**IN THE CIRCUIT COURT OF DAVIDSON COUNTY, TENNESSEE
FOR THE TWENTIETH JUDICIAL DISTRICT AT NASHVILLE**

AKILAH MOORE, TELISE TURNER, and GARY
WYGANT,

Plaintiffs,

v.

WILLIAM LEE, as Governor of Tennessee, in his
official capacity; TRE HARGETT, as Tennessee
Secretary of State, in his official capacity; and
MARK GOINS, as Tennessee Coordinator of
Elections, in his official capacity,

Defendants.

CASE NO. 22-0287-IV

Chancellor Perkins
Chancellor Maroney
Judge Sharp

AFFIDAVIT OF THOMAS L. BRUNELL, Ph. D.

State of Texas
County of Dallas

    I, Thomas L. Brunell, Ph. D., do hereby state as follows under penalty of perjury:

    1. I have been a Professor of Political Science in the School of Economic, Political and Policy Sciences since 2009 and currently serve as head of the Political Science program at the University of Texas at Dallas.

    2. I received a Ph. D. in Political Science from the University of California, Irvine in 1997.

    3. In 2021, I was appointed by the Director of the U.S. Census Bureau to serve a three-year term on the Census Scientific Advisory Committee.

    4. I have published a book on redistricting and dozens of peer-reviewed articles in the top journals in the fields of redistricting, the Voting Rights Act, elections, and representation.

5. I am the lead author on two textbooks for American Politics: *Introduction to American Government* (TopHat 2021) and *Introduction to State and Local Politics* (TopHat 2021).

6. I teach classes of Election Law; Redistricting and Racial Politics; Campaigns and Elections; and Congress.

7. My research interests revolve around American elections.

8. I was asked to compare the enacted Tennessee State Senate map, Senate Bill 0780, Public Chapter 596 ("Senate Redistricting Plan") to Amendment 2 proposed by Senator Yarbro ("Amendment 2") on two factors: population deviations and the number of majority-minority districts.

9. I was given the maps and data related to these variables.

10. Table 1 presents the data for population deviations for both maps by district. The ideal population of a district is calculated by dividing the total population of Tennessee from the 2020 Census by the number of districts, in this case 33. The total population of the state is 6,910,840, which, when divided by 33, gives us an ideal population for each State Senate district of 209,419 people. The data below show the total population for each district by map, along with the deviation from ideal population (negative numbers indicate the district population is below the ideal, while positive numbers indicate the district population is above the ideal), and percent deviation. Total deviation is calculated by adding the percent deviation from the least populous district to the percent deviation from the most populous district. The total population deviation for the Senate Redistricting Plan is 6.17. The total deviation for the Amendment 2 map is 7.70. The enacted map has a smaller total deviation than the Amendment 2 map.

Table 1. Population Deviations in the Enacted Plan and Democratic Caucus Plan

District	Enacted Map			Democratic Caucus Map		
	Total Pop	Deviation	Deviation %	Total Pop	Deviation	Deviation %
1	203,291	-6,128	-2.93%	207,285	-2,134	-1.02%
2	203,307	-6,112	-2.92%	199,074	-10,345	-4.94%
3	207,305	-2,114	-1.01%	204,567	-4,852	-2.32%
4	214,884	5,465	2.61%	205,577	-3,842	-1.83%
5	203,349	-6,070	-2.90%	211,756	2,337	1.12%
6	203,299	-6,120	-2.92%	209,848	429	0.20%
7	204,332	-5,087	-2.43%	209,178	-241	-0.12%
8	212,327	2,908	1.39%	208,633	-786	-0.38%
9	211,348	1,929	0.92%	207,524	-1,895	-0.90%
10	211,874	2,455	1.17%	214,389	4,970	2.37%
11	213,909	4,490	2.14%	211,394	1,975	0.94%
12	214,359	4,940	2.36%	215,195	5,776	2.76%
13	203,305	-6,114	-2.92%	214,944	5,525	2.64%
14	209,385	-34	-0.02%	207,896	-1,523	-0.73%
15	206,039	-3,380	-1.61%	213,535	4,116	1.97%
16	210,544	1,125	0.54%	206,209	-3,210	-1.53%
17	216,082	6,663	3.18%	212,552	3,133	1.50%
18	207,896	-1,523	-0.73%	213,737	4,318	2.06%
19	215,379	5,960	2.85%	210,194	775	0.37%
20	216,076	6,657	3.18%	209,010	-409	-0.20%
21	216,084	6,665	3.18%	211,877	2,458	1.17%
22	216,092	6,673	3.19%	207,814	-1,605	-0.77%
23	216,082	6,663	3.18%	205,370	-4,049	-1.93%
24	212,561	3,142	1.50%	211,749	2,330	1.11%
25	204,183	-5,236	-2.50%	214,197	4,778	2.28%
26	215,745	6,326	3.02%	203,534	-5,885	-2.81%
27	215,763	6,344	3.03%	212,470	3,051	1.46%
28	210,183	764	0.36%	200,764	-8,655	-4.13%
29	203,170	-6,249	-2.98%	209,418	-1	0.00%
30	203,175	-6,244	-2.98%	210,487	1,068	0.51%
31	203,172	-6,247	-2.98%	209,109	-310	-0.15%
32	203,169	-6,250	-2.98%	210,992	1,573	0.75%
33	203,171	-6,248	-2.98%	210,562	1,143	0.55%
Total Deviation			6.17%			7.70%

11. In Table 2, are the data for percent Non-Hispanic Black population for each district for both maps. The Senate Redistricting Plan has four districts with majority non-Hispanic Black population (Districts 19, 29, 30, and 33). The Amendment 2 map has

three majority non-Hispanic Black districts (29, 30, and 33). The Senate Redistricting

Plan has one more majority Black population district than the Amendment 2 map.

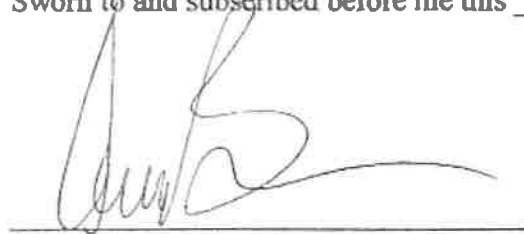**Table 2. Percent Non-Hispanic Black Total Population by District**

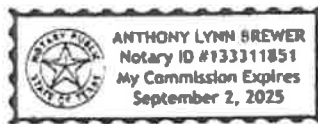| District	Enacted Plan		Democratic Caucus Plan	
1	7,656	3.8%	6,257	3.0%
2	4,369	2.1%	4,349	2.2%
3	6,937	3.3%	4,339	2.1%
4	3,868	1.8%	4,282	2.1%
5	11,073	5.4%	5,994	2.8%
6	18,589	9.1%	31,779	15.1%
7	13,610	6.7%	5,552	2.7%
8	1,975	0.9%	1,985	1.0%
9	4,136	2.0%	7,676	3.7%
10	33,117	15.6%	56,241	26.2%
11	32,748	15.3%	9,624	4.6%
12	2,750	1.3%	2,759	1.3%
13	26,071	12.8%	10,843	5.0%
14	31,057	14.8%	17,454	8.4%
15	3,272	1.6%	4,035	1.9%
16	7,619	3.6%	9,961	4.8%
17	25,059	11.6%	32,736	15.4%
18	17,454	8.4%	47,689	22.3%
19	108,409	50.3%	93,433	44.5%
20	22,607	10.5%	23,711	11.3%
21	25,513	11.8%	27,190	12.8%
22	42,887	19.8%	42,808	20.6%
23	9,724	4.5%	9,309	4.5%
24	20,098	9.5%	17,973	8.5%
25	47,279	23.2%	8,106	3.8%
26	35,597	16.5%	17,962	8.8%
27	8,172	3.8%	56,405	26.5%
28	17,907	8.5%	17,455	8.7%
29	144,621	71.2%	147,148	70.3%
30	116,668	57.4%	112,122	53.3%
31	33,192	16.3%	81,375	38.9%
32	59,385	29.2%	46,339	22.0%
33	140,353	69.1%	118,881	56.5%

FURTHER AFFIANT SAITH NOT.

THOMAS L. BRUNELL, Ph. D.

Sworn to and subscribed before me this 24TH day of March 2022.

NOTARY PUBLIC

ANTHONY LYNN BREWER
Notary ID #133311851
My Commission Expires
September 2, 2025

My Commission Expires: Sept. 2, 2025

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