

November 10, 2025

Nellie Slayden, University of Texas, Austin, B.S. Petroleum Engineering, EIT
Adversely Impacted Neighbor

1744 Channel Road, Austin, Texas 78746
[REDACTED]

5 [REDACTED]

The Honorable Members of the Board of Adjustment
City of Austin, Texas
P.O. Box 1088
Austin, Texas 78767

Re: Opposition to Variance Requests for 1750 & 1752 Channel Road; Case Nos.
C15-2025-0026 & 0027

Dear Madam Chair and Honorable Board Members:

I am a Petroleum Engineer (**B.S. Petroleum Engineering, University of Texas at Austin**) and professionally trained in the analytical methods used to determine dredge volumes. (See Section VII for details.) These are standard engineering techniques used across petroleum, civil, and architectural engineering disciplines. Because these calculations are fundamental to engineering design, my education and experience directly qualify me to evaluate dredge-volume analyses and identify when they deviate from accepted engineering standards or employ misleading assumptions.

I. VOLUNTARY RELINQUISHMENT OF GRANDFATHERED RIGHTS AND ARBITRARY RE-EXPANSION

Unlike upstream neighbors —also represented by Applicants' Agent— Applicants are voluntarily demolishing and relinquishing two **grandfathered** dock footprints. They now seek to **recapture and enlarge** those relinquished footprints by presenting **manipulated dredge data** to inflate calculated dredge volumes beyond the statutory 25 cubic-yard limit.

This is an attempt to make an **end-run around LDC § 25-2-1176**. We urge the Board to follow Board precedent that requires **credible engineering evidence** to determine the minimum lengths of the docks that respect the public's navigation safety. See, *e.g.*, the Board's precedent relying upon the Professional Engineering Analysis of Professional Engineer Janice Smith in Variance C15-2019-0047 and in Variance C15-2019-0010.

II. ADMISSIONS UNDERMINE CLAIMED HARDSHIP

Applicants concede that a dredge volume of 24 to 25 cubic yards **provides navigation safety** and eliminates any alleged hardship under **§ 30-5-652**:

“In most cases where the lake is shallow and a new boat dock is proposed, the allowable 25 cubic yards of dredge per LDC 25-2-1176(A)(1) is sufficient to allow navigational safety.”

— *Applicants’ Letter to the Board, Aug. 18, 2025* (Exhibit B).

This admission directly contradicts Applicants’ asserted hardship.

III. APPLICANTS FAIL TO CALCULATE MINIMUM DOCK LENGTHS CONSISTENT WITH 25 CUBIC-YARD DREDGE LIMIT AS REQUIRED FOR LDC 25-2-1176 VARIANCES

This Board has properly balanced competing interests before, and granted variances **when licensed professional engineers offered credible, trustworthy documentation** that the **dock length (greater than 30’)** is minimized to yield a dredge volume **just less than 25 cubic yards**. **This Board has endorsed 24 cubic yards of dredge to balance interests**. See *Variance C15-2017-0047, Professional Engineering Analysis & Variance C15-2019-0010, Professional Engineering Analysis*.

The Applicants’ docks are in a highly congested main body of Lake Austin, and LDC § 25-2-1174 requires all docks to be designed NOT to pose a public navigation hazard.

This Board has carefully scrutinized dredging and volume submissions in **LDC § 25-2-1176(A)(1)** variances. Dredging volumes are especially vulnerable to data and assumption manipulation, and the windfall for owners and their agents is tempting. Owners gain transferable rights to one of the most valuable surface areas of Texas at great expense to the public, the State, and conforming impacted neighbors.

The Applicants have not submitted **certified engineering analyses** determining the **minimum dock lengths** that yield respective **dredge volumes of just less than 25 cubic yards per § 30-5-652**. The Board has routinely demanded this critical due diligence in similar variances to guard against improper analyses or unconventional assumptions and methods. See *Variances C15-2017-0047 & C15-2019-0010*.

Accordingly, we urge the Board to follow its precedent of scrutiny and require Applicants to present **a professional engineer’s stamped analysis** demonstrating the **minimum necessary dock extensions** beyond 30’ that both (1) ensures navigation safety pursuant to LDC § 25-2-1174 and (2) keeps dredge volumes just below the **25 cubic yards limit** of § 30-5-652.

IV. APPLICANTS' SUBMISSIONS CONFIRM OVERSIZED DESIGNS AND TECHNICAL INCONSISTENCIES

Applicants' own presentations and asserted dredge volumes establish that their dock lengths are **oversized and arbitrary, even for an unsubstantiated arbitrary 4' depth demand**. Much shorter docks provide **both navigation safety and yields \approx 24 cubic yards** within the § 30-5-652 limit of 25 cubic yards:

- **1752 Channel using applicants' asserted dredge volumes:**
 - 30 ft dock = 42.18 cubic yards dredge volume
 - ? ft dock = 24 cubic yards dredge volume
 - 46 ft 1 in. dock = 3.25 cubic yards dredge volume

The appropriate 1752 dock length-- the "sweet spot"-- exists ***somewhere in between 30 ft and 46 ft 1 in.*** which yields \approx 24 cubic yards of dredge, within the § 30-5-652 limit of 25 cubic yards.

- **1750 Channel using applicants' asserted dredge volumes:**
 - 30 ft dock = 31.01 cubic yards of dredge volume
 - ? ft dock = 24 cubic yards of dredge volume
 - 37 ft dock = 12.04 cubic yards dredge volume

The appropriate 1750 dock length -- the "sweet spot" -- exists ***somewhere in between 30 ft and 37 ft***, which yields \approx 24 cubic yards of dredge, within the § 30-5-652 limit of 25 cubic yards.

Applicants have failed to provide the Board with a licensed engineer's analysis identifying the minimum dock lengths over 30 feet. Variances cannot be granted on this record.

V. MANIPULATED AND INCONSISTENT DATA

Applicants have now submitted multiple dredge volumes, each replete with inconsistencies, improper application of conventional engineering methods, unsupported assumptions, and manipulated data. These inconsistencies demonstrate their Agents' confusion, lack of technical engineering skills required for the task, or an intent to manipulate and/or confuse the Board.

In addition to omitting the due diligence step described above in Section III, Applicants' dredge volume "calculations" are fatally flawed with erroneous and unconventional analysis and misleading or unsubstantiated assumptions:

1. **Inflated 4' Minimum Depth - Note, dredge volume is directly proportional to depth.** Applicants' 4-foot minimum dredge depth is excessive and unreasonably increases dredge volumes and thus, dock lengths. A seemingly minor 6-inch depth variation balloons the Applicants' asserted dredge volumes.

This Board has *not* previously approved a 4-foot minimum dredge depth that increases the allowed dock length in this congested, high-speed thoroughfare area of Lake Austin. Applicants

offer no rationale for deviating from the Board's depth precedents to arbitrarily inflate dredge volumes.

2. **Inflated Minimum Depth Profiles.** Applicants initially assumed a uniform 4-foot dredge profile across the entire respective dock footprints—including non-navigable areas under walkways and between bulkheads and slip noses—artificially inflating their dredge volumes. Applicants have since revised their dredge profiles away from the bulkhead, but instead introduced a sharp vertical 3'-4' underwater dredge wall. Depending on the composition of the sedimentary accumulation, the wall will likely collapse under waves and the bank effect. This also evidences the lack of relevant engineering knowledge necessary for this technical analysis.

3. **One Profile Lakebed Contours.** Aqua Permits drafted the Contour on the Existing and Proposed Plans. Any Engineer applying the Average End Areas formula will average the two end areas of the lakebed to determine dredge volumes. While Applicants' calculations assume that the lakebed contour is uniform, Applicants only select and use one end area, a single discrete cross-section that is most likely selected to increase dredge volume instead of the average of the two ends. Following our submissions, Applicants have now changed the lakebed cross-sections for both docks. The contour plan provides all the information that a skilled **engineer needs to determine the two end areas and their averages.** See Applicants' *Dredge and Lakebed Profiles Compilation, 2025 (Exhibit D)*.

4. **Ever-Changing Profiles.** Applicants altered their lakebed profiles multiple times during this proceeding, each time increasing dredge volumes to support a contrived hardship. This practice is **inconsistent with engineering norms.** Applicants drafted the contour plan. Thus, they have access to the data they need to define and average **both** ends of a cross-section, instead of just one end. According to Board precedent, Applicants must employ a professional licensed engineer to apply the proper methods to calculate dredge volumes according to the conventional Average End Areas Methodology to determine minimum dock lengths.

VI. LACK OF PROFESSIONAL ENGINEERING CERTIFICATION

Applicants' Agents, Mr. Hawkins, Mr. Fichter, and Aqua Permits are **not licensed Professional Engineers** subject to independent regulatory oversight. It is abundantly clear that Applicants' Agents do not possess the skills or knowledge necessary for these types of calculations and analyses.

The Board has required a **stamped Professional Engineer's report** for variances involving dock extensions into navigable waters. See *Variances C15-2019-0047 and C15-2019-0010*. Any reliance on this Agent's unlicensed and unverified opinions would be inconsistent with the Board's precedent. The Agent's assertions regarding hardship, reasonableness, and adverse impact are based on bald, unsupported statements and manipulated and contradictory assumptions. The presentations must be summarily rejected as defective, untrustworthy, and unreliable.

VII. ENGINEERING QUALIFICATIONS TO EVALUATE DREDGE VOLUME

As a **Petroleum Engineer (B.S. Eng., Univ. of Texas Austin)**, I am professionally trained in the same analytical methods used to determine dredge volumes. My background includes calculating volumes of earth and fluid between mapped surfaces—procedures identical in principle to calculating how much lakebed material must be removed to achieve a safe navigational depth under a dock.

This process involves reading **depth-contour maps**, developing **cross-section profiles from these elevations or contours**, and applying **standard volumetric formulas**, including **average-end-areas methods** pertinent here. These are known engineering techniques used across petroleum, civil, and environmental engineering disciplines. In practical terms, the calculation is the same whether estimating the cubic yards of dredge in a boat slip or the volume of a subsurface pay (e.g., rock, shale, or sediment hydrocarbon reservoirs). Both require interpreting contour data to calculate depths and volumes.

Because these calculations are fundamental to engineering design and construction, my education and experience directly qualify me to evaluate dredge-volume analyses and identify when they deviate from accepted engineering standards or employ misleading assumptions.

VIII. CONCLUSION AND REQUEST

For the foregoing reasons, I request the Board:

1. **Reject** Applicants' dredge-volume calculations and hardship allegations based thereon for failing to meet the Board's precedent and requirements for a Sealed or Stamped Professional Engineering Analysis calculating the minimum dock length required to yield just less than 25 cubic yards of dredge material in compliance with the § 30-5-652 dredge limit of less than 25 cubic yards. *See Board precedent: Variances C15-2019-0047 & C15-2019-0010.*
2. **Deny** the variance requests for 1750 and 1752 Channel Road.
3. **Advise Applicants to submit Stamped Professional Engineer Analyses** demonstrating the minimum dock lengths (the "sweet spots") required to yield just less than 25 cubic yards of dredge material for each dock in any future **LDC 25-2-1176(A)(1) Variance Requests for these Properties.**

Respectfully submitted,



Nellie Slayden, Univ. of Texas at Austin, B.S. Petroleum Engineering, EIT
Adversely Impacted Neighbor