

Rebuttal Report of Jonathan Cervas

Driver et al. v. Houston County Board of Elections et al., 5:25-cv-00025 (M.D. Ga.)
February 6, 2026

1. I have been asked by attorneys for the plaintiffs in this action to evaluate the analyses and conclusions made in the report of the defendants' expert, Dr. Michael Barber, dated January 23, 2026.

I. Summary of Findings

2. Most of Dr. Barber's opinions about my work are *legal conclusions*. From a social-science perspective, all the illustrative plans that I presented in my opening report are compatible with the current form of Houston County's government—a five-member commission—and demonstrate that a remedy for the alleged vote dilution is feasible within that form of government.
3. Dr. Barber misunderstands or misconstrues the reason why I included two maps drawn without regard to race or party. I did not include them to suggest that they satisfy the first *Gingles* precondition. Rather, I included them to demonstrate that it is possible to devise remedies for the alleged vote dilution in Houston County that do not take race or party into account. And Dr. Barber does not appear to dispute that point.
4. Dr. Barber identifies an error in one of my illustrative plans ("Cervas MMD 5") that affects two majority-White districts. This report presents a corrected version of that plan.
5. Dr. Barber argues that two of my illustrative plans ("BOE 4" and "Cervas MMD 4") fail to satisfy the first *Gingles* precondition because they don't include a district in which the Black voting-age population ("BVAP") exceeds 50%. While those are legal conclusions, Dr. Barber also fails to acknowledge that both plans contain a district that is majority-Black on other important demographic measures—like voter turnout. This report also presents an alternative version of one of those plans ("Cervas MMD 4a") that creates a majority-BVAP district by shifting three small census blocks.

6. Dr. Barber’s opinions that my illustrative plans do not respect traditional race-neutral redistricting criteria lack merit because he fails to consider that my plans were drawn to respect Census County Divisions (“CCDs”)—a unit of census geography that incorporates traditional race-neutral redistricting criteria—and that my plans use census block groups as the principle building blocks.
7. Nothing in Dr. Barber’s report affects my conclusion that it is possible to remedy vote dilution among Black voters (1) by creating either a four or five single-member district plan with or without considering race, or (2) by utilizing an alternative voting rule such as single transferable or single non-transferable vote.

A. Findings

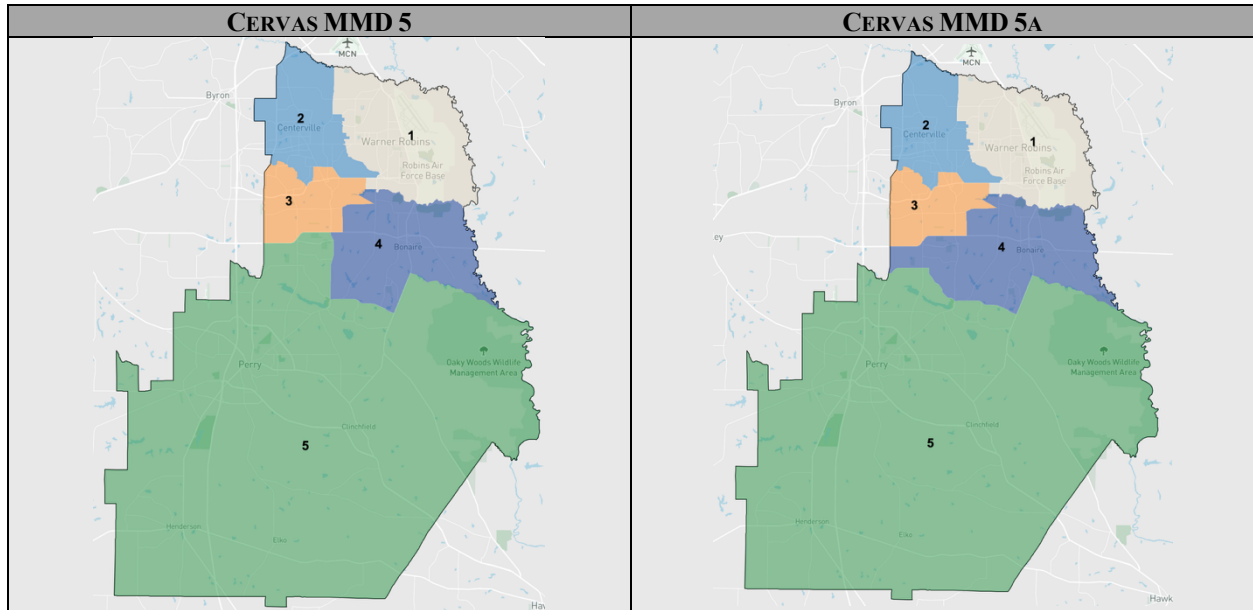
8. Dr. Barber observes—correctly—that a county ordinance gives one Houston County commissioner certain executive responsibilities and higher pay than the other four commissioners. (Barber Rpt. 6.) He then assumes that the adoption of a five-district plan would require an increase in the size of the commission or a change to the “internal structure” of the commission. Not so. From a social science perspective (leaving aside that this is primarily a legal question), a five-district plan is fully compatible with having a full-time Chair and Chief Executive Officer. It would merely change how that official is designated or elected. In any event, in my experience, the county government’s own preferred “internal structure” is not germane to any factor in traditional vote dilution analysis.
9. In addition, Dr. Barber’s suggestion that some plans do not satisfy the first *Gingles* precondition is a legal opinion. I will leave the legal opinions to counsel and the Court. From a social-science perspective, my four- or five-district plans both offer alternatives that remedy the alleged vote dilution.
10. Dr. Barber does not opine about any of my illustrative plans in respect to whether they offer Black voters an equal opportunity to elect candidates of their choice. The reconstituted election analyses in my opening report show that all my plans provide Black voters with a meaningful opportunity to elect candidates of their choice.
11. Dr. Barber points out that my race- and party-blind five-district plan (“Cervas Blind 5”) and my race- and party-blind four-district plan (“Cervas Blind 4”) do not contain any majority

BVAP districts. His conclusion that these plans do not satisfy the first *Gingles* precondition is a legal opinion. I included these plans not because they satisfy *Gingles I* (as I understand it), but rather because they show that it is feasible to devise a remedy for the alleged vote dilution that does not take race or party into account. Even though they do not have a majority-BVAP district, the election analyses in my opening report show that the plans do contain a majority-Black district in which Black voters would have a meaningful opportunity to elect candidates of their choice. Dr. Barber did not dispute the electoral performance of these plans for Black voters. Those plans would remedy the alleged violation if the county or this Court were to adopt either one of them.

12. Dr. Barber observes that my race-conscious five-district plan (“Cervas MMD 5”) fails to meet the equal population requirements of the US Constitution. (Barber Rpt. 8.) I inadvertently included three census block groups in majority-White district 5 that should be assigned to majority-White district 4. Switching those three census block groups (which has no effect on district 1, the Black-majority district) remedies the error. (See **Figure 1**.)¹

¹ Census block groups “131530212041”, “131530212042”, and “131530212043”.

FIGURE 1: CERVAS MMD 5A



Note: Black lines are the CCDs in Houston County. The only adjustment is to add a small population from district 5 into district 4.

TABLE 1: DEMOGRAPHIC DATA, CERVAS MMD 5A

DISTRICT	TOTAL	WHITE	WHITE %	BLACK	BLACK %	TOTAL VAP	WHITE VAP	% WHITE VAP	BLACK VAP	% BLACK VAP
1	32,268	10,110	31.3	17,874	55.4	23,682	8,444	35.7	12,320	52
2	33,260	17,400	52.3	11,312	34	25,488	14,377	56.4	7,838	30.8
3	32,773	17,697	54	9,682	29.5	24,285	13,723	56.5	6,878	28.3
4	33,455	20,825	62.2	8,467	25.3	24,732	15,920	64.4	5,924	24
5	31,877	20,179	63.3	9,185	28.8	23,931	15,554	65	6,645	27.8

TABLE 2: ELECTORAL PERFORMANCE ANALYSIS, CERVAS MMD 5A

DISTRICT	SHERIFF (2024)	CLERK (2024)	COMMISSION POST 2 (2022)	COMMISSION POST 4 (2022 SPECIAL)
1	89.8	64.4	62.6	55.8
2	46.5	49.1	45.3	41
3	40.4	42.9	40	38.4
4	34.2	37.2	34.2	31.2
5	30.7	33.6	30.1	25.5

13. Regarding *Cervas MMD 5*, Dr. Barber states that I do “not identify any additional traditional redistricting principles guiding [] modifications” of my plans to increase the share of Black residents within the boundaries of district 1. (Barber Rpt. 8.) But this claim is unfounded, since I do describe several traditional redistricting principles. (Cervas Rpt. ¶68.) My opening report communicates the process that I used to produce each of the maps, identifying relevant population subdivisions, communities of interest, and drawing compact districts. And as can plainly be seen in **Figure 1** above, the districts are compact, correspond with CCD lines, and keep the air force base in a single district. I used race no more than necessary to determine whether a reasonably-configured majority-Black district could be drawn.
14. Dr. Barber observes that one of my four-district plans, *Cervas MMD 4*, contains a district (district 1) that falls just short of a Black voting-age majority. The percentage of BVAP in this district shows to be 50%, but that is an artifact of rounding. District 1 in *Cervas MMD 4* has 15,019 Black residents compared to 30,058 total. That is 49.966%. The district is short by 10 Black residents to reach the numeric threshold of 50%. This can be easily corrected by reassigning three census blocks from district 3 into district 1 (among other possible ways to increase the BVAP percentage).² (See **Figure 2**.)

² GEOID20: “131530201062022”, “131530201062030”, “131530206001000”

FIGURE 2: ADJUSTED CERVAS MMD 4 (“CERVAS MMD 4A”)

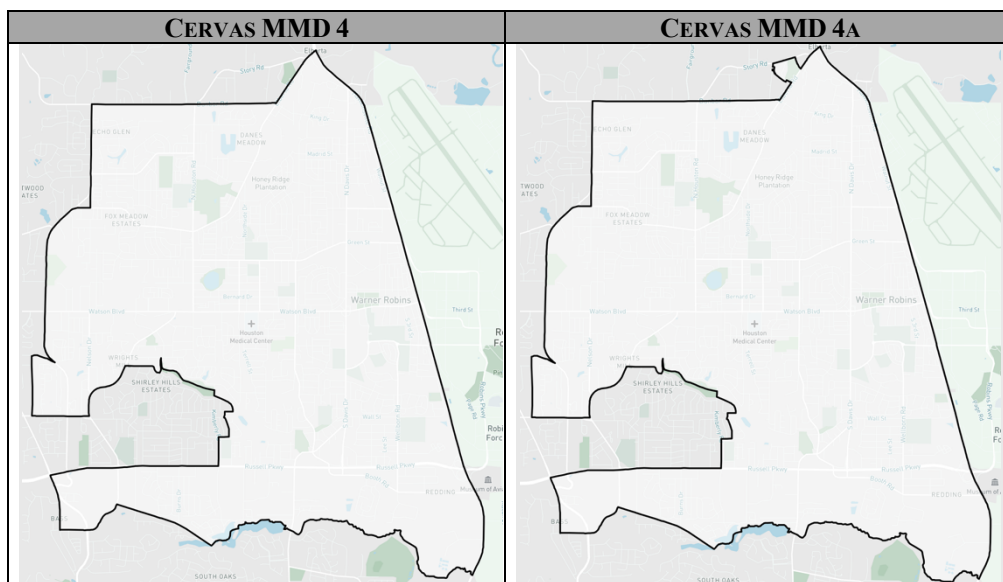


TABLE 3: DEMOGRAPHIC DATA, CERVAS MMD 4A

DISTRICT	TOTAL	WHITE	WHITE %	BLACK	BLACK %	TOTAL VAP	WHITE VAP	% WHITE VAP	BLACK VAP	% BLACK VAP
1	40,591	13,422	33.1	21,797	53.7	30,086	11,336	37.7	15,047	50.0
2	40,471	21,923	54.2	11,763	29.1	30,229	17,221	57	8,286	27.4
3	41,571	25,715	61.9	10,938	26.3	31,206	20,125	64.5	7,662	24.6
4	41,000	25,151	61.3	12,022	29.3	30,597	19,336	63.2	8,610	28.1

TABLE 4: ELECTORAL PERFORMANCE ANALYSIS, CERVAS MMD 4A

DISTRICT	SHERIFF (2024)	CLERK (2024)	COMMISSION POST 2 (2022)	COMMISSION POST 4 (2022 SPECIAL)
1	86.1	61.4	59.2	53
2	42.3	44.9	41.8	39.6
3	42.4	40.5	37.1	33.7
4	31.5	34.4	31.1	26.9

15. Dr. Barber’s opinion that *Cervas MMD 4* fails to satisfy *Gingles I* is a legal opinion. Besides easily reaching the threshold by adding adjacent census blocks, it also is a district that is well above 50% Black in total population (53.6%) (Cervas Rpt. 28.)

16. There are other relevant data points about whether *Cervas MMD 4* satisfies the criteria in *Gingles I*. For instance, when looking at voters in the electorate, district 1 contains a majority of Black voters. In the 2022 General election, 53.7% of all voters in district 1 are Black (countywide 31.4% of voters were Black). In the 2024 General election, that percentage

increased to 53.9% (countywide 32.0% of voters were Black). The Black share of all *registered voters* in these elections is even greater (counting voters and non-voters), 54.4% in 2022 and 55.1% in 2024. If we look at voter file overall and leave aside any election, we see that district 1 in *Cervas MMD 4* is 57.4% Black.

17. All three sets of data demonstrate another important point that cannot be determined by the decennial census; the Black share of these districts (or at least the electorate) is *increasing*.
18. **Table 5** is the complete set of data about the proportion of registered voters in each district in each plan. Districts where Blacks are a majority of registered voters are highlighted in gray. Only in *Cervas Blind 5* does no district reach the 50% threshold (district 1 in that plan is 48.3%).

TABLE 5: BLACK PERCENTAGE OF REGISTRATION BY DISTRICT

BOE 4	
DISTRICT	BLACK %
1	35.2%
2	28.0%
3	28.2%
4	54.5%

BOE 5	
DISTRICT	BLACK %
1	34.1%
2	31.3%
3	27.9%
4	61.2%
5	28.7%

CERVAS BLIND 4	
DISTRICT	BLACK %
1	52.1%
2	35.1%
3	29.9%
4	28.0%

CERVAS MMD 4	
DISTRICT	BLACK %
1	57.4%
2	31.6%
3	27.9%
4	29.4%

CERVAS MMD 4A	
DISTRICT	BLACK %
1	57.4%
2	31.6%
3	27.8%
4	29.4%

CERVAS BLIND 5	
DISTRICT	BLACK %
1	48.3%
2	41.8%
3	33.1%
4	29.4%
5	28.4%

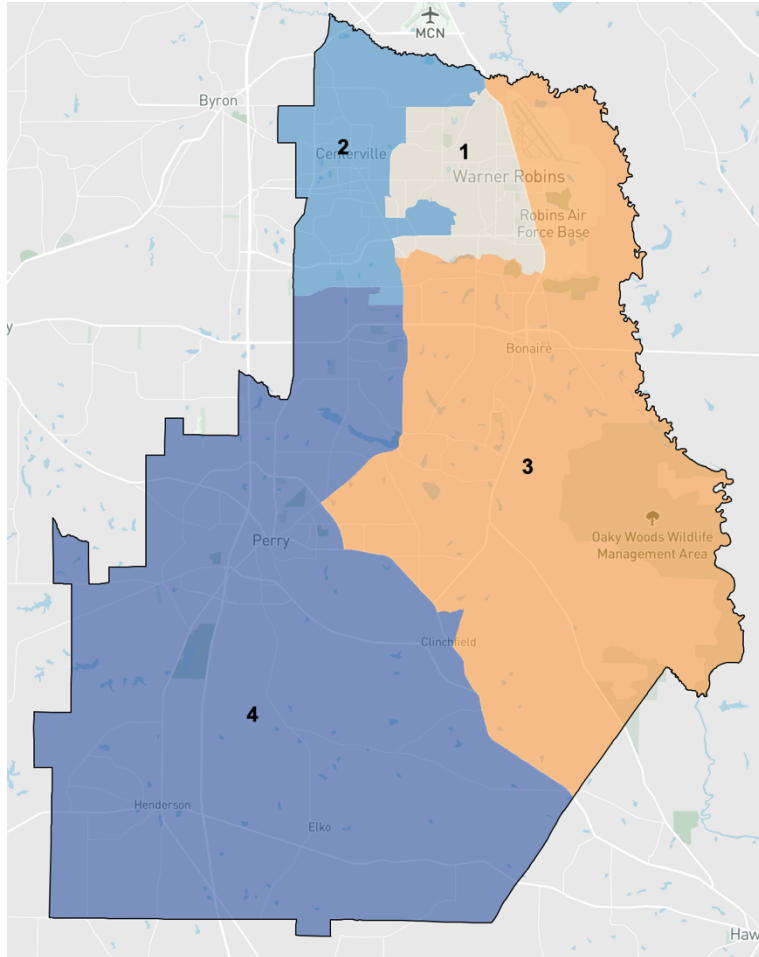
CERVAS MMD 5	
DISTRICT	BLACK %
1	60.0%
2	36.9%
3	32.2%
4	25.2%
5	28.8%

CERVAS MMD 5A	
DISTRICT	BLACK %
1	60.0%
2	36.9%
3	32.2%
4	26.4%
5	28.3%

19. Dr. Barber discusses the shape of the districts in *Cervas MMD 4*, stating that “District 3 wraps almost entirely around District 1.” (Barber Rpt. 12.) It is true that the White-majority district 3 wraps around the highly compact Black-majority district 1, but that design is optional. One could imagine a multitude of potential configurations of White-majority areas covering

districts 2, 3 and 4. To demonstrate one such option, in the matter of less than 5 minutes I created this alternative, which freezes district 1 as a numeric Black-majority district but shuffles the voters in the other districts.

FIGURE 3: “MORE COMPACT” CERVAS MMD 4 (“CERVAS MMD 4B”)



Note: District 1 in Cervas MMD 4b is identical to district 1 in Cervas MMD 4a.

TABLE 6: DEMOGRAPHIC DATA, CERVAS MMD 4B

DISTRICT	TOTAL	WHITE	WHITE %	BLACK	BLACK %	TOTAL VAP	WHITE VAP	% WHITE VAP	BLACK VAP	% BLACK VAP
1	40,591	13,422	33.1	21,797	53.7	30,086	11,336	37.7	15,047	50
2	41,648	22,983	55.2	12,548	30.1	31,838	18,632	58.5	8,833	27.7
3	40,205	25,453	63.3	10,138	25.2	29,565	19,334	65.4	7,088	24
4	41,189	24,353	59.1	12,037	29.2	30,629	18,716	61.1	8,637	28.2

TABLE 7: ELECTORAL PERFORMANCE ANALYSIS, CERVAS MMD 4B

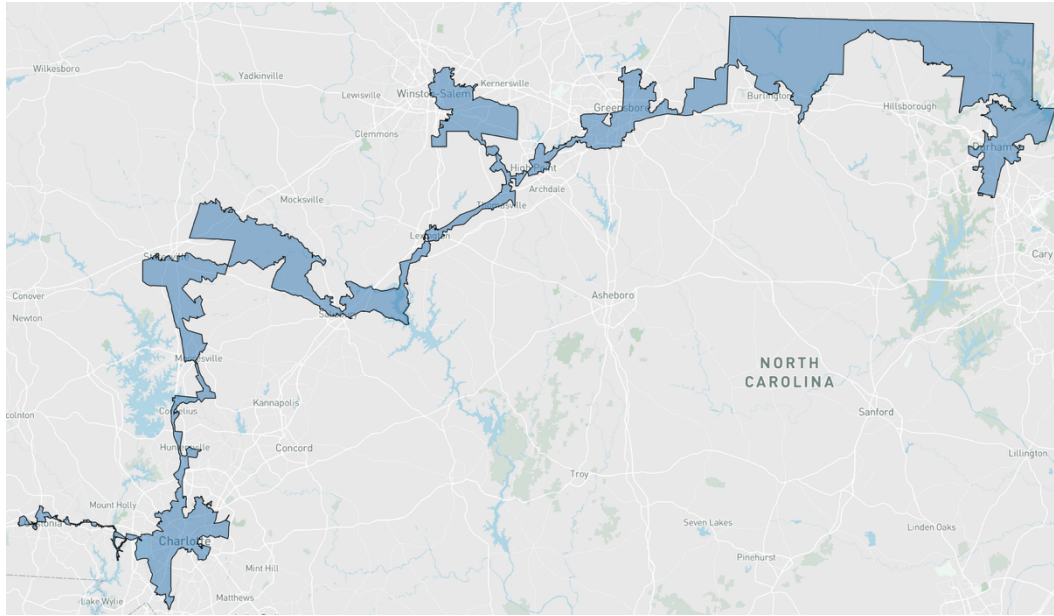
	DISTRICT	SHERIFF (2024)	CLERK (2024)	COMMISSION POST 2 (2022)
1	86.1	61.4	59.2	53
2	43.3	45.6	42.1	39
3	39.6	37.9	34.8	31.4
4	33.4	36.2	32.9	29.5

TABLE 8: BLACK PERCENTAGE OF REGISTRATION BY DISTRICT

CERVAS MMD 4B	
DISTRICT	BLACK %
1	57.4%
2	32.9%
3	26.4%
4	29.5%

20. Dr. Barber argues that “District 2 includes an appendage that extends eastward into the center of District 1 in a manner that is difficult to explain via any traditional districting principles.” (Barber Rpt. 12-13.) Not so. My illustrative plans were constructed by combining census block groups (see below for more). This area corresponds to those boundaries. Even with the “appendage” from district 2, district 1 hardly resembles the “bizarre” maps that were struck down in *Shaw v. Reno* (See **Figure 4**) and its kin. District 1 is reasonably-configured, and it demonstrates that the Black population in Houston County is sufficiently compact to form a majority in a single-member district.

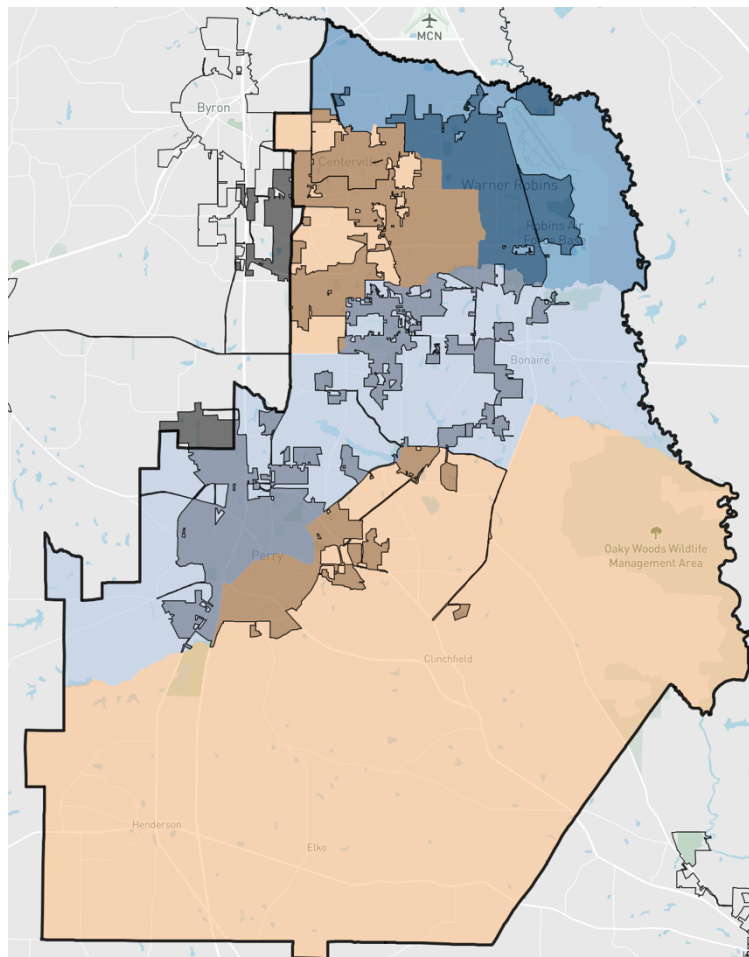
FIGURE 4: DISTRICT 12 IN NORTH CAROLINA, 103RD CONGRESS



Source: Jeffrey B. Lewis, Brandon DeVine, Lincoln Pitcher, and Kenneth C. Martis. (2013) Digital Boundary Definitions of United States Congressional Districts, 1789-2012. [103rd Congress]. Retrieved from <https://cdmaps.polisci.ucla.edu>.

21. It is not clear why Dr. Barber believes that the three “incorporated cities” should be preserved, nor is it clear from his analysis whether it is possible to maintain those boundaries. As the map in **Figure 5** shows, cities in Houston County have highly irregular boundaries. Moreover, they can extend beyond the boundary of the county (as do Warner Robins and Perry). It would be impossible to account for these lines in any plan. The district lines have little to no overlap with cities.

FIGURE 5: CURRENT STATE LOWER CHAMBER DISTRICTS WITH CITY BOUNDARIES



Note: Cities outside of Houston County outlined with no fill. Cities within Houston County (and extending beyond its boundary in gray).

22. In all my plans (aside from the Board of Education-based plans) the CCDs are preserved to the extent practicable. CCDs are described by the Census Bureau as “sub-county statistical geographic areas that usually represent a single contiguous area consisting of one or more communities, economic centers, or major land use areas in a county or county equivalent. Ideally, CCD boundaries remain consistent between censuses, facilitating comparison of

statistics from one decade to another.”³ Although they have no legal status, they provide for a reasonable set of communities of interests from which to base a plan on.

23. Preservation of precincts is sometimes regarded as a traditional redistricting criterion. But this is not always the case, especially since these boundaries are regularly adjusted throughout the decade and sometimes fail to nest within political subdivisions.⁴ It is also not clear if a mapmaker should preserve the most recent precincts, the precincts as they exist when the census data becomes first available, or (if offered by the Census Bureau) the Census Bureau’s boundary files, referred to as “Voting Tabulation Districts.” As I stated in my opening report, I did not rely on any partisan data when drawing these illustrative plans. I therefore did not use precinct boundaries. To the extent that avoiding splitting precincts is desirable, preventing minority vote dilution is clearly a compelling justification for dividing some.⁵
24. Even without intentionally avoiding splitting precincts, my plans do somewhat well on that measure. Four plans split 9 precincts, one splits 8, and one splits just 7 (of 17; *2024 precincts*). By comparison, the current lower house districts, of which four districts are partially contained in Houston County, splits 5 precincts. But one should keep in mind that these precincts were created *after* the legislative districts. That is, the precincts were created in response to the enacted legislative districts. Precincts could be adjusted should a court impose a new map on the county.
25. Dr. Barber is exactly right when he says, “precinct boundaries were not treated as a constraint at all.”⁶ (Barber Rpt. 21-22.) Precinct boundaries do not always correspond well to census block group boundaries. Therefore, prioritizing precinct boundaries necessarily means splitting additional census block groups. It would be trivial to adjust precincts to make them whole, but at the cost of dividing additional census block groups. I did not use any precinct boundaries

³ 2020 Census Participant Statistical Areas Program (PSAP) Quick Reference: Census County Divisions, <https://www2.census.gov/geo/pdfs/partnerships/psap/G-660.pdf>

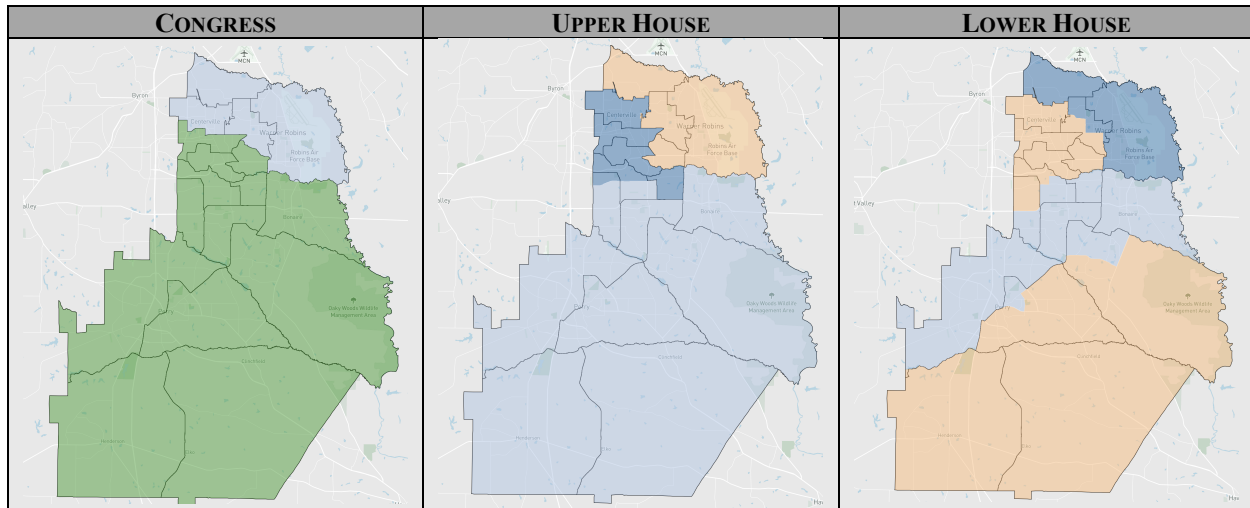
⁴ See Grofman, Bernard, and Jonathan Cervas. 2021. “ZIP Codes as Geographic Bases of Representation.” *Election Law Journal: Rules, Politics, and Policy* 20(2): 215–23. doi:10.1089/elj.2020.0687.

⁵ Criteria found in federal law supersedes those in state or local codes or legislature preferences. US Cont. Article VI, Clause 2.

⁶ Dr. Barber exaggerates the degree of precinct splits in Table 3 (Barber Rpt. 22) by including unsplit precincts in the row “Precinct Pieces”. Because he includes these, they are all high by 17. They should range between 7 and 12.

when constructing my illustrative maps. I used census block groups as my basic unit of geography.

FIGURE 6: COMPARISON OF CURRENT LEGISLATIVE BOUNDARIES IN HOUSTON COUNTY

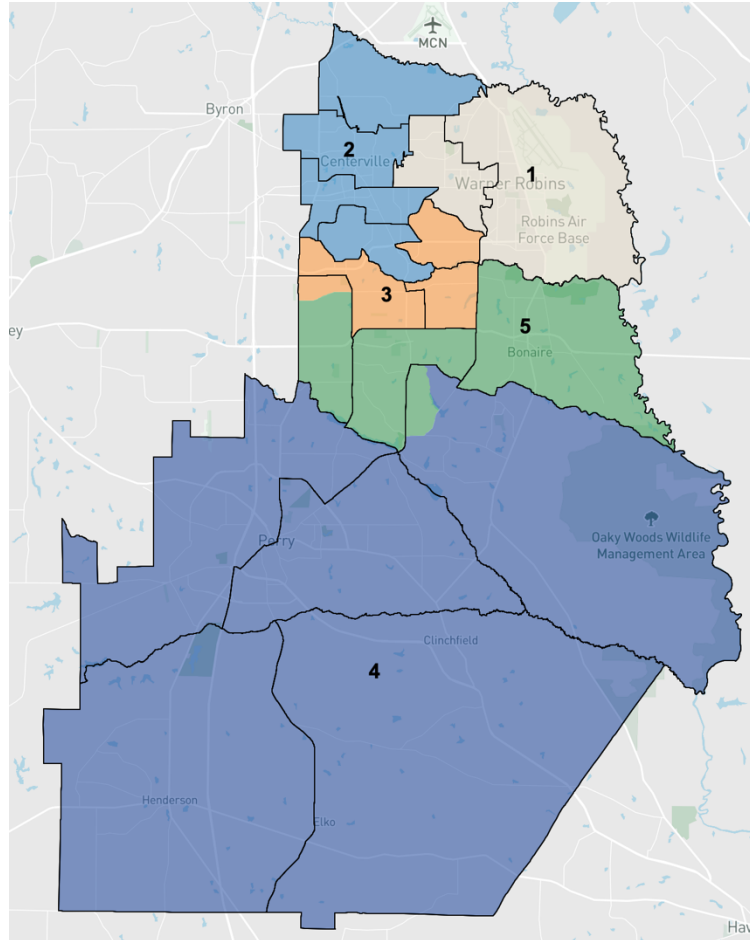


Note: District boundaries clipped to Houston County jurisdictional boundaries.

26. Combining in full two north-eastern precincts (“Wellston Center”, and “HHPC”) creates a district that is 54.8% Black, 51.2% Black VAP, and only 462 persons away from perfect population equality. No precinct is split to create this district. It can be drawn without regard to race or party. To complete the plan in the majority-White districts 3, 4, and 5, two precincts must be divided to equalize the population.

27. I had not intended to create another map, but since it was suggested by Dr. Barber, I am including it here for completeness. *Cervas Blind 5a* is shown in **Figure 7**. The demographic data is show in **Table 9**. The Election performance for this plan is shown in **Table 10**. The Black registration percentage is shown in **Table 11**. This race blind map represents one which would remedy the alleged vote dilution in Houston County.

FIGURE 7: CERVAS BLIND 5A



Note: Cervas Blind 5a (built with precincts as the building block geographical unit) is shown with the precinct boundaries (shown as black lines). Only two precincts are divided across the entire plan.

TABLE 9: DEMOGRAPHIC DATA, CERVAS BLIND 5A

DISTRICT	TOTAL	WHITE	WHITE %	BLACK	BLACK %	TOTAL VAP	WHITE VAP	% WHITE VAP	BLACK VAP	% BLACK VAP
1	33,189	10,545	31.8	18,174	54.8	24,403	8,830	36.2	12,503	51.2
2	31,133	16,632	53.4	9,958	32	23,917	13,704	57.3	6,999	29.3
3	33,187	17,503	52.7	11,209	33.8	24,957	13,945	55.9	7,846	31.4
4	32,611	20,189	61.9	9,739	29.9	24,336	15,539	63.9	6,992	28.7
5	33,513	21,342	63.7	7,440	22.2	24,505	16,000	65.3	5,265	21.5

TABLE 10: ELECTORAL PERFORMANCE ANALYSIS, CERVAS BLIND 5A

DISTRICT	SHERIFF (2024)	CLERK (2024)	COMMISSION POST 2 (2022)	COMMISSION POST 4 (2022 SPECIAL)
1	89.8	64.8	62.8	55.9
2	43.8	46.4	42.3	38.7
3	43	45.5	43.1	40.8
4	30.7	33.6	30	25.1

TABLE 11: BLACK PERCENTAGE OF REGISTRATION BY DISTRICT

CERVAS BLIND 5A	
DISTRICT	BLACK %
1	60.0%
2	36.9%
3	32.2%
4	26.4%
5	28.3%

28. Instead of using precincts as the building blocks of my districts, I used census block groups, which are created by the Census Bureau. There are 108 of these in Houston County, averaging 1,515 persons in each. The maps that I create from scratch perform the best in terms of avoiding dividing census block groups. The Board of Education 5 (“BOE 5”) map does the worst (this map was drawn by the legislature). My illustrative plan adjusts *Cervas Blind 4* to create *Cervas MMD 4* only splits one additional census block group. The plan that adjusts *Cervas Blind 5* to create *Cervas MMD 5* affects just four census block groups. This is hardly an indication that race predominated. *Cervas Blind 5a* splits 13 census block groups, but this is because it is built instead on precincts.

TABLE 12: CENSUS BLOCK GROUP SPLITS

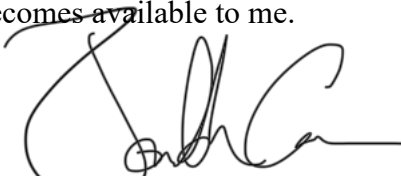
	BOE 4	BOE 5	CERVAS BLIND 4	CERVAS BLIND 5	CERVAS BLIND 5A
<i>Census Block Group Splits</i>	9	24	1	0	13
	CERVAS MMD 4	CERVAS MMD 4A	CERVAS MMD 4B	CERVAS MMD 5	CERVAS MMD 5A
<i>Census Block Group Splits</i>	2	3	3	4	4

29. Dr Barber comments that “Dr. Cervas does not conduct an analysis of countywide electoral performance.” (Barber Rpt. 23.) However, I conduct analysis of county-wide elections in Sections 1-3, beginning on page 9 of my opening report.

30. At several points in his report, Dr. Barber produces maps that show areas excluded or include when I made changes from my Race/Party Blind maps to the race conscious maps. (Barber, Figures 1 & 3.) Rather than show how race predominated in the drawing of these maps, these maps demonstrate how narrowly tailored adjustments can satisfy the demanding test of *Gingles I* and lead to compact districts based on traditional redistricting criteria (cf. Barber). My understanding of Section 2 is that the US Supreme Court has not required districts to be drawn completely race blind. (“The contention that mapmakers must be entirely “blind” to race has no footing in our §2 case law.” (*Allen v. Milligan*, Slip 25.) Race can be used when strict scrutiny is satisfied and race is used in a narrowly tailored way to achieve a legitimate state interest. My race-blind maps remedy the alleged vote dilution. My race-conscious maps aimed to show the first step in *Gingle I*. (“For all those maps were created with an express target in mind—they were created to show, as our cases require, that an additional majority-minority district could be drawn. That is the whole point of the enterprise.” (*Allen*, 23).)

* * *

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge. I reserve the right to revise, update, or supplement my opinions as new information becomes available to me.



Dr. Jonathan Cervas