERIUM-KESSLER ENGINEERS

"Although buildings and other infrastructure elements may appear simplistic in nature, the facts are that every segment of our society has been engineered to perform as an element of an integrated system—whether that's buildings, roads, bridges, or even the topography around one's home or place of work. When an issue surfaces, the ability to partner with a company such as Criterium Engineers, with over 65 years of extremely diverse experience, and the combined nationwide expertise of 110+ engineers, is critical to understanding and solving problems."

Criterium-Kessler Engineers is comprised of people who genuinely care about developing and nurturing relationships with other people and creating collaborative partnerships to fully investigate and understand their buildings and their associated challenges."

PROJECT HIGHLIGHTS

- ✓ **Standard/Enhanced Reserve Studies** – Anthem Master Association (Anthem, AZ), Fountain of the Sun (Mesa, AZ), Scottsdale Waterfront (Scottsdale), The Ridges (Las Vegas, NV), Pebble Creek Community Association (Goodyear, AZ), Quail Creek Association (Green Valley, AZ), Biltmore Terrace (Phoenix), Winfield Master Association (Scottsdale, AZ), and more.
- ✓ **Property Condition Assessments** – All AZ La-Z-Boy showrooms and warehouses, 500k and 330k SF retail shopping plazas, office buildings, manufacturing buildings, condominiums, etc.
- ✓ **Capital Needs Assessment, Sierra Vista, Arizona** – Thorough inspection and 20-year capital replacement study for purchaser; done to USDA RA requirements.
- ✓ **Block Wall Structural Evaluations** – Inspections / reports and bid specifications for Estrella Mountain Ranch, Providence HOA (Las Vegas), Superstition Foothills, Sonoran Foothills, Trailside Point, Palm Valley Phases I, II, V & VIII, Canyon Trails, Ocotillo, and many others.
- ✓ **Estrella Community Association, Goodyear, AZ** -- Wall and fence structural defect evaluation across twelve communities, detailed reports and analysis, expert witness support
- ✓ **Cost Segregation Studies** – Commercial, manufacturing, office buildings; recently segregated nearly \$10,000,000 that allowed for accelerated depreciation on a recent purchase. Have segregated over \$40,000,000 for various clients.
- ✓ **Insurance, Home Warranty, and Commercial Clients** – Stucco inspections, building inspections, structural distress inventory

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CARL MUHA, P.E., SENIOR ENGINEERING DIRECTOR



Carl is licensed Professional Engineer in Arizona, Colorado and Ohio (retired) and has earned a BS in Mechanical Engineering from the University of Pittsburgh. Carl has extensive engineering experience in design, construction, mechanical engineering analysis, new product development and manufacturing. Carl is a recognized expert in the failure analysis of MEP systems and components.

In addition to mechanical engineering. Carl also has extensive experience in structural, electrical and civil engineering. His general engineering knowledge is a result of his diverse engineering experiences in the mining, aerospace, commercial and industrial products, material handling/automated equipment, and K-12 construction industries. He provides expert testimony in matters involved in litigation.

Carl has more than 10 years of Forensic Engineering experience as President and Owner of WSST Professional Engineering services, consultant for Rimkus, and Vice President of Western Engineering and Research Corporation. Prior to working in forensic engineering Carl was Vice President of Engineering for Dant Clayton Corp, Director of Engineering for Cannon Equipment, Manager of New Product Development and Engineering for Chicago Pneumatic, Program Manager for Lockheed Martin and a Design and Construction Engineering for Consol Energy.

EDUCATION & PROFESSIONAL AFFILIATIONS

- ✓ University of Pittsburgh, BS, Mechanical Engineering

PRIMARY SKILLS & COMPETENCIES

- ✓ Mechanical Engineering
- ✓ Structural Engineering
- ✓ General Engineering;
- ✓ Expert Witness / Testimony
- ✓ Building Envelope Assessments
- ✓ Cost Studies
- ✓ Business Development/Client Engagement
- ✓ Budgeting and Cost Control

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WHY I DO WHAT I DO

Ever since childhood, I've been obsessed with "how things work". I've always excelled at mathematics and science and don't recall ever wanting to be anything other than an engineer. I like diversity in the subject matter where I work. This has been demonstrated by my very diverse engineering background ... having worked in many diverse industries, from mining to aerospace and many in between. My diverse experience makes me extremely suited for the forensic engineering industry.

WHY CRITERIUM ENGINEERS

"Although buildings and other elements of society may appear simplistic in nature, the facts are that every element of our society has been engineered to perform as an element of an integrated system—whether that's buildings, roads, bridges, or even the topography around one's home or place of work. When an issue surfaces, the ability to partner with a company such as Criterium Engineers, with over 60 years of extremely diverse experience, and the combined nationwide expertise of 110+ engineers, is critical to understanding and solving problems.

Criterium Engineers is comprised of people who genuinely care about developing and nurturing relationships with other people and creating collaborative partnerships to fully investigate and understand their buildings and their associated challenges."

PROJECT HIGHLIGHTS

- ✓ **Construction Defects** – Dry Creek Crossings, Englewood, CO.
- ✓ **Construction Defects** – St Anthony Hospital, Lakewood, CO
- ✓ **Residential Home Warranty** – Numerous evaluations of residential structural issues.
- ✓ **Evaluation of Plumbing Components** – Inspection and evaluation of thousands of plumbing components for subrogation of damages caused by the failure
- ✓ **Structural Inspections and Evaluation** – Inspection and Evaluation of historic stone bridges and municipal buildings affected by flash floods in Manitou Springs, CO
- ✓ **Program Management** – Environmental Testing of the Power Supply System for the International Space Station.
- ✓ **Design, Construction and Project Management** – Thermal vacuum test facility for Lockheed Martin.
- ✓ **K-12 Design and Construction** – Hundreds of stadiums and grandstand for K-12, municipal and private entities.
- ✓ **Insurance and Attorney Clients** – Subrogation cases involving plumbing component defects, Industrial accident investigations.

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TIMOTHY FURLONG, E.I.



Timothy Furlong is a Project Manager for Criterium-Kessler Engineers, located in Phoenix, Arizona. Timothy has been involved with maintenance and utility upgrades in residential and commercial properties as well as RV communities. Some of his work includes including inspection services, maintenance program development, and consulting.

Timothy has over 10 years of Inspection and Maintenance development spanning from the U.S. Navy weapons and auxiliary cooling systems, communication upgrades, and maintenance development for entire property envelopes. Timothy has performed thousands of inspections including electronic systems, public and private infrastructure, utilities, residential, commercial, and industrial settings on behalf of existing and perspective property owners.

Timothy has performed these services on projects in Arizona, Nevada, Florida and Virginia.

Prior to joining Criterium-Kessler Engineers, Timothy performed and managed teams to complete work with efficiency and proactive plans in mind. Timothy's career began in the U.S. Navy where he performed maintenance and qualified for technical response watch stations at a much faster pace than his peers. He was awarded the work center supervisor position to oversee the completion of the preventative and corrective maintenance within the Combat Systems department. After joining the civilian workforce, he became the Project Supervisor overseeing projects for multiple clients and later a Maintenance Director overseeing two large communities. After graduation, the skills and knowledge easily transferred and are utilized at Criterium-Kessler Engineers today.

EDUCATION & PROFESSIONAL AFFILIATIONS

- ✓ Tallahassee Community College (Tallahassee, FL)
 - Associate, Pre-Engineering
- ✓ Arizona State University (Tempe, AZ)
 - Bachelors of Science – Civil Engineering
- ✓ Fundamentals of Engineering Certificate - 2023

PRIMARY SKILLS & COMPETENCIES

- ✓ Structural Inspections
- ✓ Fire Inspections
- ✓ Maintenance Plan Evaluation
- ✓ Block Wall Evaluations
- ✓ Truss Evaluations
- ✓ Beam and Truss Design

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WHY I DO WHAT I DO

"Civil and Structural Engineering is a unique career that spans many different roles, industry sectors, skills and people. Each engineering project is unique and requires collaboration with many different professions to get the job done successfully. Given that completed engineering projects can have a life span in decades, I love driving down a road and seeing problematic areas that I helped resolve. There is not much better professional satisfaction than driving a client's problem to successful completion resulting in a property that is now safer, stronger and will potentially save money for decades to come."

WHY CRITERIUM ENGINEERS

"Criterium-Kessler Engineers was an easy choice for me. Few engineering firms engage in such an expansive menu of services. With a national footprint and 100 plus engineers that specialize in different avenues, there was no better company to build a career. In addition, I have the opportunity to be in the field constantly. Every week I help clients identify and overcome their property's problems. I enjoy being a member of a quality team that holds ethics and quality work as the standard."

PROJECT HIGHLIGHTS

- ✓ **Providence Master HOA - Las Vegas, Nevada** – Inspected and made recommendations for repair for over 1,500 walls over 30 Sub-Communities.
- ✓ **Palm Valley Phase V – Goodyear, Arizona** – Inspected and made recommendations on 17 miles of walls.
- ✓ **Camello Vista – Scottsdale Arizona** – Performed structural inspections on multiple building types and units. Identified structural deficiencies and designed their solutions for beam, shear wall and ceiling joists.
- ✓ **Structural fire inspection – Arizona** – Identified structural elements that were degraded from the fire. Made recommendations on what needed to be removed and was
- ✓ **Vistancia Roadway - Peoria, Arizona** – Performed analysis on the roadway system of the gated Community. Made recommendations on maintenance techniques, and shelf life of roadway system.
- ✓ **West Plaza Townhomes – Glendale Arizona** – Performed asphalt roof inspections for 30 buildings. Provided report outlining observations, opinions, and recommendations.
- ✓ **Papago Park – Tempe, Arizona** – Performed balcony inspections for 49 Units across the Community. Developed a repair priority matrix based upon the different elements of the structural systems that had failed or were failing. Oversaw and administered construction of multiple balconies that needed replacement.

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