Addendum A

Validation of the Original Analysis Using Newly Available GDOT Traffic Data

The Fiscal Side of the Ledger
Frederica Road / Sea Island Road Intersection Analysis

Purpose

Since publication of The Fiscal Side of the Ledger, additional official traffic count data has become available from the Georgia Department of Transportation (GDOT). Additional public records have also been reviewed, and multiple Open Records Requests (ORRs) have been submitted seeking documentation related to the 2021 intersection study.

This addendum validates the original analysis against that newly available information by addressing three questions below.

Question 1 – Validation of the Growth Assumption

> Short answer: the original 2.4%/year growth estimate holds up. It's on the high side of what GDOT's actual counts show, but it's within the range they measured, not contradicted by it. Growth looked flat over the most recent full year, but a quick check of early-2026 numbers shows it picking back up.

The Details

Newly available GDOT continuous traffic count data provides an opportunity to compare the original 2.4% annual growth assumption with actual measured traffic volumes.

Measurement Period	Measured CAGR
2015–2024	1.77%
2015–2019	1.07%
2019–2024	2.34%
2021–2024	2.57%
2023–2024	-0.31%

Validation Finding #1: The 2.4% annual growth assumption used in the original white paper falls within the range of measured CAGR values (1.07%–2.57%) and is not contradicted by the newly available GDOT data. It sits at the higher end of that range, however, and the most recent measured year (2023–2024) shows growth that is flat to slightly negative (-0.31%) — the first count-based signal that the corridor's growth rate may be decelerating. The assumption is reasonable as an upper-bound planning figure over a 20-year horizon, but should not be read as confirmed at that rate for the full projection period.

Interim 2026 Indicator

A same-month, day-for-day comparison (July 1–30, both years, same station) shows the 2023–2024 slowdown has not continued: July 2026 volume ran approximately 1.08% above July 2025 (288,762 vs. 285,673 total vehicles over the identical 30-day window). This is a partial-year, informal indicator — not an official annualized AADT figure, and not directly comparable to the CAGR values above — but it suggests renewed growth at a pace closer to the pre-COVID long-run average (1.07%/yr) than to the higher post-COVID recovery rate (2.57%/yr) or the 2.4%/yr planning assumption itself.

Question 2 – Comparison with the Public SEI Record

> Short answer: the county's engineers did study an upgraded traffic signal with added turn lanes, as originally promised — that study wasn't withheld or skipped. It was sitting in a report that was excluded. SEI concluded that even with the upgrade, the signal would still back up badly during the evening rush.

The Details

The publicly available 2021 SEI presentation can now be compared against the official GDOT traffic record, SEI's own subsequent June 2022 Traffic Data Report, and the documents obtained through the Open Records Request process.

Topic	Public SEI Record	Current Record
Traffic Growth	Growth not expected to increase significantly	GDOT measured 1.07%–2.57% growth across periods; most recent year (2023–2024) flat to slightly negative (-0.31%)
Task 2 (Enhanced Signal Alternative)	Enhanced signal identified in scope of work	Modeled in SEI's June 23, 2022 Traffic Data Report (Table 15/16): dual left-turn lanes, protected phasing, and channelized rights on Sea Island Road; still operates at LOS F overall (84 sec) and LOS F on the eastbound approach (207 sec) in the 2041 weekday PM design year
Public Documentation	Presentation available (October 19, 2021)	Full technical analysis located in SEI's June 23, 2022 Traffic Data Report, obtained via prior ORR response; Glynn County Public Works confirmed by written correspondence that no SEI documentation exists beyond the traffic studies already delivered.

Validation Finding #2: The enhanced signal-with-turn-lanes alternative identified in SEI's original Task 2 scope of work was in fact modeled, not omitted. SEI's June 23, 2022 Traffic Data Report analyzes a modified signal — dual left-turn lanes on the Sea Island Road eastbound approach, protected-only left phasing, channelized right turns, and retimed signal operation — and finds it still operating at LOS F overall (84 seconds average delay) and LOS F on the eastbound approach specifically (207 seconds) in the 2041 weekday PM design year. This corrects an earlier working assumption in the author's research that this analysis had not been produced. It had; its results, and how they compare to the roundabout alternative, are addressed in Question 3.

Question 3 – Does the New Information Affect the Preferred Solution?

> Short answer: the roundabout still comes out ahead in the SEI analysis, and it wins by handling the intersection's biggest problem — cars turning left off Sea Island Road — far better than a signal can. But that finding was based on truck traffic that was measured back in 2021, and truck traffic has roughly doubled since then. Trucks are tougher on roundabouts than on signals, so we think this needs to be rechecked with current numbers to conclude the roundabout remains the best option.

The Details

SEI's stated methodology rested on several specific, identifiable factors: traffic counts collected over what the presentation describes as the absolute peak travel weekend of the year (July 4th, 2021); a growth assumption that historic traffic had not increased dramatically and was not expected to increase; and Level of Service

modeling that does not distinguish heavy-vehicle share between alternatives. Each of these bears directly on roundabout performance specifically — roundabout capacity is more sensitive to heavy-vehicle percentage and to actual traffic growth than a signal's fixed-cycle timing is, since larger vehicles require more gap-acceptance time at a yield-controlled approach.

The GDOT continuous count data developed in this addendum tests each of these factors directly, using data that did not exist at the time of SEI's 2021 analysis:

- Growth: SEI's presentation stated traffic was not expected to increase. GDOT's continuous station measured 1.77% growth from 2015–2024, and an interim 2026 indicator shows continued growth of roughly 1.08% year-over-year.
- Heavy vehicles: peak-hour truck share (combined Single-Unit + Combination-Unit % of Design Hour Volume) rose from approximately 4.5% in 2021 to approximately 9.2% in 2024 — crossing the roughly 5% threshold that FHWA's national roundabout design guidance (Roundabouts: An Informational Guide, NCHRP Report 672) identifies as the assumption boundary for standard single-lane capacity models. SEI's own Synchro modeling of the intersection applied a flat 2–3% heavy-vehicle input drawn from July 2021 counts, well below the current corridor figure.
- Basis of the original count: SEI's traffic counts were collected over a single peak weekend rather than continuously. The GDOT station is the only dataset identified to date that tracks this corridor's actual traffic pattern across multiple years.

SEI's June 2022 Traffic Data Report — completed after the October 2021 presentation cited above — directly compares the enhanced signal alternative against the roundabout alternative for the 2041 design year. In the weekday PM peak, the roundabout outperforms the modified signal overall (LOS E, 42 seconds, versus LOS F, 84 seconds), driven almost entirely by the eastbound left-turn movement: 14 seconds under the roundabout versus 207 seconds under the modified signal, because the signal must hold every other movement while that left turn's protected phase runs. The roundabout's own weak point is the westbound approach (158 seconds, LOS F), which SEI's report attributes to insufficient approach capacity and notes could be improved with an added lane at the cost of a larger intersection footprint.

None of this establishes that a roundabout is the wrong solution — SEI's own modeling favors it overall. It does mean the roundabout's modeled advantage rests on a 2–3% heavy-vehicle assumption that GDOT's independent count data suggests was already understated in 2021 and has since roughly doubled to tripled, and on a growth assumption SEI itself described as flat that GDOT's continuous count data does not support. Updated modeling using current truck-share and volume data would test whether the roundabout's advantage over the modified signal narrows, holds, or grows once those inputs are current — a specific, answerable engineering question rather than an open documentation gap.

Validation Finding #3: The evidence available in this addendum, taken together with SEI's own June 2022 Traffic Data Report, supports a narrower and more specific conclusion than an earlier working assumption in this research suggested. The enhanced signal alternative was analyzed and still fails under 2041 design year conditions; the roundabout alternative succeeds overall in SEI's own modeling but depends on heavy-vehicle and growth assumptions that GDOT's independent, continuously collected data indicates were understated at the time of that analysis. Updated modeling using current truck-share and growth data would sharpen, not overturn, the engineering case for the roundabout.

Sources

- Georgia DOT Traffic Analysis and Data Application (TADA), Continuous Count Station 127-0289, Single Station Annualized Statistics.
- Georgia DOT TADA, Site 127-0289, Daily Volume reports, July 2025 and July 2026 (interim year-over-year indicator).

- Southeastern Engineering, Professional Services Agreement, June 8, 2021 (Task 1: Traffic Analysis; Task 2: Conceptual Development).
- Southeastern Engineering, Traffic Analysis Presentation, October 19, 2021.
- Southeastern Engineering, Traffic Data Report, June 23, 2022 (Sea Island Road at Frederica Road) — Tables 12–16 and Appendix D.
- Federal Highway Administration, Roundabouts: An Informational Guide (NCHRP Report 672).
- Glynn County Public Works Department, written correspondence confirming records production status [insert date from email].
- Glynn County Open Records Request responses and correspondence reviewed by the author.

Appendix: What This Data Is, and How to Check It Yourself

What is this data?

The traffic counts cited in this addendum come from a permanent counting station the Georgia Department of Transportation (GDOT) has installed directly in the road on Frederica Road, just north of S. Harrington Road — along the same corridor as the Frederica/Sea Island Road intersection. GDOT designates it Site 127-0289 and classifies it as a Continuous Count Station: it does not take a one-time sample, it counts every vehicle that passes, every day, year-round, year after year.

How is it collected?

Sensors built into the pavement detect every vehicle that drives over them and log it automatically — there is no person counting by hand. This is standard GDOT equipment used statewide to track long-term traffic trends, separate from and independent of the one-time traffic studies engineering firms like SEI conduct for a specific project.

Where exactly is it?

The station sits on Frederica Road between the Fort Frederica area and the Sea Palms Golf Resort — north of the Frederica/Sea Island Road intersection, but on the same road, reflecting the general traffic flow feeding into that intersection.

How can anyone check it?

1. Go to GDOT's public traffic data site: gdottrafficdata.drakewell.com

2. Zoom the map to St. Simons Island / Frederica Road

3. Look for the marker labeled "9,700" (a green triangle) — that is this station

4. Tap it, then Site Details → Reports → "Single Station Annualized Statistics" for year-by-year figures, or "Daily Volume" for day-by-day counts

Nothing about this data is private or hard to find. It is the same public tool anyone — including a county commissioner or a skeptical neighbor — can pull up and check directly against every figure in this addendum.