



SELLER'S DISCLOSURE NOTICE

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Section 5.008, Property Code requires a seller of residential property of not more than one dwelling unit to deliver a Seller's Disclosure Notice to a buyer on or before the effective date of a contract. **This form complies with and contains additional disclosures which exceed the minimum disclosures required by the Code.**

CONCERNING THE PROPERTY AT **7108 Eagles Ridge Court, Argyle, Texas 76226**

THIS NOTICE IS A DISCLOSURE OF SELLER'S KNOWLEDGE OF THE CONDITION OF THE PROPERTY AS OF THE DATE SIGNED BY SELLER AND IS NOT A SUBSTITUTE FOR ANY INSPECTIONS OR WARRANTIES THE BUYER MAY WISH TO OBTAIN. IT IS NOT A WARRANTY OF ANY KIND BY SELLER, SELLER'S AGENTS, OR ANY OTHER AGENT.

Seller Is Is not occupying the property. If unoccupied (by Seller), how long since Seller has occupied The Property? _____ (approximate date) Never occupied the Property.

Section 1. The Property has the items marked below: (Mark Yes (Y), No (N), or Unknown (U).)

This notice does not establish the items to be conveyed. The contract will determine which items will & will not convey.

Item	Y	N	U	Item	Y	N	U	Item	Y	N	U
Cable TV Wiring			✓	Natural Gas Lines	✓			Pump: <input type="checkbox"/> sump <input type="checkbox"/> grinder			✓
Carbon Monoxide Det.			✓	Fuel Gas Piping:			✓	Rain Gutters	✓		
Ceiling Fans	✓			-Black Iron Pipe			✓	Range/Stove	✓		
Cooktop	✓			-Copper			✓	Roof/Attic Vents	✓		
Dishwasher	✓			-Corrugated Stainless Steel Tubing			✓	Sauna			✓
Disposal	✓			Hot Tub			✓	Smoke Detector	✓		
Emergency Escape Ladder(s)			✓	Intercom System			✓	Smoke Detector – Hearing Impaired			✓
Exhaust Fans	✓			Microwave	✓			Spa	✓		
Fences	✓			Outdoor Grill	✓			Trash Compactor			✓
Fire Detection Equip.	✓			Patio/Decking	✓			TV Antenna			✓
French Drain			✓	Plumbing System			✓	Washer/Dryer Hookup	✓		
Gas Fixtures	✓			Pool	✓			Window Screens	✓		
Liquid Propane Gas:			✓	Pool Equipment	✓			Public Sewer System	✓		
-LP Community (Captive)			✓	Pool Maint. Accessories			✓				
-LP on Property			✓	Pool Heater	✓						

Item	Y	N	U	Additional Information
Central A/C	✓			<input checked="" type="checkbox"/> electric <input type="checkbox"/> gas number of units: 2
Evaporative Coolers		✓		number of units:
Wall/Window AC Units		✓		number of units:
Attic Fan(s)		✓		if yes, describe:
Central Heat	✓			<input type="checkbox"/> electric <input checked="" type="checkbox"/> gas number of units: 2
Other Heat		✓		if yes describe:
Oven	✓			number of ovens: 2 <input checked="" type="checkbox"/> electric <input type="checkbox"/> gas <input type="checkbox"/> other:
Fireplace & Chimney	✓			<input type="checkbox"/> wood <input type="checkbox"/> gas logs <input type="checkbox"/> mock <input checked="" type="checkbox"/> other: One electric/gas, one wood outdoors
Carport		✓		<input type="checkbox"/> attached <input type="checkbox"/> not attached
Garage	✓			<input checked="" type="checkbox"/> attached <input type="checkbox"/> not attached
Garage Door Openers			✓	number of units: number of remotes:
Satellite Dish & Controls		✓		<input type="checkbox"/> owned <input type="checkbox"/> leased from



Security System	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> owned <input type="checkbox"/> leased from
Solar Panels	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> owned <input type="checkbox"/> leased from
Water Heater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> electric <input checked="" type="checkbox"/> gas <input type="checkbox"/> other: number of units: 2
Water Softener	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> owned <input type="checkbox"/> leased from
Other Leased Item(s)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	if yes, describe:
Underground Lawn Sprinkler	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> automatic <input type="checkbox"/> manual areas covered: Front yard/ beds, backyard bed
Septic / On-Site Sewer Facility	<input type="checkbox"/>	<input checked="" type="checkbox"/>	if yes, attach Information About On-Site Sewer Facility (TXR-1407)

Water supply provided by: City Well MUD Co-op Unknown Other: _____

Was the Property built before 1978? yes no unknown

(If yes, complete, sign, and attach TXR-1906 concerning lead-based paint hazards).

Roof Type: **Composition shingles** Age: **4** (approximate)

Is there an overlay roof covering on the Property (shingles or roof covering placed over existing shingles or roof covering)? Yes No Unknown

Are you (Seller) aware of any of the items listed in this Section 1 that are not in working condition, that have defects, or are need of repair? yes no If yes, describe (attach additional sheets if necessary):

Section 2. Are you (Seller) aware of any defects or malfunctions in any of the following? (Mark Yes (Y) if you are aware and No (N) if you are not aware.)

Item	Y	N	Item	Y	N	Item	Y	N
Basement		<input checked="" type="checkbox"/>	Floors		<input checked="" type="checkbox"/>	Sidewalks		<input checked="" type="checkbox"/>
Ceilings		<input checked="" type="checkbox"/>	Foundation / Slab(s)		<input checked="" type="checkbox"/>	Walls / Fences		<input checked="" type="checkbox"/>
Doors		<input checked="" type="checkbox"/>	Interior Walls		<input checked="" type="checkbox"/>	Windows		<input checked="" type="checkbox"/>
Driveways		<input checked="" type="checkbox"/>	Lighting Fixtures		<input checked="" type="checkbox"/>	Other Structural Components		<input checked="" type="checkbox"/>
Electrical Systems		<input checked="" type="checkbox"/>	Plumbing Systems		<input checked="" type="checkbox"/>			
Exterior Walls		<input checked="" type="checkbox"/>	Roof		<input checked="" type="checkbox"/>			

If the answer to any of the items in Section 2 is yes, explain (attach additional sheets if necessary):

Section 3. Are you (Seller) aware of any of the following conditions? (Mark Yes (Y) if you are aware and No (N) if you are not aware.)

Condition	Y	N	Condition	Y	N
Aluminum Wiring		<input checked="" type="checkbox"/>	Radon Gas		<input checked="" type="checkbox"/>
Asbestos Components		<input checked="" type="checkbox"/>	Settling		<input checked="" type="checkbox"/>
Diseased Trees: oak wilt		<input checked="" type="checkbox"/>	Soil Movement	<input checked="" type="checkbox"/>	
Endangered Species/Habitat on Property		<input checked="" type="checkbox"/>	Subsurface Structure or Pits		<input checked="" type="checkbox"/>
Fault Lines		<input checked="" type="checkbox"/>	Underground Storage Tanks		<input checked="" type="checkbox"/>
Hazardous or Toxic Waste		<input checked="" type="checkbox"/>	Unplatted Easements		<input checked="" type="checkbox"/>
Improper Drainage		<input checked="" type="checkbox"/>	Unrecorded Easements		<input checked="" type="checkbox"/>
Intermittent or Weather Springs		<input checked="" type="checkbox"/>	Urea-formaldehyde Insulation		<input checked="" type="checkbox"/>
Landfill		<input checked="" type="checkbox"/>	Water Damage Not Due to a Flood Event		<input checked="" type="checkbox"/>



Lead-Based Paint or Lead-Based Pt. Hazards		✓
Encroachments onto the Property		✓
Improvements encroaching on others' property		✓
Located in Historic District		✓
Historic Property Designation		✓
Previous Foundation Repairs		✓
Previous Roof Repairs		✓
Previous Other Structural Repairs		✓
Previous Use of Premises for Manufacture of Methamphetamine		✓

Wetlands on Property		✓
Wood Rot		✓
Active infestation of termites or other wood destroying insects (WDI)		✓
Previous treatment for termites or WDI		✓
Previous termite or WDI damage repaired		✓
Previous Fires		✓
Termite or WDI damage needing repair		✓
Single Blockable Main Drain in Pool/Hot Tub/Spa*		✓

If the answer to any of the items in Section 3 is yes, explain (attach additional sheets if necessary):

(Soil Movement) Yes east side of pool. See engineer report and pool repair work paperwork. Pool was completed in early 2022 shortly after we saw pool shifted.. no cracking or leaks. Pool builder repaired in 2023 soil injections were completed. 2024 noticed pool tile issues. 2026 pool repairs completed

*A single blockable main drain may cause a suction entrapment hazard for an individual.

Section 4. Are you (Seller) aware of any item, equipment, or system in or on the Property that is in need of repair, which has not been previously disclosed in this notice? yes no If yes, explain (attach additional sheets if necessary):

Section 5. Are you (Seller) aware of any of the following conditions?* (Mark Yes (Y) if you are aware and check wholly or partly as applicable. Mark No (N) if you are not aware.)

Y N

- Present flood insurance coverage.
- Previous flooding due to a failure or breach of a reservoir or a controlled or emergency release of water from a reservoir.
- Previous flooding due to a natural flood event.
- Previous water penetration into a structure on the Property due to a natural flood.
- Located wholly partly in a 100-year floodplain (Special Flood Hazard Area-Zone A, V, A99, AE, AO, AH, VE, or AR).
- Located wholly partly in a 500-year floodplain (Moderate Flood Hazard Area-Zone X (shaded)).
- Located wholly partly in a floodway.
- Located wholly partly in a flood pool.
- Located wholly partly in a reservoir.

If the answer to any of the above is yes, explain (attach additional sheets as necessary):



***If Buyer is concerned about these matters, Buyer may consult Information About Flood Hazards (TXR 1414).**

For purposes of this notice:

"100-year floodplain" means any area of land that: (A) is identified on the flood insurance rate map as a special flood hazard area, which is designated as Zone A, V, A99, AE, AO, AH, VE, or AR on the map; (B) has a one percent annual chance of flooding, which is considered to be a high risk of flooding; and (C) may include a regulatory floodway, flood pool, or reservoir.

"500-year floodplain" means any area of land that: (A) is identified on the flood insurance rate map as a moderate flood hazard area, which is designated on the map as Zone X (shaded); and (B) has a two-tenths of one percent annual chance of flooding, which is considered to be a moderate risk of flooding.

"Flood pool" means the area adjacent to a reservoir that lies above the normal maximum operating level of the reservoir and that is subject to controlled inundation under the management of the United States Army Corps of Engineers.

"Flood insurance rate map" means the most recent flood hazard map published by the Federal Emergency Management Agency under the National Flood Insurance Act of 1968 (42 U.S.C. Section 4001 et seq.).

"Floodway" means an area that is identified on the flood insurance rate map as a regulatory floodway, which includes the channel of a river or other watercourse and the adjacent land areas that must be reserved for the discharge of a base flood, also referred to as a 100-year flood, without cumulatively increasing the water surface elevation more than a designated height.

"Reservoir" means a water impoundment project operated by the United States Army Corps of Engineers that is intended to retain water or delay the runoff of water in a designated surface area of land.

Section 6. Have you (Seller) ever filed a claim for flood damage to the Property with any insurance provider, including the National Flood Insurance Program (NFIP)? yes no If yes, explain (attach additional sheets as necessary):

*Homes in high risk flood zones with mortgages from federally regulated or insured lenders are required to have flood insurance. Even when not required, the Federal Emergency Management Agency (FEMA) encourages homeowners in high risk, moderate risk, and low risk flood zones to purchase flood insurance that covers the structure(s) and the personal property within the structure(s).

Section 7. Have you (Seller) ever received assistance from FEMA or the U.S. Small Business Administration (SBA) for flood damage to the Property? yes no If yes, explain (attach additional sheets as necessary):

Section 8. Are you (Seller) aware of any of the following? (Mark Yes (Y) if you are aware. Mark No (N) if you are not aware.)

Y N

Room additions, structural modifications, or other alterations or repairs made without necessary permits, with unresolved permits, or not in compliance with building codes in effect at the time

Homeowners' associations or maintenance fees or assessments. If yes, complete the following:

Name of association: Canyon Falls HOA

Manager's Name: Derrick Dawson Phone: 9402400803

Fees or assessments are: \$ 608 per Quarterly mandatory voluntary

Any unpaid fees or assessment for the Property? Yes (\$) No



If the Property is in more than one association, provide information about the other associations below or attach information to this notice.

- Any common area (facilities such as pools, tennis courts, walkways, or other) co-owned in undivided interest with others. If yes, complete the following:

Any optional user fees for common facilities charged? yes no If yes, describe

- Any notices of violations of deed restrictions or governmental ordinances affecting the condition or use of the Property.
- Any lawsuits or other legal proceedings directly or indirectly affecting the Property. (Includes, but is not limited to: divorce, foreclosure, heirship, bankruptcy, and taxes.)
- Any death on the Property except for those deaths caused by: natural causes, suicide, or accident unrelated to the condition of the Property.
- Any condition on the Property which materially affects the health or safety of an individual.
- Any repairs or treatments, other than routine maintenance, made to the Property to remediate environmental hazards such as asbestos, radon, lead-based paint, urea-formaldehyde, or mold.
If yes, attach any certificates or other documentation identifying the extent of the remediation (for example, certificate of mold remediation or other remediation).
- Any rainwater harvesting system located on the Property that is larger than 500 gallons and that uses a public water supply as an auxiliary water source.
- The Property is located in a propane gas system service area owned by a propane distribution system retailer.
- Any portion of the Property that is located in a groundwater conservation district or a subsidence district.

If the answer to any of the items in Section 8 is yes, explain (attach additional sheets if necessary):

(Q2) Hoa maintains front yard lawn service, internet / direct tv, fitness center, community pools, biking and hiking trails, splash pad, parks, community pools, clubhouse with activities

Section 9. Within the last 4 years, have you (Seller) received any written inspection reports from persons who regularly provide inspections and who are either licensed as inspectors or otherwise permitted by law to perform inspections? yes no If yes, attach copies and complete the following:

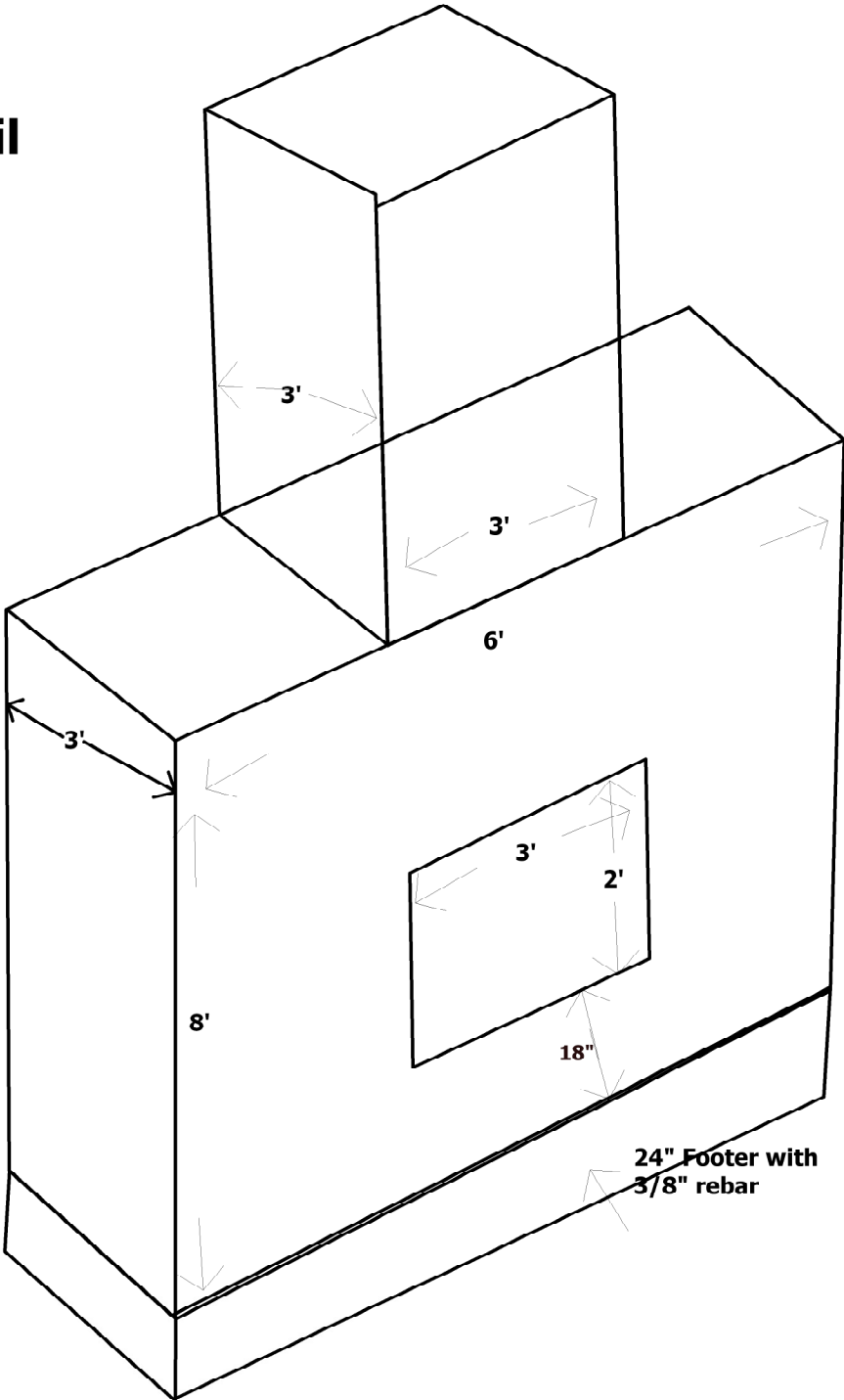
Inspection Date	Type	Name of Inspector	No. of Pages

Note: A buyer should not rely on the above-cited reports as a reflection of the current condition of the Property. A buyer should obtain inspections from inspectors chosen by the buyer.

Section 10. Check any tax exemption(s) which you (Seller) currently claim for the Property:



Fireplace detail



Ensin Family
1708 Eagles Ridge Ct.
Argyle, TX
Cell (469)387-5500
enslin.family@gmail.com

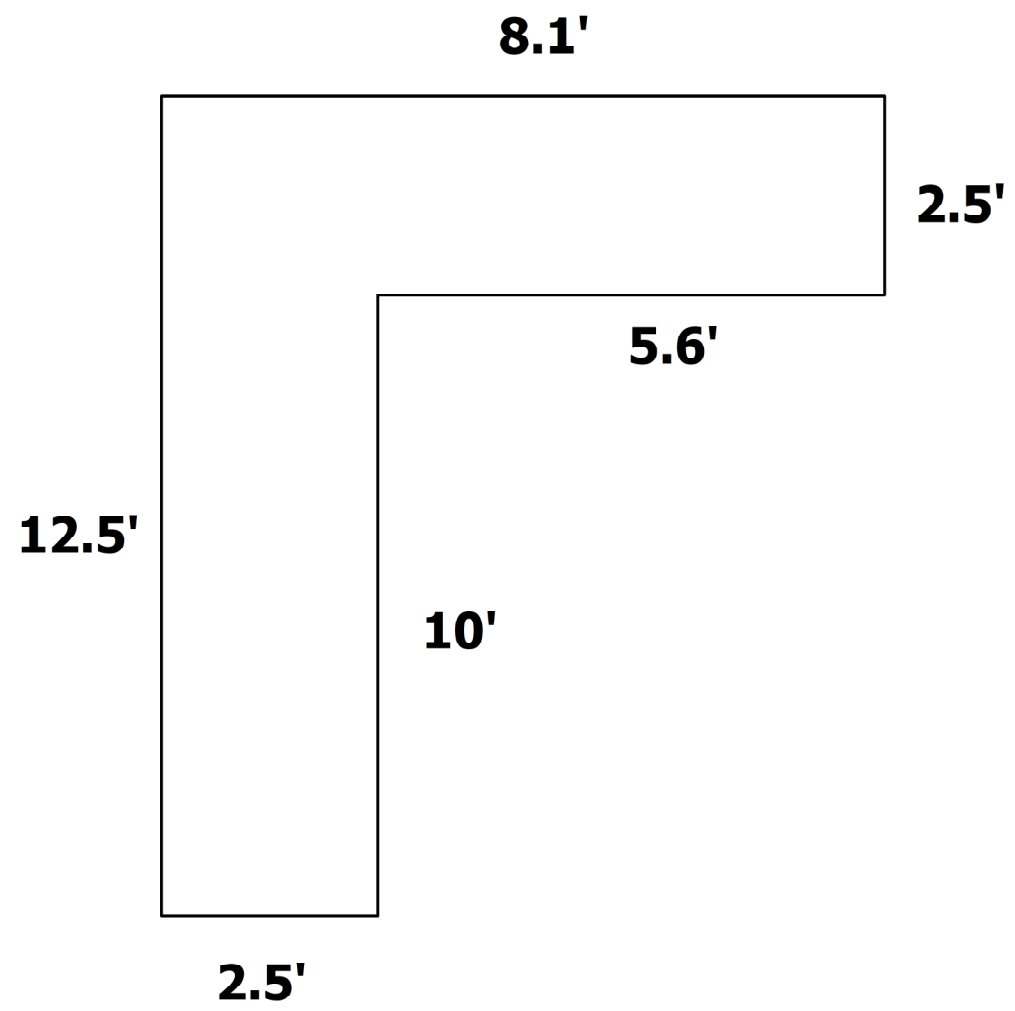
JETT AQUATICS, INC.

4710 Keller Hicks Rd.
Fort Worth, TX 76244
Ethan Guhl
ethan@jettpools.com
Cell: 817-372-2771

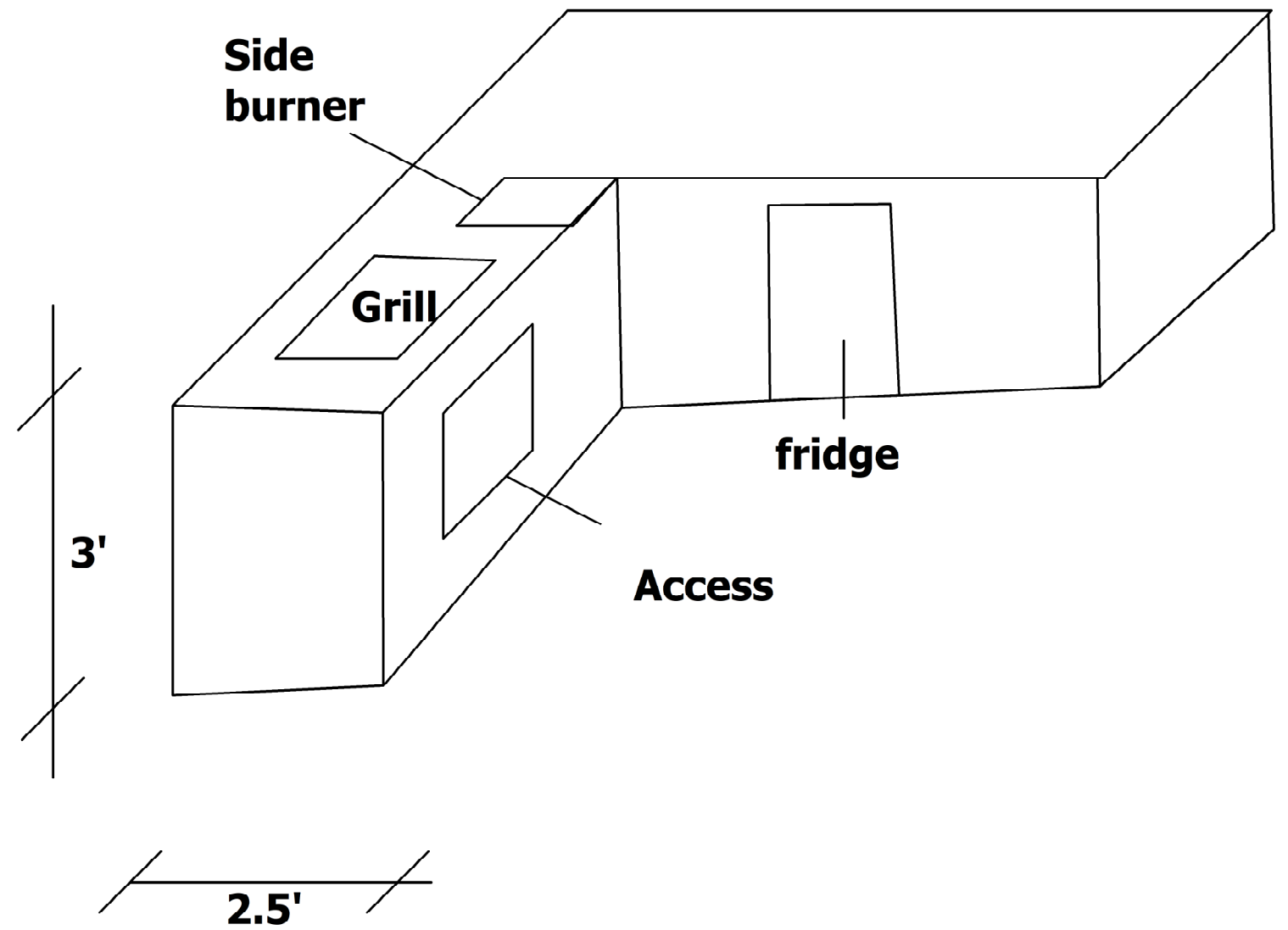


Enslin Kitchen detail

Front View

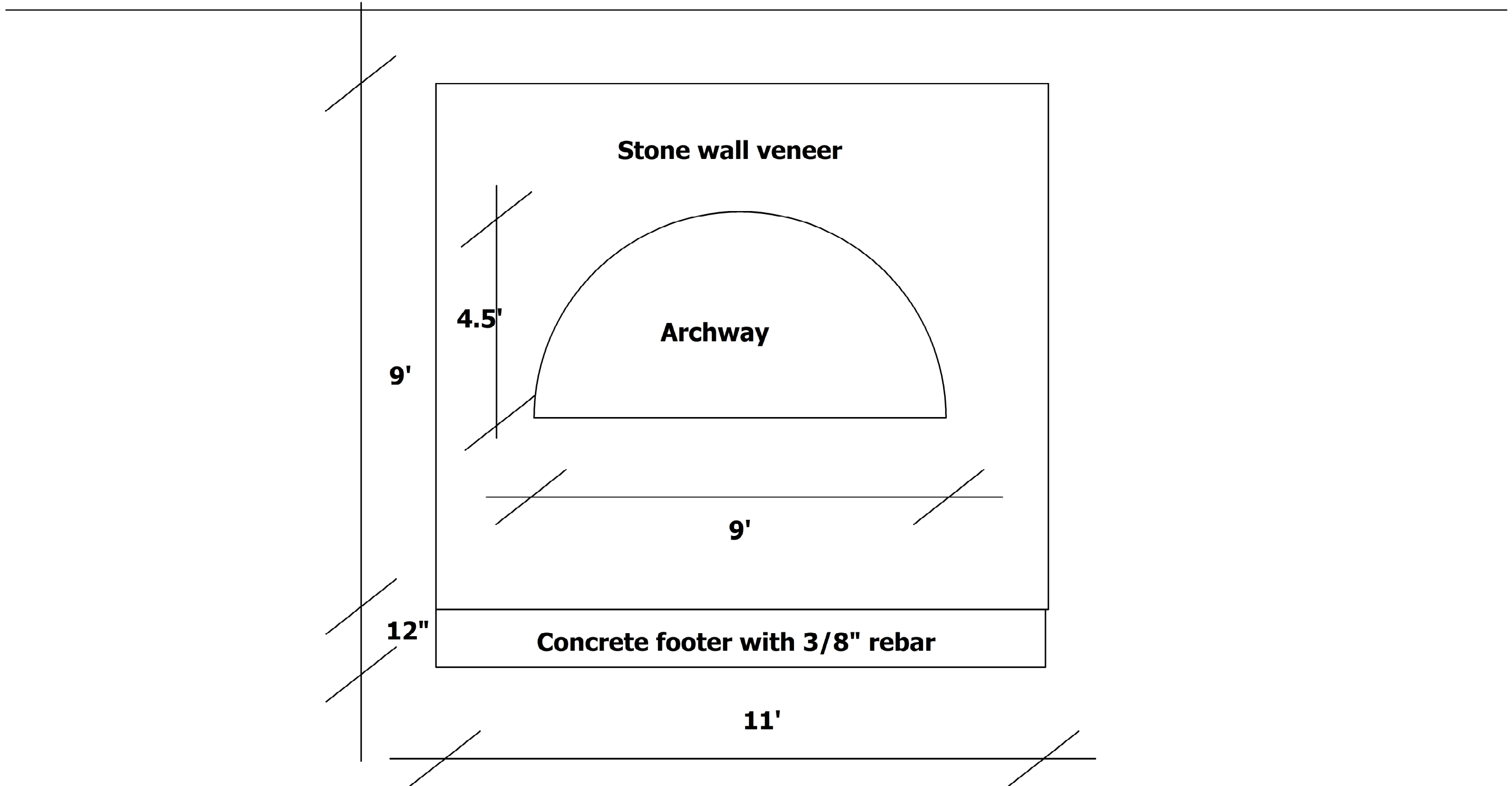


Overhead View



Enslin Wall detail

Front View



Enslin Pool (PSE # 22-0414-N2)

6 messages

Joseph Roberts <joseph@pseglobal.com>
To: Christine Enslin <enslin.family@gmail.com>
Cc: Torie Cassell <torie@pseglobal.com>

Wed, Dec 4, 2024 at 1:49 PM

Christine:

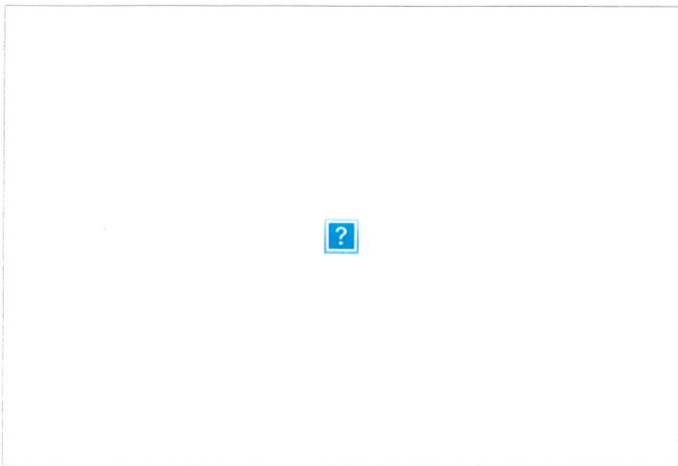
Based upon my site visit from today, December 4, 2024, I have prepared the following summary:

1. The pool was approximately 1.5 inches out-of-level on December 4, 2024.
2. The pool was approximately 2.2 inches out-of-level on July 5, 2022.
3. It was communicated to Paragon during the site visit that repairs to the plaster were performed after our site visit on July 5, 2022. The distress along the wall of the tanning ledge, as well as along the southern portion of the west perimeter of the swim basin appear to be causally related to additional movement of the pool after the aforementioned repairs were performed.
4. Due to the magnitude and nature of the cracks, PSE recommends a leak test of the pool shell (i.e. dye testing) be performed to verify whether the cracks in proximity to the southern portion of the tanning ledge are leaking. We have worked with American Leak Detection before to perform such tests; however, it should be noted that Paragon does not endorse any specific testing company, and any company that performs such tests would be acceptable.
5. Paragon recommends an additional relative elevation survey be performed in 4 to 6 months to determine if the pool exhibits further differential movement.

If there are any further questions at this time, please don't hesitate to contact me.

Sincerely,

Joseph Roberts



To share files with me, please click this [link](#).

Christine Enslin <enslin.family@gmail.com>

Wed, Dec 4, 2024 at 2:36 PM

To: Jeremy Clark <jeremy@jett pools.com>, Ethan Guhl <ethan@jett pools.com>

Here is the site report from today. Temps in 50's and it was raining today.

Christine and Mark
[Quoted text hidden]

Joseph Roberts <joseph@pseglobal.com>

Fri, Jun 13, 2025 at 10:29 AM

To: Christine Enslin <enslin.family@gmail.com>

Cc: Torie Cassell <torie@pseglobal.com>

Christine:

I am responding to my email from December 4, 2024, in order to keep all notes in one place.

Based upon our site visit on May 21, 2025:

1. The pool was approximately 1.7 inches out-of-level on May 21, 2025
 - a. The pool was approximately 1.5 inches out-of-level on December 4, 2024.
 - b. The pool was approximately 2.2 inches out-of-level on July 5, 2022.
2. Based upon the above measurements, it appears that the pool has reached a certain amount of equilibration considering the levelness variance was only two-tenths of an inch different on May 21, 2025 from December 4, 2024.
3. As we enter a dry season, the pool may exhibit additional levelness variance and Paragon recommends that one additional relative elevation survey be performed at the end of the dry season (September/October) to determine how it performs through a dry season and verify that the pool has indeed reached an apparent state of equilibration.
4. As previously mentioned in the email below, due to the magnitude and nature of the cracks, Paragon recommends a leak test of the pool shell (i.e. dye testing) be performed, particularly to verify whether the cracks in proximity to the southern portion of the tanning ledge are leaking. We have worked with American Leak Detection before to perform such tests; however, it should be noted that Paragon does not endorse any specific testing company, and any company that performs such tests may be acceptable.
 - a. It should be noted that Paragon recommends a full leak test be performed of the pool shell to determine if any additional cracks in the pool shell besides the primary cracks of concern are present and leaking.
 - b. Please provide the results of the leak test to Paragon for review once complete.

If there are any questions, please don't hesitate to contact me.

Sincerely,

Joseph Roberts

Christine:

I am responding to my email from June 13, 2025, in order to keep all notes in one place.

Based upon our site visits on November 12 and November 15, 2025:

1. Henley Johnston and Associates, Inc. (HJA) performed a subsurface investigation in late 2024 to evaluate the chemical injection operations that were performed at the residence. Based upon the results of the investigation by HJA, post-construction movements were estimated to be on the order of 1 inch.
2. Pool Elevation Variance Summary:
 - a. The pool was approximately 1.6 inches out-of-level on November 15, 2025.
 - b. The pool was approximately 1.7 inches out-of-level on May 21, 2025
 - c. The pool was approximately 1.5 inches out-of-level on December 4, 2024.
 - d. The pool was approximately 2.2 inches out-of-level on July 5, 2022. Note: This survey was performed prior to repairs and chemical injection that occurred later in 2022.
3. Based upon a comparison of the surveys from December 4, 2024 to November 15, 2025, the maximum change in relative elevation was 0.3 inches during the 11 to 12 month time period. Considering that the measurement tolerance of the equipment is plus or minus 0.1 inches, we typically consider differences of 0.3 inches or less from a comparison of two surveys to be negligible.
4. Based upon the above relative elevation survey measurements, in conjunction with the subsurface investigation by HJA, PSE is of the opinion that it would be reasonable to perform cosmetic remedial work at this time.
5. Since the time of our last site visit on May 21, 2025, a leak test (dye test) was reportedly performed and it was determined that the cracks in the pool shell were not leaking. At the time of our site visit on November 12, 2025, it was communicated to Paragon that there was an issue with the auto-fill. If it is determined that the pool is losing water which is causing the auto-fill to run more often, then it is recommended to perform an additional leak test (dye test) on the pool shell to verify whether the cracks in the pool are leaking at this time. If any leaks are found in the pool shell, please notify Paragon.
6. In order to mitigate potential future distress, it is recommended to provide a movement joint between the edge of the pool coping stone and the travertine tile of the pool deck. The movement joint may be comprised of a backer rod with an elastomeric sealant or may be a landscaping gap filled with artificial turf/gravel.
7. In order to repair the distress in the pool shell/tile/coping, it is recommended to remove the pool finished (coping, tile, plaster) at the locations where there are cracks in the shell (west perimeter near tanning ledge) in order to allow access to the pool shell to repair the cracks at this location. To repair cracks that exhibit an out-of-plane offset across the crack, it is anticipated the the pool shell above the location of the crack will need to be removed and re-constructed. It is recommended that any new portions of the pool shell be properly connected to the existing pool shell with steel reinforcement, doweled and epoxied, into the existing pool shell.

[Quoted text hidden]

12:40 pm

April 3

Advanced TAIN Medical
New patient appt. Friday 1:30 pm.
New office visit Be there at 1pm
New patient paperwork.

To share files with me, please click this [link](#).

Med Flo Transportation

From: Joseph Roberts
Sent: Wednesday, December 4, 2024 1:50 PM
To: Christine Enslin <enslin.family@gmail.com>
Cc: Torie Cassell <torie@pseglobal.com>
Subject: Enslin Pool (PSE # 22-0414-N2)

pick up

500 W. Main St Suite 230
Lewisville, TX 75057

Christine:

[Quoted text hidden]

Christine Enslin <enslin.family@gmail.com>
To: Joseph Roberts <joseph@pseglobal.com>

Wed, Jul 2, 2025 at 8:17 AM

We had a leak dye test completed. There are no leaks at the tanning ledge.
[Quoted text hidden]

Joseph Roberts <joseph@pseglobal.com>
To: Christine Enslin <enslin.family@gmail.com>
Cc: Torie Cassell <torie@pseglobal.com>

Thu, Jul 3, 2025 at 6:17 AM
lobby on

Christine:

Diane Smith
BLEN

Thanks for this update. Do you have a leak test report that you could provide to us for our file?

The recommendation to perform a survey at the end of dry season is not changed.

Please let me know if you have any questions at this time.

[Quoted text hidden]

Mark and Christine Enslin

[Quoted text hidden]

26931G - 7108 Eagles Ridge Court 11.21.24.pdf

Fri, Nov 22, 2024 at 3:03 PM

Joseph Roberts <joseph@pseglobal.com>
To: Christine Enslin <enslin.family@gmail.com>
Cc: Torie Cassell <torie@pseglobal.com>

Christine:

As discussed, based upon a review of the provided letter by Henley Johnston and Associates, Inc. (HJA) dated November 21, 2024, the soil underlying the subject pool exhibited estimated post-construction movements on the order of 1-inch, which is generally considered to be acceptable. As a result, PSE is of the opinion that no additional chemical injection is warranted at this time. It should be noted that some of the apparent reported movement that occurred after the injection was performed could be causally related to the injection process itself due to the fact that water is utilized to deliver the chemical into the soil.

PSE recommends that the pool be monitored by performing relative elevations surveys every 3 to 4 months in order to determine the amount of seasonal movement that the pool undergoes as well as to verify that the pool has/will stabilize. After the pool is verified to be stable, then PSE recommends cosmetic repairs be performed at that time.

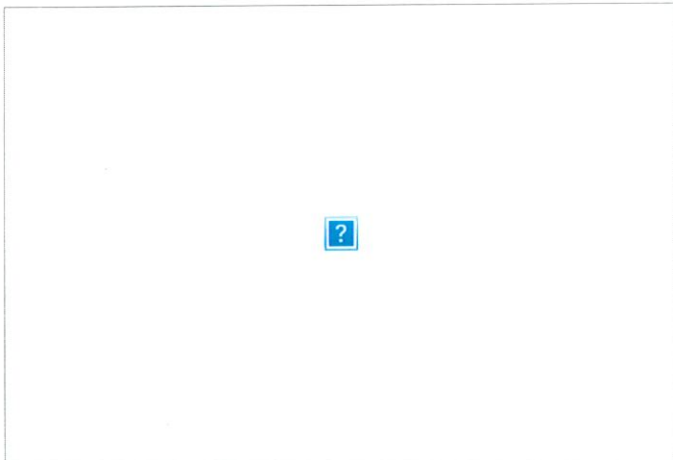
If it is determined that the pool continues to move beyond that which is expected based upon the relative elevation surveys or based upon your own visual observations of distress, then PSE will provide additional recommendations as deemed necessary (i.e. leak tests, etc.).

PSE will be in touch to provide availability to perform a site visit for the first relative elevation survey as part of the monitoring process.

If there are any questions in the meantime, please don't hesitate to contact us.

Sincerely,

Joseph Roberts



To share files with me, please click this [link](#).

Injection Check for 7108 Eagles Ridge Court

10 messages

Hunter Hamilton <hhamilton@hja-eng.com>

Thu, Nov 21, 2024 at 3:43 PM

To: Christine Enslin <enslin.family@gmail.com>, Torie Cassell <torie@pseglobal.com>

Cc: Douglas Greenwood <dgreenwood@hja-eng.com>, Joseph Roberts <joseph@pseglobal.com>

All,

Good afternoon! Attached is the requested letter for the above referenced project.

We appreciate the opportunity to provide this letter for you. If you have any questions or concerns, please feel free to contact me. Thank you!

Sincerely,

Hunter Hamilton, E.I.T. | Staff Engineer

Henley-Johnston & Associates, Inc.

[235 Morgan Avenue Dallas, Texas 75203](#)

[Office: 214-941-3808](#) | [Cell: 325-450-0137](#)

hhamilton@hja-eng.com | www.hja-eng.com

Long Logo



26931G - 7108 Eagles Ridge Court 11.21.24.pdf

Christine Enslin <enslin.family@gmail.com>

Thu, Nov 21, 2024 at 4:07 PM

To: Torie Cassell <torie@pseglobal.com>

Here is the soil report the company provided for us.

[Quoted text hidden]

26931G - 7108 Eagles Ridge Court 11.21.24.pdf

Christine Enslin <enslin.family@gmail.com>

Thu, Nov 21, 2024 at 4:08 PM

To: Ethan Guhl <ethan@jettpools.com>

Here is the soil report for the area next to our pool.

PSE recommends that the pool be monitored by performing relative elevations surveys every 3 to 4 months in order to determine the amount of seasonal movement that the pool undergoes as well as to verify that the pool has/will stabilize. After the pool is verified to be stable, then PSE recommends cosmetic repairs be performed at that time.

If it is determined that the pool continues to move beyond that which is expected based upon the relative elevation surveys or based upon your own visual observations of distress, then PSE will provide additional recommendations as deemed necessary (i.e. leak tests, etc.).

PSE will be in touch to provide availability to perform a site visit for the first relative elevation survey as part of the monitoring process.

If there are any questions in the meantime, please don't hesitate to contact us.

Sincerely,

Joseph Roberts

<image002.jpg>

To share files with me, please click this [link](#).

From: Hunter Hamilton <hhamilton@hja-eng.com>
Sent: Thursday, November 21, 2024 3:43 PM
To: Christine Enslin <enslin.family@gmail.com>; Torie Cassell <torie@pseglobal.com>
Cc: Douglas Greenwood <dgreenwood@hja-eng.com>; Joseph Roberts <joseph@pseglobal.com>
Subject: [EXTERNAL]Injection Check for 7108 Eagles Ridge Court

All,

Good afternoon! Attached is the requested letter for the above referenced project.

We appreciate the opportunity to provide this letter for you. If you have any questions or concerns, please feel free to contact me. Thank you!

Sincerely,

Hunter Hamilton, E.I.T. | Staff Engineer

Henley-Johnston & Associates, Inc.

[235 Morgan Avenue Dallas, Texas 75203](#)

[Quoted text hidden]

Christine Enslin <enslin.family@gmail.com>

Fri, Nov 22, 2024 at 3:21PM

To: Ethan Guhl <ethan@jettpools.com>, Jeremy Clark <jeremy@jettpools.com>

Info from the engineer.

[Quoted text hidden]

Ethan Guhl <ethan@jettpools.com>

Sat, Nov 23, 2024 at 4:07AM

To: Christine Enslin <enslin.family@gmail.com>

Good morning Christine,

I'd like to come over with my transit and take elevation measurements. Let's discuss the next steps in repairing the pool when you have time. As I stated before, I hate to see you or me spend money repeatedly on this issue. I will help you get this resolved, but neither of us should waste time or money without knowing the underlying cause.

I read this report and I hope they are correct. Let me know when I can come over to get started so we can create a plan to move forward.

Thanks,

Ethan Guhl

Owner

Jett Aquatics, Inc

Custom Pools and Outdoor Living

[4710 Keller Hicks Rd.](#)

[Fort Worth, TX 76244](#)

Cell 817-372-2771

On Nov 22, 2024, at 3:21PM, Christine Enslin <enslin.family@gmail.com> wrote:

Info from the engineer.

----- Forwarded message -----

From: **Joseph Roberts** <joseph@pseglobal.com>

Date: Fri, Nov 22, 2024 at 3:03PM

Subject: RE: [EXTERNAL]Injection Check for 7108 Eagles Ridge Court

To: Christine Enslin <enslin.family@gmail.com>

CC: Torie Cassell <torie@pseglobal.com>

Christine:

As discussed, based upon a review of the provided letter by Henley Johnston and Associates, Inc. (HJA) dated November 21, 2024, the soil underlying the subject pool exhibited estimated post-construction movements on the order of 1-inch, which is generally considered to be acceptable. As a result, PSE is of the opinion that no additional chemical injection is warranted at this time. It should be noted that some of the apparent reported movement that occurred after the injection was performed could be causally related to the injection process itself due to the fact that water is utilized to deliver the chemical into the soil.



[Quoted text hidden]

Christine Enslin <enslin.family@gmail.com>
To: Torie Cassell <torie@pseglobal.com>
Cc: Joseph Roberts <joseph@pseglobal.com>

Mon, Nov 25, 2024 at 4:39 PM

Yes, please proceed.
[Quoted text hidden]

Torie Cassell <torie@pseglobal.com>
To: Christine Enslin <enslin.family@gmail.com>
Cc: Joseph Roberts <joseph@pseglobal.com>

Tue, Nov 26, 2024 at 11:35 AM

Okay, great. We have you scheduled for next Wednesday, December 4th around 12 PM.

Thanks!

Torie



[Quoted text hidden]

Office: 214-941-3808 | Cell: 325-450-0137

hhamilton@hja-eng.com | www.hja-eng.com

<image003.jpg>

Christine Enslin <enslin.family@gmail.com>
To: Ethan Guhl <ethan@jettpools.com>

Sat, Nov 23, 2024 at 8:08 AM

Anytime this coming week is fine.

Mark and I both agree about waiting and I will have the engineer company come out every 4 months to check levels. He recommends to do that for several seasons to get an idea of how the soil is moving. He did recommend maybe doing a leak test.

I did notice the tiles by the tanning ledge are showing part of the structure of the pool.

Thank you for all of your help
[Quoted text hidden]

Torie Cassell <torie@pseglobal.com>
To: Joseph Roberts <joseph@pseglobal.com>, Christine Enslin <enslin.family@gmail.com>

Mon, Nov 25, 2024 at 2:28 PM

Hi Christine,

We estimate approximately \$1,200-\$1,800 for the follow up site visit, analysis and verbal consultation. We currently can schedule for next Wednesday, December 4th around 12 PM.

Please let me know if you would like to proceed.

Thank you,

Torie



LIMITED SITE INVESTIGATION

Enslin Residence
7108 Eagles Ridge Ct.
Argyle, Texas 76226
PSE Project Number: 22-0414-N1



Prepared for:

Mark and Christine Enslin
7108 Eagles Ridge Ct.
Argyle, Texas 76226

August 1, 2022



August 1, 2022

PSE Project Number: 22-0414-N1

Mark and Christine Enslin
7108 Eagles Ridge Ct.
Argyle, Texas 76226

Attn: Mark and Christine Enslin

**Re: 7108 Eagles Ridge Ct.
Argyle, Texas 76226**

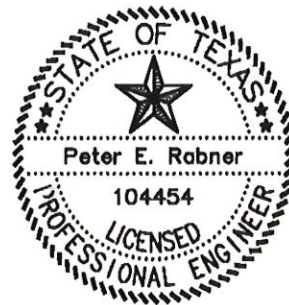
Dear Mr. and Mrs. Enslin:

In accordance with your authorization (refer to proposal 22-0414-P1, dated June 20, 2022), Paragon Structural Engineering Ltd. (PSE) performed a limited visual site investigation of the pool and pool deck at the residence located at 7108 Eagles Ridge Ct. in Argyle, Texas. We trust that the information provided herein is sufficient for your use. Please contact us if you need any additional information or if we can be of further service.

Sincerely,

A handwritten signature in black ink that reads "Peter Rabner".

Peter E. Rabner, M.S.C.E., P.E.
Senior Structural Engineer



The seal appearing on this document was authorized by Peter E. Rabner, P.E. 104454 on August 1, 2022.

PER/jpr

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EXECUTIVE SUMMARY

The purposes of this investigation, as outlined by the client, are to provide opinions regarding the current condition of the pool and adjacent pool deck, and to provide recommendations for remedial measures, if applicable. This scope of work was accomplished by Paragon Structural Engineering, Ltd. (PSE) conducting an informal interview with the homeowner, performing visual observations of the pool and adjacent pool deck surfaces, performing a relative elevations survey of the pool coping, recording measurements of the water level relative to the pool coping, and analyzing the collected information.

Based upon our observations and analysis, PSE has developed the following opinions regarding the pool structure and adjacent deck at the referenced address:

1. PSE is of the opinion that the pool at the referenced address has likely experienced upward differential movement (i.e. heave) along the eastern portion of the pool structure due to moisture-induced expansion of the supporting soils such that the pool has tilted/rotated toward the house.
2. PSE is of the opinion that the pool currently serves its intended function; however, to minimize the risk of additional movement, PSE recommends that chemical injection of the supporting soil beneath the pool can be performed in an attempt to stabilize the soil and mitigate future movement of the structure. PSE recommends that the extents of chemical injection include the entire plan area of the pool. PSE is of the opinion that the chemical injection process should mitigate the potential for future heave by limiting the ability of the expansive soils to absorb additional moisture. The chemical injection should be performed in accordance with specifications established by a geotechnical engineer, and post-injection testing should be performed to verify that the remaining potential vertical movement of the supporting soil has been reduced to the specified magnitude.
3. PSE is of the opinion that the soil-related differential movement of the pool is causally related to distress observed in the paver pool deck located adjacent to the west perimeter of the pool.
4. PSE is of the opinion that an expansion/movement joint should be installed between the coping and the deck pavers along the west perimeter of the pool. The pavers should be cut back, and the joint filled with backer rod and a flexible sealant. In addition, PSE recommends cosmetic repairs to the coping and pool tile along the west perimeter of the pool.

- Pool construction was completed in December 2021.
- Soil in the pool excavation was wet during construction.
- Cracked water line tiles and coping were noted at the southeast corner of the tanning area in March 2022. The pool builder repaired the distressed items.
- Buckling/diselevation of the pool deck pavers were noted west of the tanning area in mid-April 2022. The pool builder repaired the pavers.
- The homeowner reported that there are no known water leaks.

III. SITE INVESTIGATION

On July 5, 2022, Mr. Peter Rabner, M.S.C.E., P.E. of PSE, performed a site visit to visually observe the condition of the in-ground swimming pool. At the time of PSE's site visit, the pool was filled with water.

Vegetation

During the site visit, PSE photographically documented minimal vegetation/landscaping near the pool as evidenced in Appendix 1. It was noted that much of the backyard was covered with artificial turf.

Grading and Drainage

During the site visit, PSE photographically documented the observed surficial drainage grades adjacent to the pool structure as evidenced in Appendix 1. In addition, PSE recorded the locations of the surface deck drains. Based upon our observations, the topography of the subject site indicated general drainage away from the pool.

Distress

During the site visit, PSE photographically documented typical distress observed in the adjacent pool deck area as evidenced in Appendix 1. Several items were noted that typically indicate movement of the pool structure and/or pool deck has occurred, which include but are not limited to the following:

- Cracked coping along the west perimeter (refer to Photographs 28, 38, and 39 in Appendix 1).

LIMITED SITE INVESTIGATION

I. PURPOSE

The purposes of this investigation, as outlined by the client, are to provide opinions regarding the current condition of the pool and adjacent pool deck and to provide recommendations for remedial measures, if applicable. This scope of work was accomplished by Paragon Structural Engineering, Ltd. (PSE) conducting an informal interview with the homeowner, performing visual observations of the pool and adjacent pool deck surfaces, performing a relative elevations survey of the pool coping, recording measurements of the water level relative to the pool coping, and analyzing the collected information.

Unless otherwise noted, this report was not prepared for use in real estate transactions. It was prepared for the scope of work outlined by the client as indicated above. Unless authorized by the client, any and all usage or reliance upon this report by parties other than the client is expressly prohibited. For the purposes of this report, *distress* is defined as any cracks, separations, rotations, and/or deterioration which may be indicative of foundation-related movement, and it does not necessarily imply failure or negative consequences. For the purposes of this report, *repair* may refer to any remedial action taken to alter the appearance of distress in an attempt to return the distress to its original state, regardless of workmanship, and it is not meant to categorize the nature of the action as either permanent or structural. This investigation is not necessarily an exhaustive documentation of all the distress/repair items in the pool and adjacent deck areas, and it should be used as a means for evaluation only.

II. PROJECT INFORMATION

According to information obtained from the Denton Central Appraisal District, the house at the referenced address was built circa 2021 and the in-ground swimming pool was constructed in the yard area on the east side of the house circa 2021. The front of the house faces west-northwest; however, for the purposes of this report, PSE will assume that it faces west. All subsequent directional descriptions will be based upon this assumed cardinal orientation.

Owner Interview

Following our site visit on July 5, 2022, PSE conducted an informal interview with the homeowner, Mrs. Christine Enslin. The purpose of the interview was to obtain a firsthand report of the condition and history of the pool as reported by the homeowner. Mrs. Enslin provided the following information:

Based upon the water surface measurements, PSE is of the opinion that most of the levelness variance is attributed to post-construction foundation movement rather than the original construction of the pool.

IV. METHOD OF ANALYSIS

The United States Department of Agriculture (USDA) publishes soil data for industrial, agricultural, and engineering uses. According to the USDA soil survey website, the subject residence appears to be situated on Navo clay loam, 3 to 5 percent slopes. The published plasticity index (PI) for the Navo clay loam ranges from 11 to 45 percent. The PI is defined as the difference between the liquid limit and the plastic limit during which the soil is in a semi-solid state. This information is provided for general assessment of the expansive nature of the soils likely existing at the subject site, and it should not be construed as site-specific soils testing.

As documented by Fredlund and Rahardjo (1993), as well as Lytton (1994), the volume of a soil can increase with the addition of moisture, and conversely, the volume of a soil can decrease with the withdrawal of moisture. A relationship between the PI and the inherent swelling capacity of a soil was documented by Terzaghi, Peck, and Mesri (1996), which is provided in Table 4.0 (on the following page).

Table 4.0: Approximate Relation Between PI and Inherent Swelling Capacity

PI	Inherent Swelling Capacity
0 – 10	Low
10 – 20	Medium
20 – 35	High
35 and greater	Very High

Based upon the USDA's published PI range, the shrink-swell potential for the subject property is classified as medium to very high. Thus, the soils likely existing at the subject property have the ability to change volume with changes in moisture content. The depth in a soil to which periodic changes of moisture occur is commonly referred to as the active zone (Das 2004).

PSE is of the opinion that the pool structure and adjacent paver pool deck are likely supported within the active zone; therefore, they are susceptible to heave and settlement resulting from increases and decreases in the moisture content of the supporting soil. PSE is of the opinion that some differential movements of ground-supported structures are to be expected, as the intent of a ground-supported structure is to limit, not eliminate, differential movement.

- Diselevation at deck pavers along the west perimeter of the tanning area (refer to Photographs 29-31, and 33 in Appendix 1).
- Separation between coping stones at the southeast corner of the tanning area (refer to Photographs 34-36 in Appendix 1).
- Cracked pool shell at the southeast corner of the tanning area (refer to Photograph 40 in Appendix 1).

Relative Elevation Survey

At the time of our site visit on July 5, 2022, PSE performed a relative elevation survey of the coping around the perimeter of the pool. A Zip Level Pro-2000 was used to perform the survey. According to the equipment manufacturer, the elevation measuring instrument has a tolerance of ± 0.1 inch over a range of 200 feet. This survey is relative in nature in the sense that it is not referenced to a permanent benchmark. Adjustments for built-in elevation changes (i.e. step-ups/downs) were made for this relative elevation survey.

It is important to note that structures are not constructed perfectly level; therefore, the elevation survey will reflect these built-in variances in addition to any net post-construction movements of the structure. The highest relative elevation of the coping was surveyed near the north end along the east perimeter of the pool. The lowest relative elevations of the coping were surveyed along the west perimeter of the tanning ledge of the pool. The relative elevations indicate that the coping along the east perimeter are relatively level, with relative elevations ranging from -0.4 inches to 0.0 inches along the east perimeter of the pool. In addition, the relative elevations indicate that the coping along the west perimeter are relatively level, with relative elevations ranging from -1.5 inches to -2.2 inches along the west perimeter of the pool. In general, the pool exhibits higher elevations along the east perimeter and lower elevations along the west perimeter with a total levelness variance on the order of approximately 2.2 inches.

Water Surface Measurements

At the time of our site visit on July 5, 2022, PSE measured the distance from the water surface to the top of the pool coping at various locations around the perimeter of the pool. PSE measured a distance of approximately 6-1/2 inches between the water surface and the top of the pool coping near the northeast corner of the pool. PSE measured a distance of approximately 4-1/4 inches between the water surface and the top of the pool coping at the southwest corner of tanning area. These measurements indicate a levelness variance of approximately 2-1/4 inches across the pool.

PSE is of the opinion that the pool structure is performing its intended function; however, to minimize the risk of additional movement, PSE recommends that chemical injection of the supporting soil beneath the pool can be performed in an attempt to stabilize the soil and mitigate future movement of the structure. PSE recommends that the extents of chemical injection include the entire plan area of the pool. PSE is of the opinion that the chemical injection process should mitigate the potential for future heave by limiting the ability of the expansive soils to absorb additional moisture. The chemical injection should be performed in accordance with specifications established by a geotechnical engineer, and post-injection testing should be performed to verify that the remaining potential vertical movement of the supporting soil has been reduced to the specified magnitude. Additionally, as with any structure, PSE recommends to monitor the pool for continuing movement and to contact PSE if any new and/or worsening distress is noted.

Paver Pool Deck

At the time of our site visit on July 5, 2022, PSE observed the presence of separations and cracks at the coping along the west perimeter of the pool (refer to Photographs 28, 34-36, 38, and 39 in Appendix 1). In addition, PSE observed the presence of diselevation at the paver pool deck at the west perimeter (refer to Photographs 29-31, 33 and in Appendix 1). Further, PSE observed crushing of the pavers along the west perimeter of the pool (refer to Photographs 46 and 47 in Appendix 1).

Along the west perimeter of the pool, most of the pool deck pavers abut the flower beds along the east perimeter of the residence. The pool deck pavers along the tanning area abut the foundation of the residence. As previously discussed, PSE is of the opinion that the pool has tilted/rotated toward the subject residence. It appears that as the pool tilted/rotated toward the residence, the coping exerted a compressive force on the deck pavers, compressing the pavers. Since most of the pavers abut flower beds, the movement of the pavers can be absorbed by the flower beds; however, at the tanning area, the pavers abut the foundation and are restrained with no way to absorb the movement. This causes the diselevation, crushing, and separations noted along the west perimeter of the subject pool.

PSE is of the opinion that an expansion joint should be installed between the coping and the deck pavers along the west perimeter of the pool. The pavers should be cut back, and the joint filled with backer rod and a flexible sealant. In addition, PSE recommends cosmetic repairs to the coping and pool tile along the west perimeter of the pool. As with any structure, PSE recommends to monitor the paver pool deck for continuing movement and to contact PSE if any new and/or worsening distress is noted.

Many variables can affect ground-supported structures resulting in differential movement, such as:

- Moisture influences (i.e. rainfall, irrigation, subsurface water, and effects of vegetation)
- Subgrade characteristics (i.e. fill soils, geotechnical properties, etc.)
- Foundation design (i.e. type of foundation and engineering design or lack thereof)
- Construction (i.e. original construction elevations and quality of the construction)
- Site conditions (i.e. drainage grades, large slopes or elevation changes, earth retaining structures, and previous foundation remedial work)
- Plumbing leaks

It should be noted that soil movement itself does not necessarily cause distress. Differential movement typically causes distress to ground-supported structures.

V. DISTRESS CAUSATION

Pool

At the time of our site visit on July 5, 2022, PSE visually observed that the reveal of the wall tile at the waterline was not uniform along the perimeter of the pool, which appeared to indicate that the northeast portion of the pool is relatively higher than the southwest portion of the pool. As a result, PSE is of the opinion that the pool at the referenced address has likely experienced upward differential movement (i.e. heave) along the eastern portion of the pool structure due to moisture-induced expansion of the supporting soils such that the pool has tilted/rotated toward the house. It should be noted that the east portion of the pool is bordered by landscaping nearby, whereas the remainder of the pool is bordered by the deck pavers. Based upon our visual observations and the relative elevation survey, it appears that the pool is globally heaving along the east perimeter and has tilted/rotated toward the west.

When a building pad is prepared for construction of a structure, often, remedial measures are implemented to the soils to minimize the potential of soil movement. The remedial measures typically extend beyond the footprint of the structure and into the surrounding soils, stabilizing them as well. Based upon the uniform rotation of the pool toward the house, PSE is of the opinion that the west portion of the pool may have been constructed partially over stabilized soils while the eastern portion may have been constructed over non-remediated soils. When non-stabilized soils are exposed during construction of a pool, additional moisture introduced into the bearing soils can allow for heave.

specifications established by a geotechnical engineer, and post-injection testing should be performed to verify that the remaining potential vertical movement of the supporting soil has been reduced to the specified magnitude.

Based upon our observations, PSE recommends that an expansion joint be installed between the coping and the deck pavers along the west perimeter of the pool. The pavers should be cut back, and the joint filled with backer rod and a flexible sealant. In addition, PSE recommends cosmetic repairs to the coping and pool tile along the west perimeter of the pool.

VI. CONCLUSIONS

Based upon our observations and analysis, PSE has developed the following opinions regarding the pool structure and adjacent deck at the referenced address:

1. PSE is of the opinion that the pool at the referenced address has likely experienced upward differential movement (i.e. heave) along the eastern portion of the pool structure due to moisture-induced expansion of the supporting soils such that the pool has tilted/rotated toward the house.
2. PSE is of the opinion that the pool currently serves its intended function; however, to minimize the risk of additional movement, PSE recommends that chemical injection of the supporting soil beneath the pool can be performed in an attempt to stabilize the soil and mitigate future movement of the structure. PSE recommends that the extents of chemical injection include the entire plan area of the pool. PSE is of the opinion that the chemical injection process should mitigate the potential for future heave by limiting the ability of the expansive soils to absorb additional moisture. The chemical injection should be performed in accordance with specifications established by a geotechnical engineer, and post-injection testing should be performed to verify that the remaining potential vertical movement of the supporting soil has been reduced to the specified magnitude.
3. PSE is of the opinion that the soil-related differential movement of the pool is causally related to distress observed in the paver pool deck located adjacent to the west perimeter of the pool.
4. PSE recommends that an expansion/movement joint be installed between the coping and the deck pavers along the west perimeter of the pool. The pavers should be cut back, and the joint filled with backer rod and a flexible sealant. In addition, PSE recommends cosmetic repairs to the coping and pool tile along the west perimeter of the pool.

VII. RECOMMENDATIONS

Based upon our observations, PSE is of the opinion that the pool currently serves its intended function, however, to minimize the risk of additional movement, PSE recommends that chemical injection of the supporting soil beneath the pool can be performed in an attempt to stabilize the soil and mitigate future movement of the structure. PSE recommends that the extents of chemical injection include the entire plan area of the pool. PSE is of the opinion that the chemical injection process should mitigate the potential for future heave by limiting the ability of the expansive soils to absorb additional moisture. The chemical injection should be performed in accordance with

IX. LIMITATIONS

This investigation was limited in scope to the pool and adjacent deck only, and as such, it did not include any other structures on the property (i.e. house, retaining walls, etc.). This investigation was non-destructive in nature, and it did not include removing any coverings unless specifically noted. Any portion of the structure that was inaccessible at the time of the investigation was not inspected. Any notes regarding site grading and drainage are based on visual observations only. No surveying was completed unless specifically noted. This investigation is not to be considered as an overall site grading and drainage assessment or correction plan unless specifically noted.

This report is based upon information provided by the client and/or others, visual observations, and a relative elevation survey. Changes to any of the supplied/received information may affect the analysis. If there are any changes, please contact PSE so the analysis may be adjusted accordingly.

The professional services that form the basis for this investigation and report have been performed using that degree of care and skill ordinarily exercised by reputable engineers practicing in the same locality. No other warranty, expressed or implied, is made as to the professional advice and opinions set forth. This report should not be construed as a warranty policy or any kind of property warranty. If a warranty policy is desired, it should be purchased at additional cost from an independent insurance carrier.

PSE is not responsible for the design and is not the engineer of record for any corrective measures at the site. The recommendations provided should only be considered as a general action plan for evaluation purposes only, and they are not intended to be a complete set of plans and specifications suitable for construction.

There is no way to predict the future performance of a ground-supported structures due to variables such as, but not limited to: moisture influences, subgrade characteristics, design, construction, and site conditions. While the recommendations herein are intended to reduce the risk of further movement and resulting distress to the pool structure and adjacent deck, it is unreasonable to expect that such risk can be eliminated. Based upon the shrink/swell potential of the soils at this site, PSE is of the opinion that additional soil-related movement and resultant distress may occur and that continued maintenance is to be expected.

The results, conclusions, and recommendations contained in this report are directed at and intended to be utilized within the scope of work contained in this report. This report is not intended to be used for any other purposes. PSE makes no claim or representation concerning any activity or condition falling outside the specified purposes which this report is directed, said purposes being specifically limited to the scope of work as defined herein.

VIII. REFERENCES

The basis of the opinions formed in the investigation may also be predicated on the following references:

- American Concrete Institute (2001). Control of Cracking in Concrete Structures Reported by ACI Committee 224.
- Appraisal District Website for Denton County, Texas.
- Biddle, P.G. (1998). Tree Root Damage to Buildings, Volume 1: Causes, Diagnosis and Remedy and Volume 2: Patterns of Soil Drying in Proximity to Trees on Clay Soils. Willowmead Publishing, Wantage, England.
- Bryant, J.T., Nistala, S., Morris, D.V., Sweeney, S.P., Gehrig, M.D., (2006). The Zone/Area of Influence Concept in Design and Forensic Engineering and Geosciences. Texas ASCE Proceedings, Fall 2006, San Antonio, Texas.
- Buckley, Ernest L., P.E., Ph.D., "Loss and Damage on Residential Slab-on-Ground Foundations", Construction Research Center, University of Texas at Arlington, March 12, 1974, 24 pages.
- Das, Braja M, Principles of Foundation Engineering Fifth Edition, Brooks/Cole, California, 2004, 743 pages.
- Das, Braja M, Principles of Geotechnical Engineering, PWS Publishing Company, Boston, 1998, 712 pages.
- Fredlund, D.G. and Rahardjo, H. (1993). Soil Mechanics for Unsaturated Soils. John Wiley, NY, NY 517 pages.
- Google, Inc., "Google Earth, Version 5.0 (software)."
- Lytton, R.L. (1994). Prediction of Movement in Expansive Clays. Vertical and Horizontal Deformation of Foundations and Embankments, Geotechnical Special Publication No. 40, Yeung, A.T. and Felio, G.Y., ed., ASCE New York, Vol 2. pp 1827-1845.
- The National Drought Mitigation Center, U.S. Drought Monitor.
- NOAA, NWS Website for Climatology.
- Phillips, H.F., Pierry, R.F. and Bryant, J.T. (2004). Reliability Based Soil Structure Foundation Interaction Evaluation Approach. Proceedings ASCE Spring 2004 Meeting Texas Section American Society of Civil Engineers.
- Terzaghi, Peck & Mesri. Soil Mechanics in Engineering Practice, John Wiley & Sons, New York, 1996, 549 pages.
- United States Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey.

APPENDIX 1

OBSERVATION PHOTOGRAPHS AND DESCRIPTIONS

Photographs taken July 5, 2022



1. General view of pool facing north.



2. General view of south perimeter.



3. General view of west perimeter.



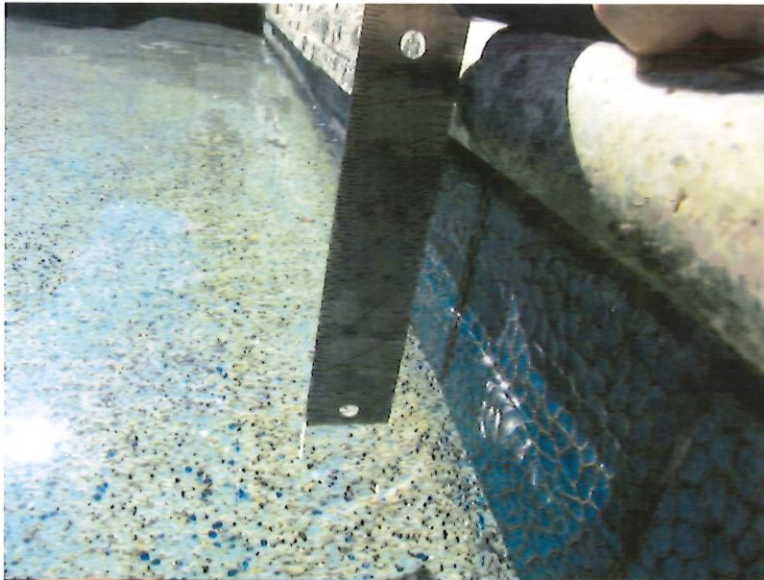
4. General view of north perimeter.



5. General view of east perimeter.



6. Water level at southwest corner of pool measures 4.5" below top of coping.



7. Water level at west side of fireplace measures 5-1/16" below top of coping.



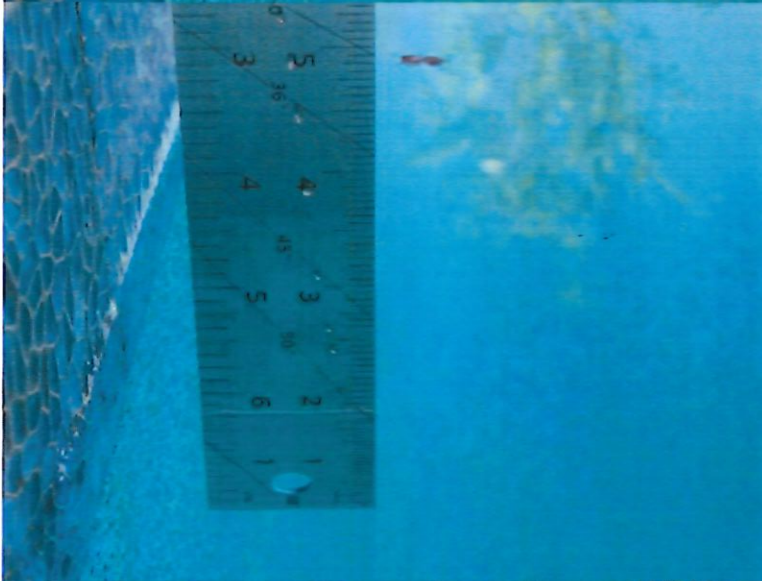
8. Water level at east side of fireplace measures 5-3/4" below top of coping.



9. Water level at southeast corner measures 6" below top of coping.



10. Water level at quarter point from south perimeter, east side, measures 6-1/8" below top of coping.



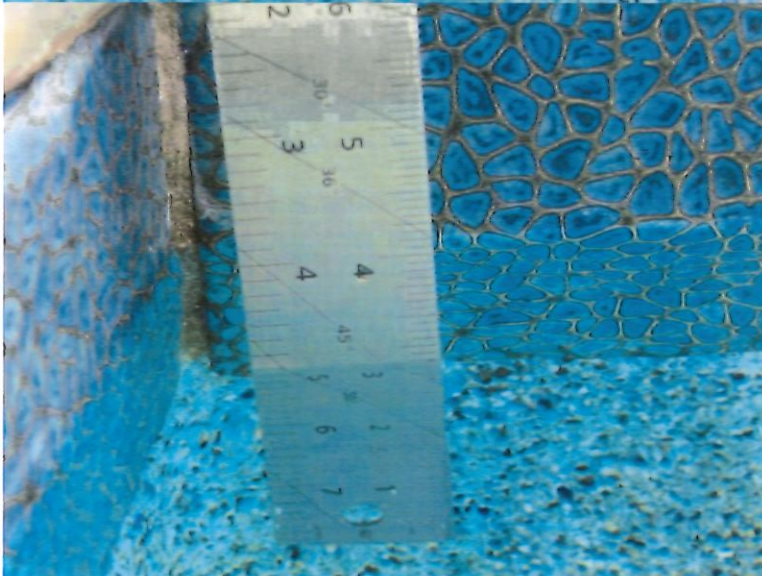
11. Water level at midpoint along east elevation measures 6-1/4" below top of coping.



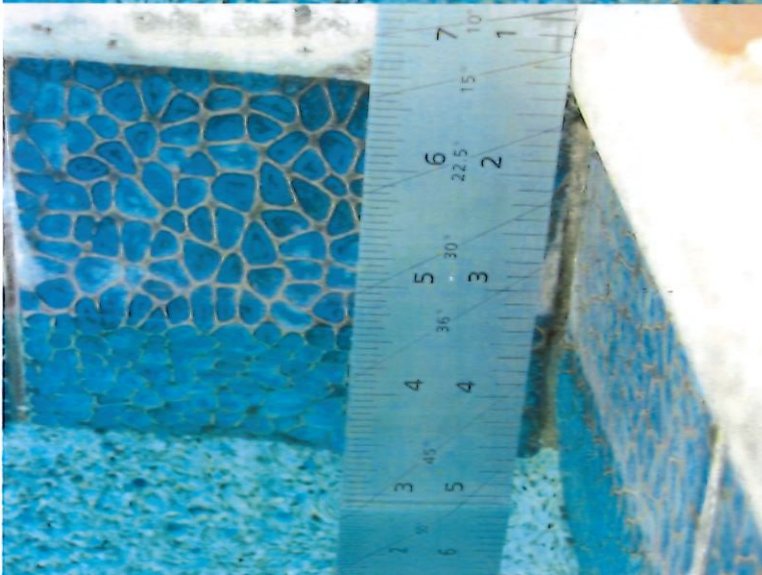
12. Water level at northeast corner measures 6-1/2" below top of coping.



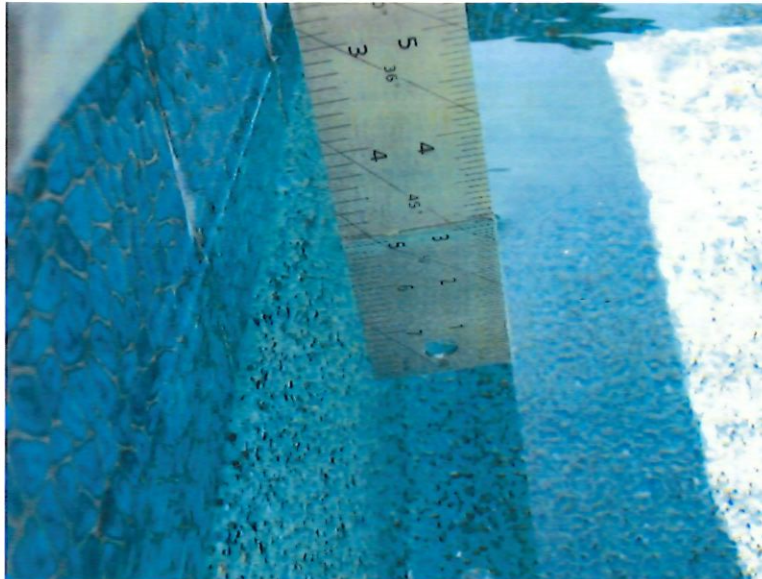
13. Water level at pool at east side of spa at northeast corner measures 6-1/2" below top of coping.



14. Water level at southeast corner of spa measures 4-7/8" below top of coping.



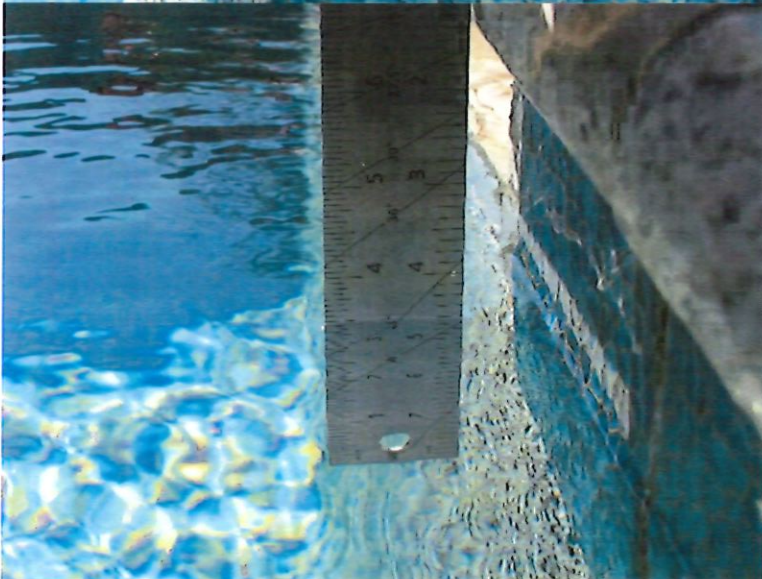
15. Water level at northeast corner of spa measures 5" below top of coping.



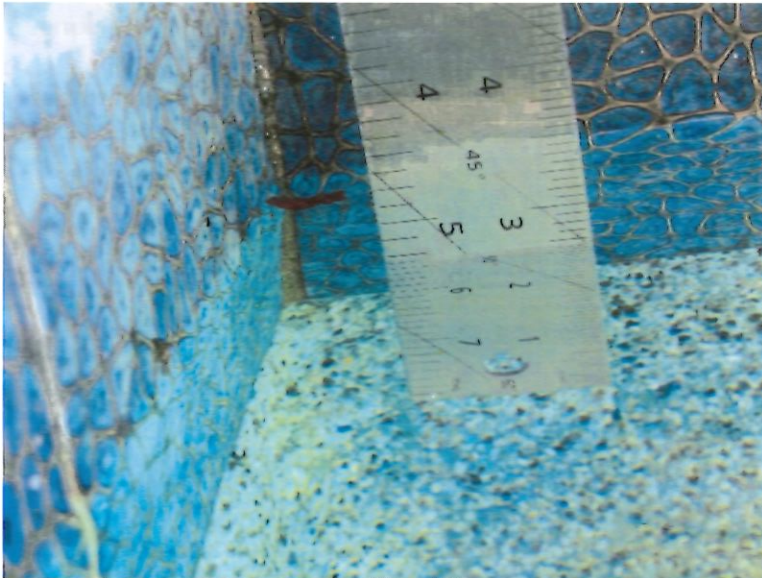
16. Water level at midpoint along northern perimeter of spa measures 4-7/8" below top of coping.



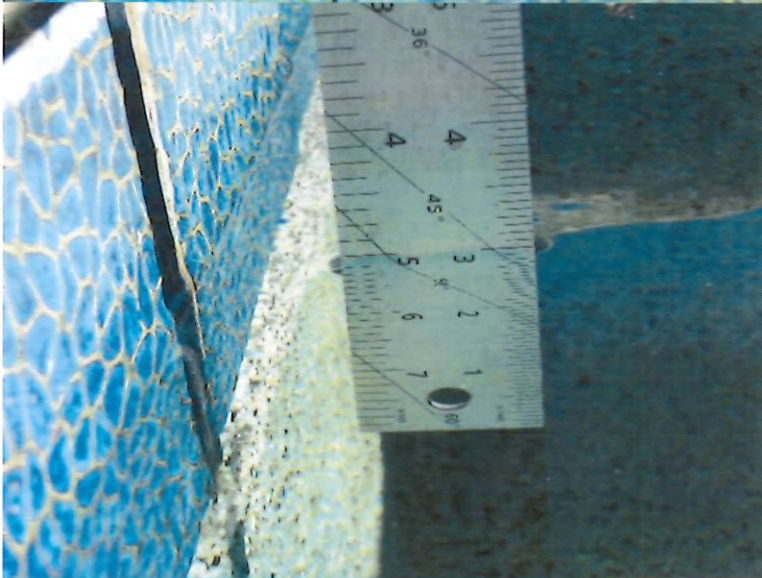
17. Water level at northwest corner of spa measures 4-5/8" below top of coping.



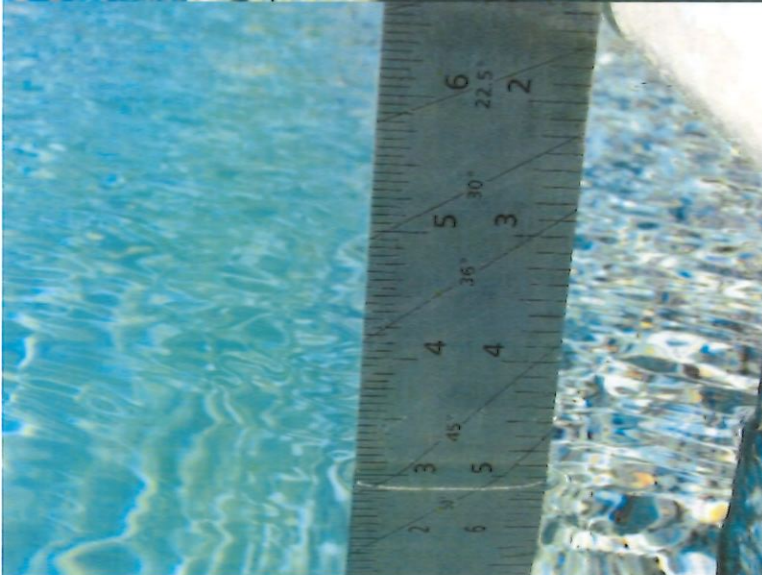
18. Water level at southwest corner of spa measures 4-1/2" below top of coping.



19. Water level at west side of spa at pool measures 5-1/4" below top of coping.



20. Water level at northwest corner measures 5" below top of coping.



21. Water level at northeast corner of tanning ledge measures 4-7/8" below top of coping.



28. Cracked coping tile at same location from prior photograph.



29. Diselevation at paver along west side of tanning area.



30. Diselevation at paver along west side of tanning area.

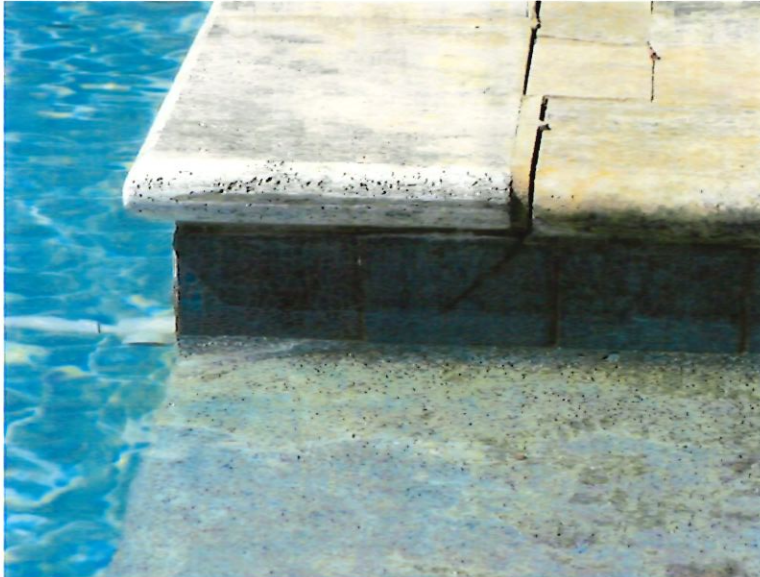


31. General view of prior photograph.



32. View of surface drain.

33. Diselevation of paver along west side of tanning ledge.



34. Cracked mortar and tile at southeast corner of tanning area.



35. Close-up view of prior photograph.



36. Top view of prior photograph.



37. Opposite side of corner of prior photograph.



38. Cracked coping ledge at southwest corner of pool.



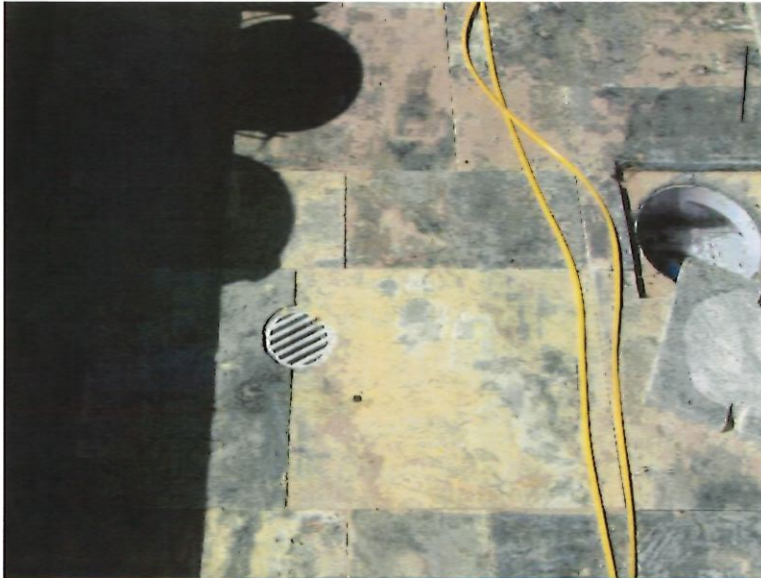
39. Cracked coping ledge at southwest corner of pool.



40. Crack in pool shell at southeast corner of tanning area.

41. Replaced pool tiles at southwest corner.

42. Replaced pool tiles at southwest corner.



43. Replace pavers at drain and skimmer at northeast corner of pool.



44. Southwest perimeter of pool where water line tiles have been replaced.



45. Southwest perimeter of pool where water line tiles have been replaced.



46. Southwest perimeter of pool where water line tiles have been replaced.



47. Southwest perimeter of pool where water line tiles have been replaced.



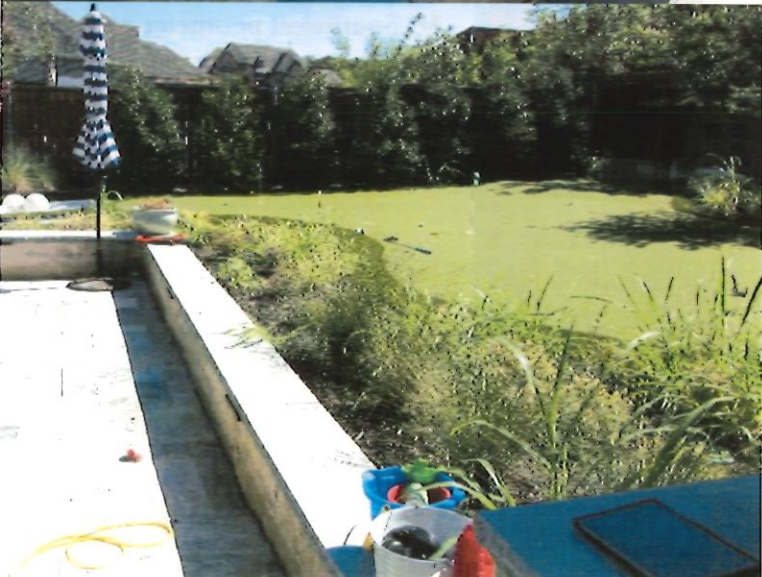
48. Southwest perimeter of pool where water line tiles have been replaced.



49. Southwest perimeter of pool where water line tiles have been replaced.



50. Southeast corner of yard landscaping.



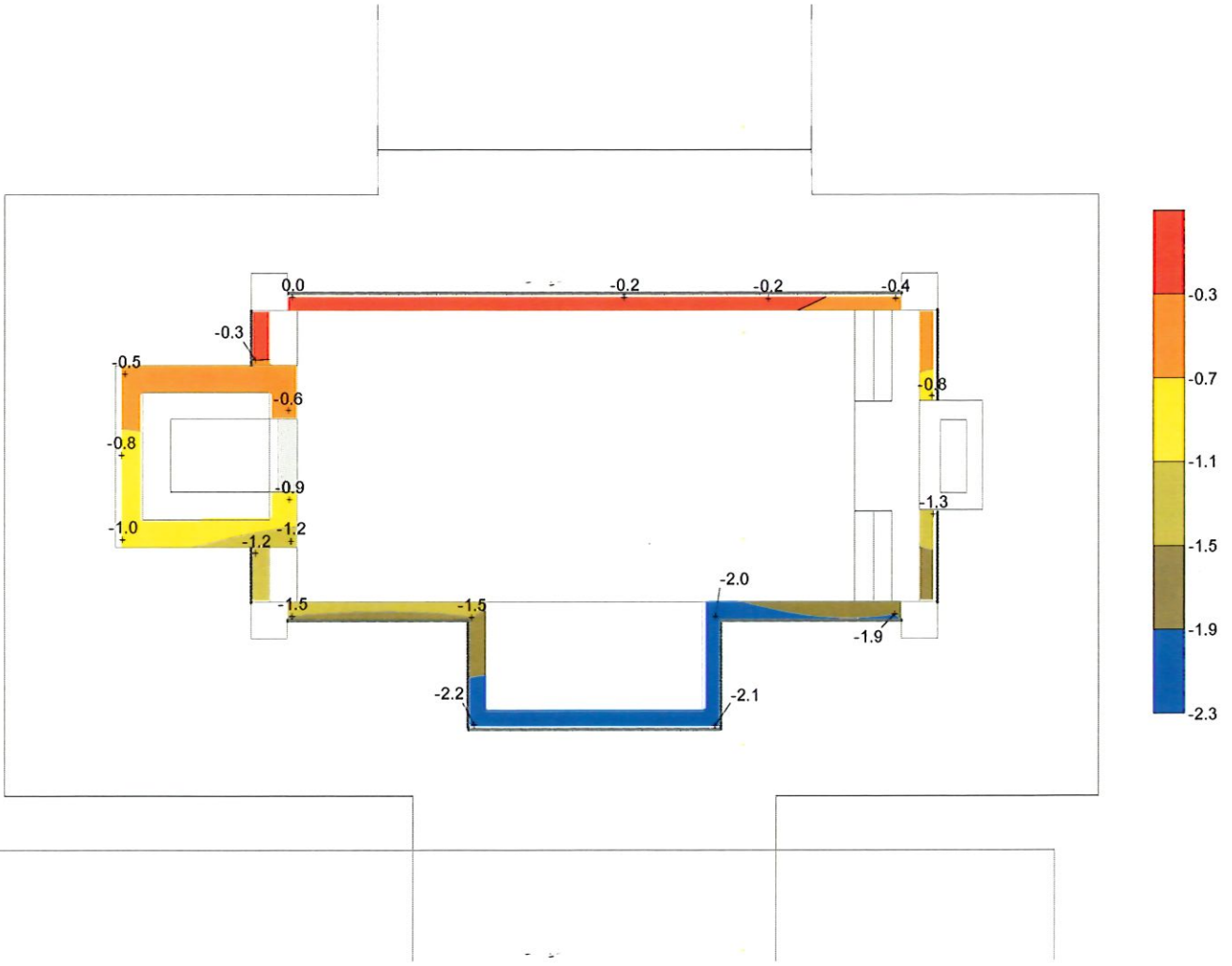
51. Northeast corner of yard landscaping.

APPENDIX 2
RELATIVE ELEVATION SURVEY

Performed July 5, 2022



52. Mortar separation at northwest column of gazebo.



Notes:

1. Relative elevation interpolated by the Kriging gridding method.
2. Elevation locations are approximate.
3. Elevation measurement tolerance is +/- 0.1" over 200 feet.



8404 International Parkway T 469.892.7520
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 TX Firm Registration No. F-2163

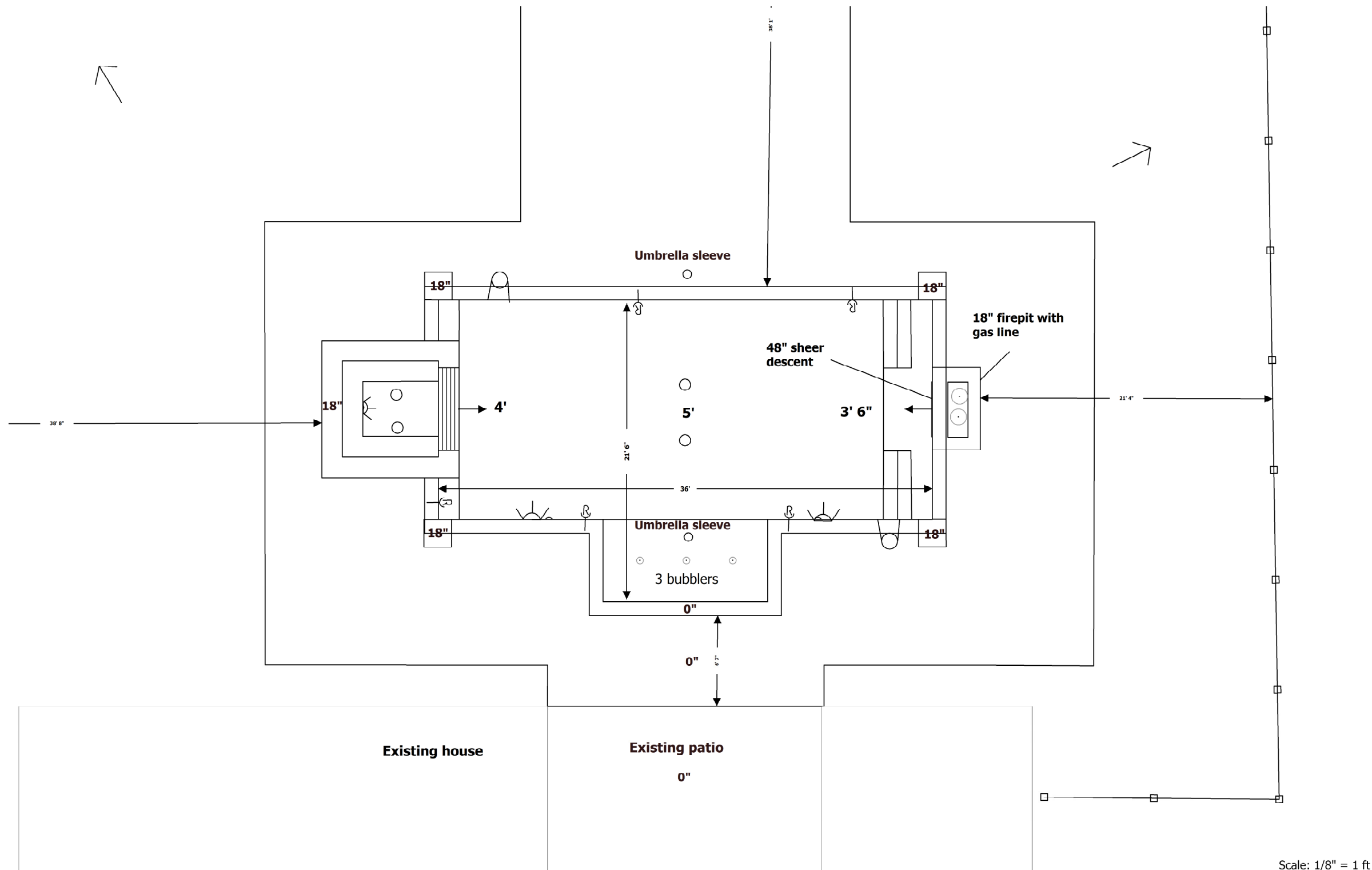
ENSLIN RESIDENCE

7108 EAGLES RANGE COURT
 ARGYLE, TEXAS 76226

SHEET TITLE:
 RELATIVE ELEVATION
 SURVEY

OBSERVATION DATE: 07-05-2022 SCALE: NONE

PROJECT NUMBER: 22-0414-N1 SHEET S-1



JETT AQUATICS, INC.

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Christine Enslin
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Argyle, TX 76226
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Canyon Falls - Village 8
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Scale: 1/8" = 1 ft

Pool Specs		Equipment Specs		Decking specs			Dig TESS: 2084940189
Size: 21'6"x36"	Area: 632	Pump: Jandy 2.0 Epump		1687 sq. ft. 2 color rock stamp			
Gallons: 19,750	Perimeter: 119	Filter: Jandy 580 cartridge		Water Features			
Skimmers: 2	Returns: 5	Controls: IAqualink - 8 function P/S		48" Sheer decent			
Depths: 3.5 x 5 x 4		Cleaner: Polaris 280 - Black Max					
Coping: Travertine		Sanitizer: Fusion chlorine / UV		Spa	Spillway: Stacked	Veneer: TBD	
Plaster: Esparza Peerless		Lights: 2 LED		Area: 38	Raised: 18"	Blower: 2.0 HP	
Excavation: Bobcat		Booster Pump: 80 GPM		Perimeter: 22	Jets: 6	Lights: 1 LED	
Concrete Removal:		Extras:					