IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF GEORGIA
ALBANY DIVISION

MATHIS KEARSE WRIGHT, JR.,	:	
	:	
Plaintiff,	:	
	:	CASE NO.: 1:14-CV-42 (WLS)
v.	:	
	:	
SUMTER COUNTY BOARD OF ELECTIONS AND REGISTRATION,	:	
	:	
Defendant.	:	

REPORT OF THE SPECIAL MASTER

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I. Overview

1. I was formally appointed as a special master by Court Order of September 23, 2019. [1] As of September 23, I began a review of the court record in this case, with a focus on reviewing the

[1] In a court order of September 12, 2019, in the expectation that I would later be appointed as special master, I was asked by the Court to communicate to Counsel for the parties as to whether an earlier Court Order setting November 25, 2019 as the final deadline for the special master could be moved up. After reviewing in a very preliminary fashion the Court Order of March 17, 2019, and looking briefly at other publicly available data, my reply (by e-mail) on September 17, 2019 was that I was not yet in a position to answer that question, but that I would proceed with all diligence compatible with a thorough review of the data and the mapping possibilities once I returned to the United States in late September. Pursuant to the September 12 Court order I also engaged in correspondence with counsel about suggestions for the wording of my appointment order. In mid-September, I also verified that Jonathan Cervas would be available to assist me in the technical details of map construction. Mr. Cervas is currently completing his Ph.D. under my supervision at the Department of Political Science, University of California, Irvine. He is

Court's March 17, 2019 Opinion, the Court's September 23, 2019 order, and the expert witness reports. I examined the demography and geography of the county, the demographic and geographic features of the current School Board District map that had been found to violate the Voting Rights Act (using data and maps presented in expert witness reports in hard copy format and reviewing the Court's findings). I also examined the demographic and geographic features of the Plaintiff's proposed School Board District map described in Dr. McBride's Expert Witness Report (Doc. 38-1), again using data and maps presented in hard copy format.

2. On October 3, 2019 I communicated to Counsel an e-mail memo requesting additional information in the form of geocoded data (e.g., identifying school locations, communities of interest, and incumbent addresses) and Geographic Information System (GIS) shape files for the Enacted map and each of the four remedial maps introduced into the Court record by Plaintiff) as well as geocoded data on registration and turnout by race at the individual level. In that memo, I indicated to counsel that I had already mentally began to conceptualize possible maps in the form of mental templates, but that would I find very useful the additional information to allow me to move beyond conceptual maps to formulate illustrative remedial maps that could be presented to the Court.

3. On October 10, 2019 I received from Counsel for the Plaintiff all of the additional information I had requested, with the exception of data on registration or turnout by race at the individual level.[2] Counsel for the Plaintiff suggested that I request this data from Counsel for the Defendant, and I did so on October 12, 2019. But Counsel for the Defendant, Kimberly Reid, notified me on October 17, 2019 that Defendants did not have the resources to provide that data in computer readable form.[3] Since neither registration data or turnout data by race at the individual level was necessary to my map-making task of

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a geographic information systems (GIS) specialist who has assisted me in two previous cases where I was served as a special master (in Virginia and Utah). Having been asked by me to do so, in mid-September Mr. Cervas began obtaining needed basic census mapping information about Sumter County. However, his major involvement as my research assistant did not begin until I was able to work directly with him after my return to the United States in late September (just after I had spent two weeks as the Official Politics Visitor in Residence at Nuffield College, Oxford University).

[2] I am indebted to Counsel for the Plaintiff for the rapidity and thoroughness of this response.

[3] She wrote: "Unfortunately, the County has limited resources to gather this information, and the elections supervisor who may have had some personal knowledge of the information you requested has moved and is no longer employed by the Board of Elections and Registration. That said, we do suggest that you consider the 2018 election results for the Gubernatorial and 2nd Congressional District races. These results are available on the Secretary of State's website at: https://sos.ga.gov/index.php/Elections/current_and_past_elections_results." This website shows election results but does not contain data broken down by race. I was, however, able later to locate a portion of the Georgia Secretary of State website that did contain the information I sought (see below).

drawing a district in accord with traditional districting principles,[4] I now had the necessary data to begin working on illustrative maps to present to the Court for its consideration, and I began this process on October 10, 2019. However, after geocoding of one of the incumbent home locations failed to create a match with the Sumter County map, on October 12 I again contacted Counsel to request the correct address for this incumbent, and I was very promptly provided this information by Counsel for the Plaintiff on October 13, 2019.

4. On October 28, 2019, I obtained data from the Georgia Secretary of State for elections in Sumter County from 2014 to 2018 on actual voter registration and turnout by race of the voter, and during the period October 28-November 1, I had this data geocoded and merged. I was able to purchase this public data directly (at a small cost) from the office of the Georgia Secretary of State, [5] and then converted it to a geo-coded format with the assistance of a university data lab. [6] I was then able to make use of that data to project registration and turnout data into the districts in the alternative illustrative maps that I am presenting to the Court,[7] as well as into the districts in the Enacted Map and the districts in Plaintiff's Map 2 discussed in Dr. McBride's Expert Witness Report (Doc. 38-1).[8]

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[4] Registration data by race is almost never available for units small enough to be used for redistricting purposes. Since I, and other experts, do not expect to have registration data by race at low units of aggregation, we have learned to draw maps and reach reliable conclusions about racial voting patterns without access to such data. Even if there is registration data (or turnout data) by race it at the level of individuals it needs to be geocoded at the block level in order to be fully useful, and this can be a very time-consuming process from hard copy files if an individual investigator must do all the data entry herself or himself. Even if the information is already available in computer format it still requires geo-coding to be useful for map-making purposes or for analysis of racial bloc voting. However, registration data by race, or even better, turnout data by race, when it is available, can be highly informative, and I have taken advantage of the existence of such data in the conclusions I have reached about which districts in which illustrative maps can be viewed as "minority opportunity districts."

[5] I would like to express my particular appreciation to Brandon Phifer (Election System Support Specialist) of that office for expediting the delivery of the material that I had requested.

[6] Geocoding processes were done through the Texas A&M GeoCoding Services. I am grateful to the group for expediting the process.

[7] Here, and in many other instances, I am indebted to the technical GIS skills of my research assistant, Jonathan Cervas.

[8] Since there were issues raised at the deposition of Dr. McBride [November 14, 2014, filed 1/12/2015 (doc: 38 beginning at page 87)] about the potential for accurate geocoding of the state's racial registration and turnout data, to verify the accuracy of these geocoding assignments I had the geo-coding independently replicated by a commercial service geocod.io, and compared their results to those of the Texas A&M lab. I found that they matched nearly identically, and that the trivial differences between them would not affect my basic conclusions. As still a further check, I compared the estimates of Sumter County county-wide registration by race generated by these geo-coding estimates to the state's own coding on the Secretary of State's website used by the State to determine who is eligible to vote where. This gave rise to still further confidence in my ability to accurately make use of geo-coded registration and turnout data. (In this context, I should note that the file I used was for "active" voters. Since Georgia

5. This data on registration and turnout by race was not used in my map-making. All the illustrative maps I have drawn were done before I had any individual level registration or turnout data by race, and the maps that I drew without such data were not changed in any way after I acquired this data except for a shift of one zero population block between two districts in Illustrative Map 3.[9] As I informed Counsel, I did not need registration or turnout data by race at the level of individuals with geocoded locations that can be projected into alternative maps to draw remedial plans for Sumter County Board, since I was drawing maps using traditional districting criteria -- with race entering only at the end to assure that plans I drew did not inadvertently pack or crack minority populations.

6. While I will continue to present information about minority population and voting age population in the data section, I have also used the geo-coded data on registration and turnout by race (https://sos.ga.gov/index.php/Elections/voter_registration_statistics) projected into the districts in the various maps to examine the likely effects on equal protection of alternative map configurations that I had already previously drawn. Later in this Report, I present information about the registration and turnout composition of the districts in each of the illustrative maps, and I show the proportion of districts in each of the illustrative maps that contain more Black voters than White voters on election day. This latter data directly bears on the potential for a district to be a minority opportunity district.[10]

7. I view my central tasks as special master as preparing illustrative remedial maps for the Court to consider as alternatives, and informing the Court as to the realistic opportunities for the minority community to participate in the electoral process and to elect candidates of choice in the various districts in these maps.[11] I sought to address the key questions posed

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has been purging inactive voters from its voter lists, I wanted to make sure that the data I was using for 2019 to project into districts that might be used in an election in 2020 would not be affected in the event of a further purge.) I also discovered from conversations my research assistant had with the Chief of the U.S. Census Redistricting & Voting Rights Data Office, James Whitehorne, that the Census is in the process of preparing a new geocoding algorithm that will improve the accuracy of its own geo-coding of individual names. Some familiarity with the accuracy Census's own previous geo-coding algorithm perhaps raised questions in the mind of Dr. McBride as to the feasibility of geo-coding.

[9] This involved a feature of the map that I had previously not noticed. Of course, shifting a zero-population block between districts has no impact on map demographics, nor did it affect overall map compactness.

[10] However, other data, including that using VAP, can still be relevant since turnout may change if a district that was not a *minority opportunity district* becomes one, and VAP establishes a baseline of the maximum size of any potential electorate. Similarly, information on incumbency (White or Black) can be very important, since *white cross-over* voting potential also affects whether or not a district might be considered a *minority opportunity district.*

[11] Here I draw on my expertise as a specialist in representation and analysis of racial voting patterns reflected in expert witness testimony in a number of cases, including *Gingles v. Edmisten* (later heard as

for me by the Court in its order of September 23, namely whether, in a seven district plan, it was possible to remedy the voting rights violation in the current map, in which there are only two Black[12] voting age majority districts, by drawing plans according to traditional districting principles, with race clearly not the preponderant factor in line drawing. In particular: (a) In plans drawn according to traditional districting principles, where race was clearly not the preponderant motive in line-drawing, were there going to be as many as three or four districts in which African Americans constituted a majority of the voting age electorate? And (b) how many of those districts constituted "minority opportunity" districts?[13]

8. In addressing the questions posed to me by the Court, the data contained in this Report draws entirely on information already in the Court record, or information that is publicly available from two reliable sources: the U.S. Census Bureau and the office of the Georgia Secretary of State, with the exception of data on the home addresses of the incumbents in

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Thornburg v. Gingles 478 U.S. 30 (1986)**;** my extensive publications on this topic which have been cited by numerous other expert witnesses and by courts, including the Supreme Court (see e.g., Grofman, Bernard N., Michael Migalski, and Nicholas Noviello. 1985. The `totality of circumstances' test in Section 2 of the 1982 extension of the Voting Rights Act: A social science perspective. *Law and Policy*, 7(2):209-223; Grofman, Bernard, Lisa Handley and Richard Niemi. *Minority Representation and the Quest for Voting Equality*. New York: Cambridge University Press, 1992; Davidson, Chandler and Bernard Grofman (Eds.), *Quiet Revolution in the South: The Impact of the Voting Rights Act, 1965-1990.* Princeton, NJ: Princeton University Press, 1994 Minisymposium on Runoff Methods, co-edited with Andre Blais and Shaun Bowler. *Electoral Studies* 27, 2008; Grofman, Bernard and Michael Migalski. 1988. Estimating the extent of racially polarized voting in multicandidate elections. *Sociological Methods and Research*, 16(4):427-454; Handley, Lisa, Bernard Grofman, and Wayne Arden. 1998. Electing minority-preferred candidates to legislative office: The relationship between minority percentages in districts and the election of minority-preferred candidates. In Bernard Grofman (Ed.) *Race and Redistricting in the 1990s*. New York: Agathon Press, 13-39; Grofman, Bernard, Lisa Handley and David Lublin. 2001. Drawing effective minority districts: A conceptual framework and some empirical evidence. *North Carolina Law Review*, 79:1383-1430; and Lublin, David, Lisa Handley, Tom Brunell, and Bernard Grofman. 2020 forthcoming. Minority Success in Non-Majority Minority Districts: Finding the 'Sweet Spot'. *Journal of Race, Ethnicity, and Politics*); and my very recent service as a special master in three other redistricting cases involving issues of racial representation (*Personhuballah v. Alcorn* 155 F. Supp. 3d 552**,** 2015,Virginia congressional elections; *Navajo Nation v. San Juan County*, Utah, county commission and school board districts. *No. 18-4005 (10th Cir. 2019*); *Golden-Bethune Hill v. VA Board of Elections*, Virginia state legislative elections, 139 S. Ct. 2018).

[12] I will use 'African American' and' Black' synonymously, and when I refer to the 'minority community' I am speaking of the African American community.

[13] I use the term *minority opportunity district* to mean one in which the minority community (in Sumter County, the African American community) have a realistic opportunity to elect a candidate of choice. This term is <u>not</u> synonymous with "safe seat."

the Enacted Map. This incumbent home location information was provided to me (and simultaneously to all Counsel) by Counsel for the Plaintiff.[14]

9. In my remedial map drawing I only made use of the 2010 Census data,[15] since data at the census block-level needed for redistricting is available only from that source,[16] and Census data from the previous Census is the standard basis of apportionment until a new Census is available.[17]

10. I have chosen to submit five different seven-district illustrative maps to the Court which directly address the questions posed by the Court. All these maps use traditional districting

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[14] However, I could have, in principle, obtained the same information from the Court record by working through photocopied data on voter locations by name of voter. Also, once I had acquired a computerized file of voter addresses, with data from the Office of the Georgia Secretary of State, then name matching would have allowed me to identify incumbent home locations.

[15] In general, 2010 Census data is taken directly from the Census website [https://api.census.gov/data/2010/dec/sf1].

[16] The need for redistricting data at the census block level is especially acute in Sumter County since the borders of its largest city, Americus, are highly irregular, and units of census geography larger than blocks include both city and non-city populations, thus making it impossible to draw plans that respect those borders using such larger geographic elements (see below).

[17] While more recent estimates of population and of racial demography are available through the American Community Survey conducted by the Census, ACS estimates must be used with care since the ACS involves sampling of citizens rather than the full enumeration which is the goal of the decennial census. Moreover, it is not available for the small units of census geography needed for redistricting in Sumter County. I do, however, report data at higher levels of aggregation than the census block using the American Community Survey (ACS) estimates ca. 2013-2017 (reported as ACS 5-year 2017 data). ACS data is generally taken from the Court opinion of March 17, 2018 (*Wright v. Sumter County Board of Elections and Registration*, United States District Court, M.D. Georgia, Albany Division, 301 F.Supp.3d 1297 at p.1), except that ACS population and racial data for cities and places in Sumter County Census is taken directly from the U.S. Census web site. ACS data is used solely as a check to see if there appear to be substantial population shifts in the County as a whole. The population change since 2010 appears to reflect a decline in County population among both Whites and Blacks. Data from another Census program that uses data on births and deaths and population movements across political subunits to estimate current population, the *Population Estimates Program* (PEP) also shows a similar estimate of population loss in the County. According to the American Community Survey (ACS) estimate, Sumter County had a total population of 30,687 people in 2017. (ACS 5-year estimate, 2013-2017, C02003_001E). The 2018 U.S. Census Bureau, Population Estimates Program (PEP) estimates Sumter County population at 29,733. Nothing I have learned from either ACS or PEP estimates affects any conclusions reported below, which are based not just on 2010 Census data but also on data from elections held in 2014 and 2016 and in 2018 and on registration and turnout data from the Georgia Secretary of State from 2019. While litigation is necessarily limited to the data available at trial, in crafting a remedy plan it is appropriate to take full advantage of all available public data sources, as well as research of the type that expert witnesses might be expected to rely upon, such as articles in scholarly journals that have been subject to a peer review process.

criteria, and do not have race as a preponderant motive. I began by drawing maps to ascertain how many majority-minority voting age districts would emerge from neutral principles such as maintenance of city borders, and I then, given the extreme irregularity of the border of the City of Americus, looked at how these districts would be affected if districts could move slightly outside city borders in order to improve compactness.

11. In the summary tables and other reports below, however, I report data on seven maps rather than just the five illustrative maps I have drawn. The two additional maps are the Enacted Map, and a Plaintiff proposed remedial map (Map 2 of the Plaintiff's maps, the one reported by Dr. McBride in the body of his expert witness report: Doc 38-1). These maps are simply being included for comparison purposes.[18]

12. I should note that I began map drawing without looking at incumbent locations. Only, at the near final stage of the map-drawing, after I had completed preliminary maps following traditional districting criteria, did I input incumbent location information into the Maptitude file I was using for line drawing.[19] After looking at incumbent locations I made minor adjustments to these maps to unpair inadvertently paired incumbents if this was feasible to do given other higher order considerations.[20] The maps reported below reflect these minor adjustments.

There are several basic facts about the geography and population demography of the County that provided me clear signposts for mapmaking following traditional districting criteria.

13. Perhaps the single most important population and geographic fact that informed my line drawing is that (a) while Sumter County has several cities or places, a majority (51.9%) of the population of the County lies within in the City of Americus.[21] The population of

[18] While I have briefly reviewed the other plans suggested by Plaintiff that were given to me in shape file form on October 10, 2019, to avoid confusion, I will only present information in this chart on the Plaintiff's remedial plan described in the text of Document 38-1. As noted previously, this inclusion is simply for comparison purposes.

[19] I had, however, previously asked my research assistant to verify that all the incumbents had geocodable addresses.

[20] In the basic Map 1 configuration this involved unpairing the African American incumbent in Districts 1 and 5, who had inadvertently been paired with each other. Remedying this pairing was straightforward and did not have implications for other features of the map, nor did it raise voting rights issues. At-large incumbents who live just outside of Americus city limits were unpaired with other incumbents when this did not generate conflict with the other higher order consideration identified below in my discussion of redistricting criteria, and the unpairings were done in way to minimize effects on the basic features of the map.

[21] Unless otherwise indicated, all demographic data reported is from the 2010 U.S. census, since that is the only source with data detailed at the census block level needed for redistricting purposes.

Americus is large enough to, in and of itself, to constitute 3.64 districts in a seven-district plan.

14. The Enacted Map splits the population of Americus into five pieces, which means that each of the Enacted Map's five geographically defined districts has a portion of Americus within it. In contrast, I have not drawn plans in which there are more than five of seven districts containing parts of Americus -- unnecessary fragmentation of any city is a violation of traditional districting principles (see discussion of traditional districting principles in a later section of this Report). While I have sought to limit the number of pieces into which the population of the City of Americus is divided, as a matter of simple mathematics, at least four splits of the City are required for population equality purposes in a seven-district plan. Outside of Americus and some areas proximate to it, with the exceptions of a few very small cities or places, Sumter County is very sparsely populated, so it follows naturally from the population geography of the County that, in any plan following traditional districting criteria, four or five of the seven districts within the plan will be located in Americus or in areas immediately proximate to it.

15. My next critical observations were that (b) Americus has 63.5% of its total population African American as compared to only 30.6% White,[22] and (c) that Americus has 58.4% of its voting age population African American as compared to only 36.0% White.

16. Furthermore, since there is additional Black population located in areas immediately proximate to Americus, (d) maps drawn on traditional districting principles that generally respect the integrity of the City of Americus (as well as that of the other cities within Sumter County) but which do not insist that three districts be drawn be drawn entirely within Americus, but allow for districts that pick up population immediately adjacent to the city, will naturally generate at least three (and sometimes four) majority Black voting age population districts in Americus and its immediate surroundings.

17. Illustrative Maps 1a, b, and c (see Exhibit 2, 3 and 4 appended to this Report and the summary chart, Table 1**,** later in this section) are essentially versions of the same map, differing primarily in the extent to which they contain districts wholly within Americus, on the one hand, and in their compactness, on the other. Each demonstrates that a plan drawn using traditional districting criteria that includes districts which are located either in or very

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[22] The category 'White" as we have coded it are those who give a single race White response to the Census. This is census variable code P003002. Hispanic is an ethnic category (of Spanish heritage) and not a racial category. Some Hispanics self-classify on the Census as White, some as Black, some as Other. Table P5 in the Decennial Summary File 1 contains information about ethnicity.

close to the City of Americus readily generates maps with three districts out of seven such that each of the three has a large Black voting age population majority.[23]

18. Illustrative Map 2 (see Exhibit 5 appended to this Report and the summary chart, Table 1, later in this section) also demonstrates that, in a city with a black voting age population of 58.4%, in a plan which takes as its first priority (after equal population and contiguity) preserving intact the cities and places of the County, the population of Americus is actually large enough to allow four majority-minority voting age population districts to be created entirely or largely within the City of Americus. That map has the district lines of three of its majority-minority districts entirely within the city (configured to run roughly from North to South), but it also creates a fourth majority-minority voting age district by adding in population directly to the north and east of the City in which includes the home inside of Americus of one of the Black incumbents. As noted earlier, the city is large enough, on its own, to constitute the population of 3.64 districts. Population from Americus makes up 100% of the population in three of the seven districts in Illustrative Map 2 and is 69% of the population in a fourth district in that plan.

19. Illustrative Map 3 (see Exhibit 6 appended to this Report and the summary chart, Table 1, later in this section) demonstrates how four majority Black voting age districts out of seven can be drawn in a different way, if we are allowed to extend districts slightly outside of Americus borders. That plan has four districts that extend beyond the city boundaries, but those extensions are more evenly spread around the perimeter of the city than is the case in Illustrative Map 2, though they are still close to the city itself. The configuration in Illustrative Map 3 was designed to increase substantially the overall compactness of the districts according to both the Polsby-Popper and Reock measures of compactness over what is found in Illustrative Map 2 and my other illustrative maps, and it does so. It is far and away the most compact map of the illustrative maps I submit to the Court on both these measures of compactness. Illustrative Map 3 contains one district (a black majority voting age district) wholly within the City of Americus.

20. One clear tradeoff between Illustrative Maps 1a, b, c and Illustrative Map 3 is that, while the latter achieves four Black voting age majority districts, the minority voting age populations in these districts are not as high as the minority voting age populations in the three Black voting age majority districts in the Map 1 series. In the concluding section of

[23] Comparisons of these three maps, which go from three districts wholly in Americus, to two districts wholly in Americus, to only one district wholly in Americus, indicates the potential for improving overall compactness and the compactness of some or all of a plan's majority-minority districts by incorporating population immediately proximate to Americus into districts drawn largely within that city so as to avoid using the highly irregular Americus city boundaries to form part of the perimeters of districts. In other words, Illustrative Maps 1a, 1b, 1c indicate potential tradeoffs between maintaining districts wholly within Americus and compactness.

this Report I address this tradeoff in terms of my assessment (based on VAP data, registration data, turnout data, data on incumbent locations, and whether the Sumter Correctional Institute is located in a district which is being classified as majority black in its voting age) of which districts in which maps should be regarded as realistic minority opportunity to elect districts. In particular, I look at how many of the four majority-minority voting age districts in Map 3 (and Map 2) should be considered as realistic minority opportunity districts – though I also find that the answer to this question may depend upon the election calendar adopted.

21. Gray and white and colored maps for each off these illustrative plans are provided in appended exhibits and below, with seven additional maps showing each individual district in each map. Detailed information on each of the districts in each illustrative map is also provided in these exhibits.

22. To facilitate comparisons of the maps, in all my illustrative maps, district numbers for districts 1-5 correspond to the homes of the incumbents in the Enacted map who were the incumbents from districts of the corresponding number. These are the five geographically specified (non-at-large) districts in the Enacted Map.

23. In all my illustrative maps, District 1, District 5 and District 6 are majority Black in their voting age population. In Illustrative Map 2 and Illustrative Map 3 there is a fourth majority Black voting age district, but it is a different number in each of the two plans. In Illustrative Map 3, the fourth Black voting age majority district is District 2 since it contains the home of the incumbent in the district of that number in the Enacted Map; in Illustrative Map 2, the fourth Black voting age majority district is numbered as District 7.

24. For the colored versions of the five illustrative maps, each color corresponds to the same district number in each of the illustrative plans.

25. At the end of this section, I provide a table with an overview of these maps as a whole, with demographic, geographic and other data. This table offers a rather comprehensive set of comparisons of the features of the five maps with each other, and with the Enacted Map and Plaintiff's Map 2.

26. While there are clear guidelines for mapmaking established by the geography and demography of the county, there are some other the features of the electoral demography and geography in Sumter County that made my task of responding to both aspects of the charge laid upon me by the Court not as simple as it might first seem. As I communicated to Counsel via e-mail memo on September 17, 2019: "[W]hile this case involves a small jurisdiction and a limited number of districts, … I have identified a number of complexities that must be dealt with. For example, the case evidence shows low levels of Black turnout relative to White turnout, as well as high variance in African American turnout levels across

elections. Thus, the level of minority population needed to allow the minority community an equal opportunity to participate in an election and elect candidates of choice will need quite careful scrutiny. That level may vary across parts of the County as well as across types of elections. And relative levels of minority and non-minority turnout might be affected by the timing of elections or the presence of a viable minority candidate with a realistic chance of election success." Also, as I noted in this e-mail memo: "The boundaries of the City of Americus are quite irregular,[24] and this fact can complicate map-making. I further noted that: "I have drawn maps at every level of government, from school boards, to cities, to state legislatures, to Congress, and somewhat counter-intuitively, smaller jurisdictions can present substantial problems in line-drawing because the smaller the district the more likely the need to use as building blocks the smallest units of census aggregation, the census block, and these can be quite numerous." I now turn to some of the factors that complicated my line drawing task and raised questions identifying what constituted a minority opportunity districts.

27. One of these complications is the fact that there are 1,454 census blocks in Sumter County, with 511 in the City of Americus.

28. Another complication is caused by that fact that the great irregularity of the boundaries of the City of Americus[25] generates conflict between two traditional districting criteria, preserving the integrity of city boundaries, on the one hand, and maintaining some level of compactness in districts. This is a particularly important tradeoff in this case since Americus is a city with both a majority of the county's total population and a majority of the County's African American population.

29. A further complication was the location of incumbents. My instructions from the Court were, within the constraints of a map drawn in accord with traditional districting principles, with population and equal protection issues of higher priority, to seek to avoid pairing of incumbents. And I have sought to do so. None of my illustrative maps places two of the incumbents from the geographically defined districts (districts 1-5) in the Enacted Map in a district with another incumbent also from one of the geographically defined districts in the Enacted Map. But, given home locations, some pairing of incumbents involving the incumbents now elected at-large is essentially unavoidable without compromising constitutional and legal priorities.

30. There was one still further complication of which I had not initially been aware: As I learned on October 13, 2019 in an e-mail memo from Counsel for Plaintiff, there is a

[24] A map of Americus showing clearly the irregularities in its perimeter in presented later in this Report

[25] See previous footnote.

medium-sized state correctional facility in Sumter County, the Sumter County Correctional Institute: http://www.sumtercountyga.us/index.aspx?NID=85. It is located in census tract 950300, block 5019. [26] That correctional facility or the proximate jail has 619 inmates. Of these 540 are adults and of these 540, 414 (76.7%) are Black. The census block in which it is located has a total population of 696, of which 528 (75.9%) are Black and 156 (22.4%) are White. Of the VAP in the census block, 74.9% are Black and 24.6% are White. However, in e-mail correspondence with Counsel for both Plaintiff and Defendant it became clear that essentially all those institutionalized in either this facility or the proximate jail either lack the ability to vote or, even if they are legally permitted to vote, they are registered elsewhere.[27] Thus, it would not be appropriate in to include the VAP data from this block in calculating the Black VAP percentages within any district that includes this facility when one is evaluating the possibility that a given district is a minority opportunity district.[28] None of the black majority voting age districts in Illustrative Maps 1a, 1b, 1c, or 2 contain the census block with this correctional institution. While District 2 in Illustrative Map 3 does contain the census block with this facility, the black voting age population in the district outside this block is such that the district clearly remains a Black majority voting age district even if we treat the block as having zero "effective" VAP.[29]

31. By taking advantage of the fact that Georgia is one of the few states to record registration data by race of the resident and also to maintain a voter history file of which elections any given voter has or has not voted in, it is straightforward to demonstrate that there are race-related difference in turnout. A website maintained by the Georgia Secretary of State https://sos.ga.gov/index.php/Elections/voter_turn_out_by_demographics reports registration and overall turnout data by County for each election in the state that is administered at the county or state level.[30] In the section of this Report on minority opportunity to elect I discuss findings from this data.

32. As noted above, all the illustrative maps I provide the Court are drawn using traditional districting criteria and without race as a preponderant motive, focusing rather on considerations such as preservation of city boundaries and compactness. Only at the near final stage of the map-drawing process do I make adjustments to the boundaries if needed to

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[26] I am indebted to Mr. Sells calling this fact to my attention (e-mail memo to all Counsel, October 12, 2019).

[27] I am grateful to Counsel for both Plaintiff and Defendant for their clarifying comments about the correctional institution.

[28] Of course, it is always necessary to include the population of the facility for population equality calculations.

[29] I have calculated the district's adjusted Black voting age percentage as 59.1%.

[30] The Secretary of State also maintains a file of registration data by race by election by county.

address equal protection issues involving race. And only at the final stage did do I make adjustments regarding incumbency pairing, but always in a fashion attentive to potential vote dilution issues.

33. All five of the illustrative maps I provide have at least three of the seven districts that contain a majority African American voting age population. In the analyses I have done, given the population demography and geography of the County, such an outcome is essentially inevitable in any plan which follows traditional districting criteria and does not place incumbency protection over equal protection.

34. Two of the four maps contain four districts that are majority-minority in their voting age population.

35. Four of my five illustrative maps contain three "minority opportunity" districts. These assessments are based on my own independent analyses of a combination of factors, including Black VAP, Black registration, and Black turnout, and take into account the location of the homes of current incumbents and also the location of the Sumter Correctional Facility. The exception is Illustrative Map 2 which, in my view, has only two minority opportunity districts. Illustrative Map 3 has at least three districts which clearly are minority opportunity districts. There is a fourth district in Map 3, which by some criterion would be considered a minority opportunity district. However, this district, District 2, includes the correctional facility, has no Black incumbent, but does have a White incumbent from the district of the same number in the Enacted Map, and it has the lowest Black turnout percentage of any of the four majority-minority voting age districts in Map 3. As I discuss in more detail in the section below on minority opportunity potential, when I consider incumbency advantage, these facts left me unwilling to label District 2 in Map 3 a minority opportunity district, but that decision is a very close call. Were I to learn that the White incumbent in the district was not seeking re-election and that there was a change in the election calendar to a November election for the first round of the non-partisan School Board elections (see discussion of election calendaring issues later in this Report), I would certainly label this district as a *minority opportunity to elect* district, since it contains a majority Black electorate in the 2014, 2016, and 2018 November elections.[31]

36. In general, the illustrative maps differ from one another in multiple ways. [32] Table 1 below summarizes many of the features of the five illustrative maps – with comparisons to the

[31] I would also note that Map 3 is the only one of the maps I am submitting for consideration by the Court that has any real potential for electing four candidates of choice of the minority community in a seven-seat plan. See my discussion of the potential voting rights implications of the election calendar in a later section of this Report.

[32] As pointed out above, in the process of line drawing it became clear to me that there were tradeoffs between traditional redistricting criteria, such as preserving the integrity of city borders (in particular, the highly irregularly shaped border of the City of Americus), on the one hand, and compactness, on the

Enacted Map and to Plaintiff Map 2. [33] Additional details on the seven maps discussed in that table are provided in the section on the maps at the end of this Report and in the Map Exhibits (one per map) appended to the Report (Exhibits 1-6, 8).

other, that suggested the usefulness of submitting multiple maps to the Court that handled this tradeoff in different ways, allowing the Court to make the final legal adjudication after input from the parties to this litigation. Using the standard measures of the two main types of compactness (areal and perimeter), the five maps differ substantially in their compactness scores on these two measures. See Table 1.

[33]For example, in addition to differing on compactness measures, the five maps differ in how many districts are wholly within the City of Americus and in how many districts are largely (90% or more) based on the population of that city. Also, as noted above, there are differences between Illustrative Maps 1a, 1b, and 1c, on the one hand, and Illustrative Maps 2 and 3, on the other, in that the minority percentages in the majority-minority districts in the first set of three maps are slightly lower in the latter than in the former, but there are four, rather than only three, majority-minority voting age and majority minority registration districts in Maps 2 and 3. Most of these details can be found in the summary table below. One important point not shown in Table 1 is that Illustrative Map 3 is the only map which has ever had four districts with a (projected into the new districts) black majority of its election day electorate. However, Illustrative Map 3 only has four majority Black turnout districts in the elections held in November. This point (and the supporting data) is discussed in the section of the Report reviewing the illustrative maps and in the discussion of calendaring.

Table 1 -- Summary Chart of Main Features of the Illustrative Maps

Features	Enacted	Plaintiff	Map 1a	Map 1b	Map 1c	Map 2	Map 3
Total Districts	5	7	7	7	7	7	7
Smaller cities kept whole	Y	Y	Y	Y	Y	Y	Y
Number of districts wholly in Americus	0	0	3	2	1	3	1
Number of districts containing a population that is 90% of more from the City of Americus	0	1	3	3	3	3	1
Districts placing portions of Americus with other cities	3	2	0	1	1	0	0
Number of districts containing a portion of Americus	5	6	4	5	5	4	5
Districts with Schools	3	4	2	3	2	3	4
Black VAP share							
(largest to smallest)	70.58* (5)	75.39 (5)	69.11	70.85 (5)	69.5 (5)	62.71	62.42
	62.76 (1)	64.44 (1)	65.73 (1)	64.78 (1)	68.4	56.32 (1)	61.49*
	43.92	54.5	62.12 (5)	64.09	61.06 (1)	55.11 (5)	60.53 (5)
	36.17	41.33*	43.66*	40.12	41.91	55.06	60.13 (1)
	30.28	41.29	37.66	37.68	37.74	40.03	34.57
		38.37	34.51	36.19*	37.08*	36.58*	33
		26.32	30.36	31.62	29.12	33.73	30.33
Black Registration							
Number of Black Reg Majority Districts	2	3	3	3	3	4	4
Compactness							
Reock	0.39	0.36	0.44	0.41	0.46	0.34	0.5
Polsby-Popper	0.35	0.26	0.29	0.34	0.39	0.24	0.44
Fracking	Y	Y	N	N	N	N	N
Incumbents							
Number of districts with white at large incumbent and black incumbent	NA	1	1	0	0	1	1
Incumbents from districts 1-5 paired with other incumbents from districts 1-5	NA	0	0	0	0	0	0
Total Number of Districts with paired incumbents	NA	2	1	1	2	1	1

37. As I have made clear above, that I offer more than one illustrative remedial map to the Court reflects my view that there can be trade-offs among competing criteria of traditional redistricting which allow for more than one way to address voting rights issues, and that only the Court, after receiving feedback from the parties, can make the ultimate legal decision of which plan to adopt. I do not express a preference among these illustrative maps. Rather, I provide detailed information about the properties of these plans intended to facilitate comparisons among these illustrative maps by the Court and the parties: maps, data about the size of minority voting age population, registration and turnout percentages in each of the districts, my estimate of the number of minority opportunity districts in each plan, compactness scores, information about incumbent pairings, and assessments of features such as degree of preservation of cities. I believe that these maps, and the detailed information provided about each, along with the tables facilitating comparisons of the various maps, will allow the Court, after feedback from Counsel, to adopt an appropriate remedial plan (and election calendar).

38. Because of the kinds of complications identified above vis-a-vis line drawing (including dealing with the irregularities in the Americus border, and the need to reexamine district boundaries so as to reduce any incumbent pairings), and the complications in establishing guidelines for when we have a minority opportunity district (including making use of registration and turnout data by race that could be projected into new district configurations -- data that I did not initially have), and because the tradeoffs among some traditional districting criteria required me to offer the Court more than a single map for it to consider, and because investigation of turnout disparities led me to examine the role of the election calendar, proceeding with all diligence compatible with a thorough review of the data and the mapping possibilities has required me to use almost the entire period allocated by the Court to complete this Report.

39. I fully understand that the Court may direct me to make further changes in any map that the Court wishes to adopt, after having received feedback from the parties about this Report and the illustrative maps in it. But, because of the time contingencies, while I do expect to be able to correct/improve an existing illustrative map, I do not expect be able to draw wholly new maps.

II. General Data

40. In order to provide context for the remedial version of a School Board plan, it is useful to look at the racial composition of the public schools for which the Sumter School Board is responsible. These County schools have a student population that is overwhelmingly minority. Among students in the schools that fall under the jurisdiction of the County School Board, 71.5% (=3,143/4,396) are non-Hispanic Black, 13.8% (=608/4,396) are non-Hispanic White, and 11.9% are Hispanic (=525/4,396). Thus, the non-White population of the schools is 86.2%, Moreover, among the subset of students who are either non-Hispanic White or non-Hispanic Black, non-Hispanic Blacks make up an overwhelming majority of 83%. (https://app3.doe.k12.ga.us/ows-bin/owa/fte_pack_ethnicsex.entry_form

41. Not all school-age children attend public schools run by the County. According to data in Georgia Advisory Committee to the U.S. Commission on Civil Rights. *Desegregation of Public School Districts in Georgia* (2007: p. 90; Plaintiff's Trial Exhibit 260). Sumter is one of the Georgia counties in which over one-third of White children attend private schools. While I was unable to acquire data on the home location of students in the schools for which the County School Board has responsibility, given the population data on those under 18, there can be no doubt that a clear majority of the students in the schools for which the School Board has responsibility come from Americus. [34]

42. There are two types of demographic data that are normally central to crafting any remedial plan involving a violation of voting rights and equal protection: (a) population and (b) voting age population (VAP) broken down by racial categories. Population data is indispensable in any redistricting since the one person, one vote standard for individual districts is based on population; while VAP data, in conjunction with election data, can be used to determine the presence or absence of racial bloc voting, and in assessing the voting age population majority necessary for the creation of a "minority opportunity district."

43. VAP data by race is customarily used in voting right litigation (with citizen voting age population data desirable in cases involving Hispanic voting rights), since only rarely are other types of data (e.g., registration data, turnout data) broken down by race available at the level of census geography needed for redistricting. If, however, there is registration data broken down by race, or turnout data by race, available at the census block level or some other low level of geographically defined unit, social science experts doing analyses of maps and of racial bloc voting patterns would wish to use that data for most purposes (See

[34] Americus is the city in which all the County's Schools are located. 55% of the 18 and under population comes from Americus, and, like the population of Americus, the racial composition of the schools that are the responsibility of School Board is much more heavily minority than the racial and ethnic composition of school-age children in the County overall. The County's total under 18 population is 8,301; of these, 5,211 (63%) are Black and 2,415 (29%) are White, according to the 2010 Census. But if we partition the County into Americus and non-Americus, we find that the County's non-Americus under 18 population is majority white (1,768 White, 1,681 Black), while the Americus under 18 population is over 80% Black (646 White, 3,530 Black).

Grofman, Handley and Niemi, 1992, *op. cit.*) But, as noted earlier, VAP data remains the baseline of eligibility for potential participation.

44. (a) According to the U.S. Census, in 2010,[35] Sumter County had a total population of 32,819 people. Of those 17,001 (51.8%) are Black and 13,852 (42.2%) are White;[36] 17,059 (52.0%) are non-Hispanic Black and 13,625 (41.5%) are non-Hispanic White.[37] Thus, among those in the County who identify as either Black or White, the Black proportion is 55.1%; among those who identify as either non-Hispanic Black or non-Hispanic White, the proportion who are non-Hispanic Black is 55.6%.[38]

(b) In the county as a whole 24,518 are of voting age (74.7%) according to the 2010 Census data.[39] In the county as a whole, using 2010 Census data, among those of voting age, 11,790 (48.1%) are Black and 11,437 (46.6%) are White. [40]

45. Of the county's total population of 32,819, according to the 2010 census, a majority, 17,041 (51.9% of the County's total population), live in Americus; [41] of the county's total voting age population of 24,518, according to the 2010 census, a majority, 12,469 (50.9%) live in Americus. See Table 2 below.

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[35] 2010 US Census Summary File 1, Table P3 – (P003001).

[36] White alone (P003002) and African American or Black alone (P003003)

[37] 2010 U.S. Census Summary File 1 Table P7 -- (African American or Black alone: P007004) (White alone: P007003)

[38] In the county as a whole, using ACS estimates, 16,159 (52.0%) are Black and 13,095 (42.1%) are White; 16,122 (51.9%) are non-Hispanic Black and 12,399 (39.9%) are non-Hispanic White. While population raw numbers have changed according to the ACS estimate, with both groups losing population, when we look at the Black percentage of the County's total population, the difference between the ACS and the 2010 Census data (52.0% and 51.8%) is miniscule.

[39] According to ACS 5-year (2013-2017) estimates 23,541 (75.6%) of the residents of the County are of voting age.

[40] In the county as a whole, using ACS estimates, among those of voting age, 10,991 (46.7%) are White and 11,652 (49.5%) are Black.

[41] According to the 2013-2017 ACS, of the county's total population of 30,687, a majority, 15,839 (51.6% is estimated to live in Americus.

Table 2 -- Sumter County Population and Voting Age Population, Broken Down by Cities and Places

	Population	White	Black	White %	Black %	VAP	White VAP	Black VAP	WVAP%	BVAP%
Sumter County	32,819	13,852	17,001	*42.2%*	*51.8%*	24,518	11,437	11,790	*46.6%*	*48.1%*
Americus	17,041	5,219	10,818	*30.6%*	*63.5%*	12,469	4,483	7,288	*36.0%*	*58.4%*
Not Americus	15,778	8,633	6,183	*54.7%*	*39.2%*	12,049	6,954	4,502	*57.7%*	*37.4%*
Andersonville	255	155	90	*60.8%*	*35.3%*	194	124	64	*63.9%*	*33.0%*
Cobb	195	58	131	*29.7%*	*67.2%*	149	45	98	*30.2%*	*65.8%*
Desoto	195	58	131	*29.7%*	*67.2%*	149	45	98	*30.2%*	*65.8%*
Leslie	409	215	173	*52.6%*	*42.3%*	309	174	122	*56.3%*	*39.5%*
Plains	776	399	331	*51.4%*	*42.7%*	632	337	257	*53.3%*	*40.7%*

Source: *US Census Bureau SF1, P003001, P003002, P003003, P010001, P010003, P010004*

46. Of the county's total of 16,789 active registered voters, a majority, 8,608 (51.2% of the County's total population), live outside of Americus. See Table 3 below.

Table 3 -- Sumter County Registered Voters

	Population	Total Voters	Active Voters	Inactive Voters	White	Black	White %	Black %
Sumter County								
Active Voters (Matched)		17,978	16,789		7,647	8,115	45.5%	48.3%
Inactive				1,189	600	477	50.5%	40.1%
Americus	17,041	8,856	8,181	675	2,650	5,027	29.9%	56.8%
Not Americus	15,778	9,148	8,608	515	4,997	3,088	54.6%	33.8%
Andersonville	255	166	150	16	87	52	52.4%	31.3%
Desoto	195	82	78	4	22	50	26.8%	61.0%
Leslie	409	238	225	13	124	92	52.1%	38.7%
Plains	776	310	296	14	137	140	44.2%	45.2%
No City	14,143	8,352	7,859	468	4,627	2,754	55.4%	33.0%

Source: *GA Secretary of State, obtained October 28, 2019, geocoding through Texas A&M Geocoder (https://geoservices.tamu.edu)*

47. In 2019, Sumter County has 16,789 total active registered voters, of which 7,647 (45.5%) are White and 8,115 (48.3%) are Black. See Table 3 above.

48. There are eight census tracts in Sumter County. Their racial composition according to the 2010 census is as shown below. Although some census tracts include whole cities or places,

in general, census tracts do not coincide with city boundaries This fact makes it difficult to use census tracts for redistricting purposes.

Table 4 -- Sumter County Census Tracts

Census Tracts	Population	White	W%	Black	B%	VAP	White VAP	Black VAP	WVAP%	BVAP%
950100	1,203	812	67.5%	348	28.9%	938	641	267	***68.3%***	***28.5%***
950200	5,597	1,830	32.7%	3,486	62.3%	3,925	1,472	2,270	***37.5%***	***57.8%***
950300	7,711	2,045	26.5%	5,442	70.6%	5,485	1,624	3,738	***29.6%***	***68.1%***
950400	2,995	1,756	58.6%	1,054	35.2%	2,347	1,451	779	***61.8%***	***33.2%***
950500	3,936	2,430	61.7%	1,240	31.5%	2,954	1,974	816	***66.8%***	***27.6%***
950600	2,130	853	40.0%	1,065	50.0%	1,619	711	772	***43.9%***	***47.7%***
950700	6,522	2,539	38.9%	3,344	51.3%	5,073	2,234	2,382	***44.0%***	***47.0%***
950800	2,725	1,587	58.2%	1,022	37.5%	2,177	1,330	766	***61.1%***	***35.2%***

Source: *US Census Bureau SF1, P003001, P003002, P003003, P010001, P010003, P010004*

49. There are 26 census block groups in Sumter County. A table showing population and racial composition of these census blocks is shown below, with data taken from the 2010 U.S. Census.

Table 5 -- Block-Groups in Sumter County

Block Groups	Population	White	Black	White %	Black %	VAP	White VAP	Black VAP	WVAP%	BVAP%
132619501001	1,203	812	348	67.5%	28.9%	938	641	267	68.3%	28.5%
132619502001	1,904	869	866	45.6%	45.5%	1,387	698	580	50.3%	41.8%
132619502002	1,134	308	801	27.2%	70.6%	790	244	531	30.9%	67.2%
132619502003	1,482	626	808	42.2%	54.5%	1,019	509	476	50.0%	46.7%
132619502004	1,077	27	1,011	2.5%	93.9%	729	21	683	2.9%	93.7%
132619503001	1,942	411	1,487	21.2%	76.6%	1,233	302	902	24.5%	73.2%
132619503002	1,585	989	513	62.4%	32.4%	1,223	804	371	65.7%	30.3%
132619503003	712	51	632	7.2%	88.8%	513	39	457	7.6%	89.1%
132619503004	1,078	72	974	6.7%	90.4%	773	57	700	7.4%	90.6%
132619503005	2,394	522	1,836	21.8%	76.7%	1,743	422	1,308	24.2%	75.0%
132619504001	980	765	154	78.1%	15.7%	775	642	98	82.8%	12.6%
132619504002	1,086	582	440	53.6%	40.5%	857	481	328	56.1%	38.3%
132619504003	929	409	460	44.0%	49.5%	715	328	353	45.9%	49.4%
132619505001	1,134	621	469	54.8%	41.4%	846	519	303	61.3%	35.8%
132619505002	1,252	1,053	157	84.1%	12.5%	993	867	101	87.3%	10.2%
132619505003	1,550	756	614	48.8%	39.6%	1,115	588	412	52.7%	37.0%
132619506001	550	48	478	8.7%	86.9%	410	42	352	10.2%	85.9%
132619506002	807	377	375	46.7%	46.5%	624	315	271	50.5%	43.4%
132619506003	773	428	212	55.4%	27.4%	585	354	149	60.5%	25.5%
132619507001	1,632	761	642	46.6%	39.3%	1,251	665	432	53.2%	34.5%
132619507002	1,629	624	835	38.3%	51.3%	1,182	490	586	41.5%	49.6%
132619507003	1,712	397	1,195	23.2%	69.8%	1,216	365	756	30.0%	62.2%
132619507004	1,549	757	672	48.9%	43.4%	1,424	714	608	50.1%	42.7%
132619508001	945	537	351	56.8%	37.1%	728	428	261	58.8%	35.9%
132619508002	828	300	502	36.2%	60.6%	631	242	367	38.4%	58.2%
132619508003	952	750	169	78.8%	17.8%	818	660	138	80.7%	16.9%

Source: *US Census Bureau SF1, P003001, P003002, P003003, P010001, P010003, P010004*

50. There are 11 VTDS (voting precincts) in Sumter County; Their racial composition according to the 2010 census is as shown below:

Table 6 -- VTDs in Sumter County

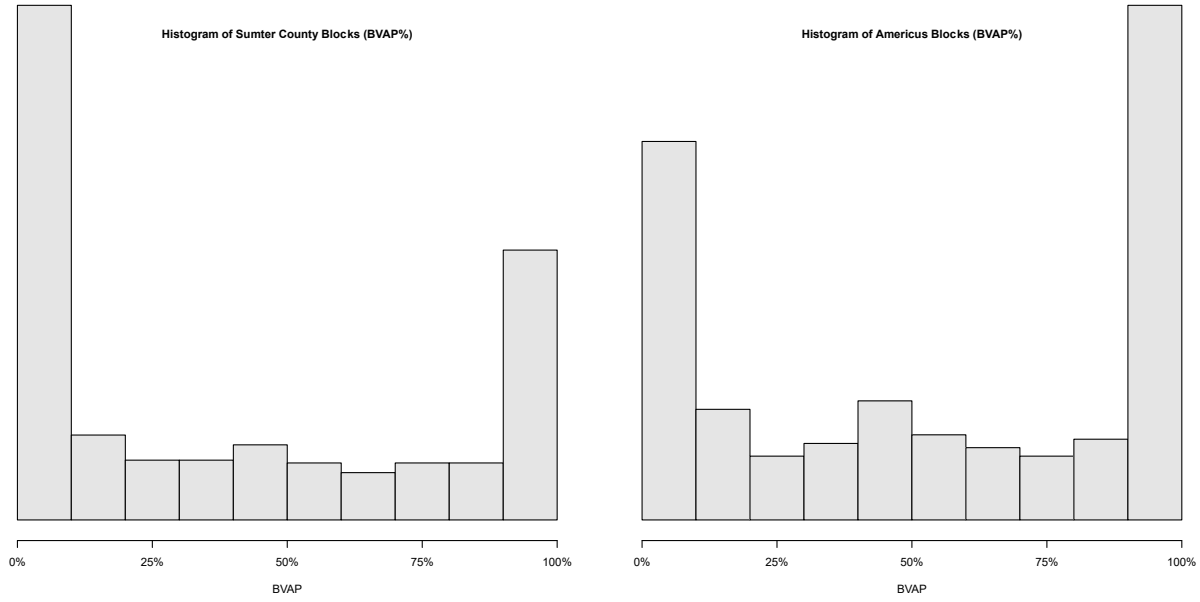
VTDs	Population	White	Black	White %	Black %	VAP	White VAP	Black VAP	WVAP%	BVAP%
132610-26	1,991	1,036	815	52.0%	40.9%	1,546	857	600	55.4%	38.8%
132615	2,800	1,625	1,027	58.0%	36.7%	2,226	1,354	770	60.8%	34.6%
132617	1,213	562	582	46.3%	48.0%	899	446	409	49.6%	45.5%
1.33E-23	2,871	1,381	1,232	48.1%	42.9%	2,152	1,113	888	51.7%	41.3%
132628	1,364	793	501	58.1%	36.7%	1,032	607	381	58.8%	36.9%
132629	688	522	150	75.9%	21.8%	538	422	106	78.4%	19.7%
1326C1-27	5,870	1,357	4,197	23.1%	71.5%	4,015	1,119	2,684	27.9%	66.8%
1326C2-27	6,019	3,145	2,332	52.3%	38.7%	4,894	2,791	1,706	57.0%	34.9%
1326C3-27	5,150	715	4,289	13.9%	83.3%	3,558	571	2,898	16.0%	81.5%
1326N-26	566	472	55	83.4%	9.7%	456	393	39	86.2%	8.6%
1326W-27	4,287	2,244	1,821	52.3%	42.5%	3,202	1,764	1,309	55.1%	40.9%

Source: *US Census Bureau SF1, P003001, P003002, P003003, P010001, P010003, P010004*

51. There are 1,453 census blocks in Sumter County; a histogram of their racial composition according to the 2010 U.S. census is shown below. It is visually apparent that, even though

the county is rather evenly divided between Black and non-Black voting age population, at the block level there is clear evidence of racial segregation.

Chart A: Histograms of Census Block BVAP



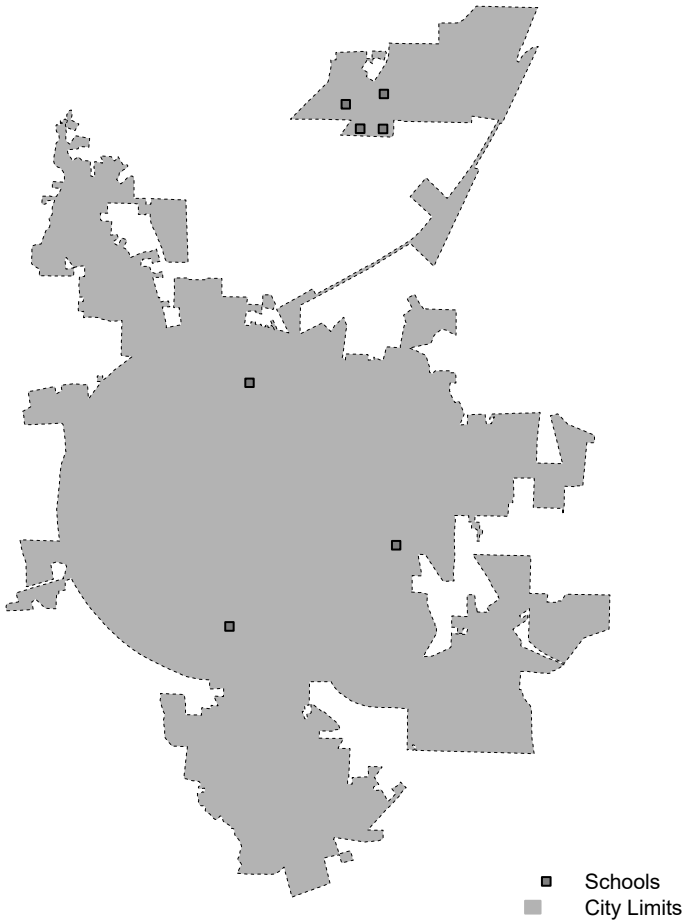
52. There are 511 census blocks in the City of Americus; a histogram of their racial composition according to the 2010 U.S. census is shown above. It is visually apparent that, even though the city has a majority Black voting age population (58.4%), at the block level there is clear evidence of racial segregation.

53. Comparing the histograms and data tables above for tracts, VTDs, census block groups, and census blocks shows clearly that data at the block level is needed to conduct line drawing that is attentive to equal protection issues. Such data is required to assure that districts neither "pack" nor "crack" protected minority groups in such a fashion as to dilute their vote.

54. The Sumter County School district has eight schools (one primary school, two elementary schools, two middle schools, one ninth grade academy, with one high school, and one alternative school program [42] We show below a map with school locations for the first seven of these. All are located in Americus.

[42] See Dr. McBride's Expert Witness Report (Docket item 38-1).

Figure 1 -- Location of Schools



Source: *Shapefile downloaded from Sumter County GIS website,* http://maps.kcsgis.com/ga.americus_sumter_public/

III. Ascertaining The Nature of a "Minority Opportunity District."

55. The determination of what constitutes a minority opportunity district in a particular election requires a careful investigation of local circumstances. It hinges on four key factors: (a) the relative size of the Black and White electorates in the election, (b) the relative levels of cohesion of the White and African-communities in the election, (c) the relative levels of turnout of the White and African American communities in the election, and (d) the degree to which the election is polarized along racial lines. There is evidence on the record on all these points in Dr. McBride's Expert Witness Report that is drawn from school board elections from the period 2010-2016 along with data on some other elections involving Black candidates for which we have election results at the county level. [43] Here, taking my data from the Court Opinion of March 17, 2019, I will focus on the data from school board elections on 2014-16 under the current plan, in line with the well accepted principle that, when available and where there are no reasons to regard these elections as idiosyncratic, recent elections from the jurisdiction itself of the identical or similar type to the contests under issue provide the best evidence on patterns of voting.[44] While I later make use of data on voter turnout by race available from the Georgia Secretary of State, here I limit myself to the Census data on voting age population that was available at trial.

56. I will initially focus on school board elections conducted under the Enacted Map that have two characteristics: (1) there is at least one Black candidate in the contest, and (2) the election can be regarded as a definitive one in that either all Black candidates in the contest are eliminated, or a Black candidate is elected to the School Board in that contest. These elections are the ones that most closely represent the conditions of minority success or failure that are crucial for understanding minority opportunity to elect in a two stage election process where a majority vote requirement exists, and where a runoff is required among the top two candidates if no candidate receives a majority on the first round.

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[43] The Court's Opinion of March 17, 2019 found that the two other prongs of the *Gingles* Test are satisfied in light of the evidence presented to the Court, i.e., in addition to finding that an additional majority- minority VAP district could be drawn, the Court found that voting in the County in elections of the type under challenged is polarized along racial lines, and that the voting patterns of Black and White voters are generally quite cohesive. In particular, the Court reviewed evidence that Black and White communities voting cohesively in virtually all bi-racial contests, with White voters voting primarily for White candidates, and Black voters voting primarily for Black candidates. The Court also reviewed evidence that, in districts that are not majority Black in voting age population, if there is a Black candidate, the minority candidate usually loses in the primary or, even if advanced to the general election because of multiple White candidates in the primary who split the votes of White voters, the Black candidate goes on to lose the general election (the definitive election, and one in which a majority vote is required). In contrast, in the two existing Black voting age majority districts, the candidate of choice of the African American community always won. (In the school board contests reviewed, the candidate of choice of the African American community in these Black voting age majority districts is African American.) I review below some of that evidence pursuant to my discussion of the requirements for a "minority opporunity district."

[44] See Grofman, Handley and Niemi (1992), *op cit*.

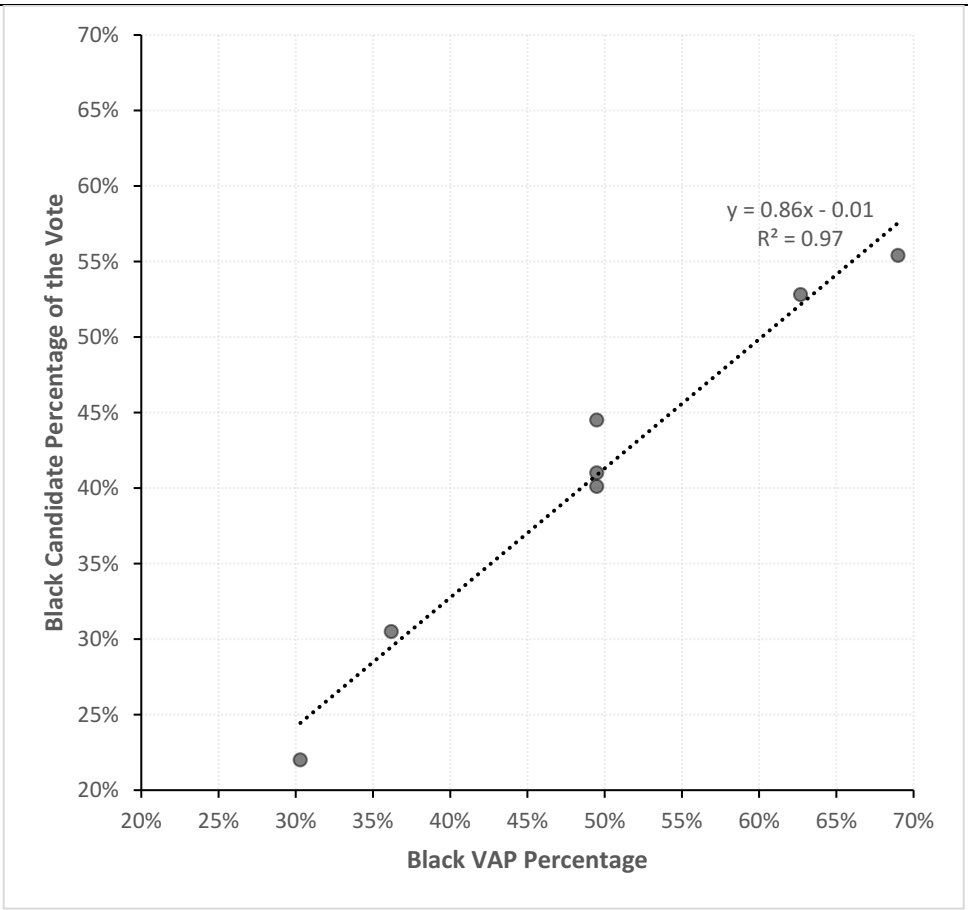
57. In the seven bi-racial elections that satisfy these two conditions (first round elections in district 1,2, 3, and 5 in 2014; runoff elections in July 2014 in at-large district 1 and at-large district 2, and the at-large first round election in at-large district 2 in May 2016), my retabulation of the data for these elections provided in the March 17, 2019 Court Opinion (taken from the Expert Witness Report of Dr. McBride, Doc. 38-1) shows that the estimated average level of support for White candidates from White voters is 90.0%, with a range from 84.7% to 95.0%; while the estimated average level of support for Black candidates from Black voters is 94.4%, with a range from 85.3% to 99.5%.[45]

58. I have reviewed the data on election outcomes in the County and compared the vote share of Black candidates to the Black voting age percentage in the constituency and used this information to assess the size of the Black voting age population that would allow for the creation of a "minority opportunity district." Here, to avoid even any potential controversy over estimates I have done a calculation that is based entirely on numbers in the public record -- the actual vote share of Black and White candidates, and the Black and White voting age populations of the constituencies in which the elections were conducted (data taken from the U.S. Census) This data provides one of the calculations on which I will rely, but I have placed more weight on data subsequently obtained on registration and turnout by race projected into census blocks.

59. By regressing the vote share of Black candidates in the seven School Board elections identified above versus Black VAP percentage (see Figure 2 below) it is obvious that there is a very strong relationship between Black VAP percentage and African American candidate vote share, with the relationship resembling a racial census of the constituency due to the extremely high levels of racial polarization, with an almost perfect fit of a straight line to the data.

[45] The legal question of whether or not voting in Sumter County School Board elections is polarized along racial lines has been settled by the March 17, 2019 Court opinion. But there was some controversy raised by the expert for the Defendant about the data used by the expert for Plaintiff, Dr. McBride. This dispute was addressed by the Court's finding that the testimony by the Defendant's expert was not credible. In the elections that I regard as most relevant, in my view, there is no possible dispute: voting for the Sumter County School Board is dramatically polarized along racial lines. Indeed, as shown in Figure 2 reported below, which does not use any of the estimates of racial polarization offered by Dr. McBride, school board elections in the County with both White and Black candidates are shown to exhibit levels of polarization only somewhat lower that what was found in **the** South in the 1960s, and 1970s, and 1980s. The racial composition of the electorate allows for an almost perfect prediction of the likely outcome of Sumter School Board elections in the existing districts because voting is so polarized along racial lines. (The data reported are for elections in which there is only a single Black candidate. If there had been multiple Black candidates, I would have pooled the votes for all Black candidates. This is standard practice in estimating racial bloc voting, since candidates of a given race are also competing for support with each other.)

Figure 2 -- Vote Percentage of the Black Candidate in Biracial School Board Contest vs. Black VAP percentage (with corrected Black VAP of 0.69 for District 5 Election)



60. We may use the regression equation shown in Figure 2, whose percentage point share of the Black candidate in a school board election is estimated to be given by 0.855*Black VAP percentage -0.014 to obtain an estimate of the minimum level of Black voting age population needed to give a 50-50 election chance. Solving for when this equation yields a value of 0.50, I obtain an estimate of a competitive contest as one in which Black VAP is at least 60.2%. The R^2 for this equation is .969 (adjusted R^2 of .963), suggesting an almost perfect fit to the data (a perfect fit would be a value of 1.00). [46] The value of 60.2% as a

[46] While I do not rely on any of this data for any of my conclusions about minority opportunity to elect, I have reviewed the ecological inference estimates of voting behavior by race, and turnout by race, that were provided by Dr. McBride in his expert witness report (Doc 38-1) and I reference this data in my discussion of the evidence for polarized patterns of voting. It is also possible to use this data (in a six-parameter model drawing on the mathematical framework of (Brace, Kimball, Bernard Grofman, Lisa

perfectly competitive district is realistic in that we indeed observe the victory of a Black candidate of choice in a School Board election in which the minority VAP is 62.7%. In that election the winning African American candidate receives 52.8% of the vote. However, we are able to develop better measures of whether a district is an opportunity to by looking at actual voter turnout by race to determine the black turnout proportion in the district in past elections. Moreover, as discussed below, there are factors that can generate an increase in turnout in a redrawn district from what had been observed in past elections in districts configured differently.

61. While there are many factors that affect the proportion of minorities who vote,[47] in the discussion below I will focus on four factors that can be affected by the way in which district lines are drawn and/or by the choice of election calendar. Variation in these four factors may lead to an expectation that a School Board district in Sumter County requires either less or more than a roughly 60.2% Black voting age percentage in order to accurately characterize it as a "minority opportunity district". [48] But even more importantly, of course,

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Handley, and Richard Niemi. 1988. Minority voting equality: The 65 percent rule in theory and practice. Law and Policy, 10(1):43-62) to create an alternative estimate of the voting age population needed for a district in which African Americans have a realistic opportunity to participate in the electoral process and to elect candidates of choice. The estimate derived from this six-parameter model (60.0%) is virtually identical to the one I developed from publicly available data (60.2%) on VAP and election outcomes reported above. However, as I noted earlier, in my conclusions, while I do examine voting age data by race, I also have actual registration and turnout by race projected into the various districts in the various plans that is even more directly relevant to the determination of what constitutes a minority opportunity district.

[47] It is obvious why we ought to generally expect minority share of voting age population to be lower than minority share of the total population, namely the simple fact that minority groups tend to be younger on average and also may have more children under the age of 18. But there is also a very large social science literature on voter turnout identifying key factors that can affect Black participation levels among potential Black voters (Black VAP) relative to the corresponding participation rates among potential White voters (White VAP) (see especially Verba, S., Schlozman, K.L. and Brady, H.E. (1995). *Voice and Equality: Civic Voluntarism in American politics*. Cambridge, MA: Harvard University Press.). These include: (1) an average lower socio-economic status for potential minority voters, since it is well established that, in the U.S., income and education are highly correlated with participation rates; (2) lingering effects of a past history of discrimination, which may include memories in still living adults, or stories passed on to children by grandparents, of situations in which attempts at Black political participation were repressed or generated White reprisals; (3) a higher level of belief among potential minority voters that political participation is inefficacious since forces not within the control of minorities determine their life chances; (4) higher rates of disenfranchisement among minorities for either those in prison or those who are ex-felons who have not been able to renew their voting rights.

[48] We must be careful to distinguish the minority population that is required to create a minority opportunity district for a non-partisan election from that which might be required for a partisan election in the same constituency. In determining what constitutes a minority opportunity district in a partisan election we need to recognize the two-stage process involving a partisan primary and then a general election that pits candidates from the two major parties against one another, since the electorate represented in each party's primary is a non-random selection from the overall electorate in the constituency. In particular, in Georgia, the racial composition of the electorate in a Democratic primary

the data on voter registration and turnout can provide direct insights into what can appropriately be labeled a minority opportunity to elect district.

(a) The presence or absence of a minority incumbent in the contest who is the candidate of choice of the minority community, and the presence or absence of a White incumbent who is the candidate of choice of the White community, affects the realistic opportunity of a minority candidate to win election in the district. Generally, speaking incumbents are advantaged because of name recognition from a past contest or past contests, and the likelihood that they have a campaign organization wholly or at least partly already in place, and have already identified a social network to which campaign funding efforts might be directed. While I cannot directly estimate the value of incumbency advantage in School Board contests in Sumter County, there is a body of research showing incumbency advantage in local elections, where "incumbency advantage" is defined as the additional vote share percentage an incumbent could expect to receive as compared to a candidate for the same seat who was running for election for the first time.[49] In other types of elections, such as partisan elections for the U.S. House, incumbency advantage has been estimated as anywhere from 3 percentage points to 10 percentage points (depending upon time period and region).[50]

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will be far more heavily skewed toward African American voters than is the case for the general election, since a much higher proportion of African Americans in Georgia affiliate with the Democratic party than is the case for White voters. (For example, in the County as a whole, in the May 2018 Democratic primary, Black voters are 83% of that primary's electorate; in the May 2018 Republican primary Black voters make up 1% of that primary's electorate; while in the November 2018 election, Black voters make up 43% of the electorate.) In general, because of the potential of White crossover voting in the general election coming from White Democrats voting for an African American nominee of their party, and the fact that the higher Black proportion in the Democratic primary facilitates the selection of a Democratic party nominee who is a candidate of choice of the African American community, it will almost always be true that it is takes a lower Black VAP percentage to create a minority opportunity district in a partisan general election than it would in a non-partisan election in the same constituency. (My most recent work now takes into account these features of partisan elections when considering minority opportunity to elect in partisan contests: see Grofman, Bernard, Lisa Handley and David Lublin 2001. Drawing effective minority districts: A conceptual framework and some empirical evidence. North Carolina Law Review, 79:1383-1430; Lublin, David, Lisa Handley, Tom Brunell, and Bernard Grofman. 2020 forthcoming. Minority Success in Non-Majority Minority Districts -- Finding the 'Sweet Spot'. Journal of Race, Ethnicity, and Politics.)

49 See Trounstine, Jessica. 2012. "Evidence of a local incumbency advantage." Legislative Studies Quarterly 36 (2): 255-80, which shows particularly high levels of incumbency advantage in low turnout local elections; and de Benedictis-Kessner, Justin. 2016. "Off-Cycle and Out of Office: Election Timing and the Incumbency Advantage." Journal of Politics 80 (1):119-132, which shows incumbency advantage in local mayoral elections.

[50] Alford, John R. and John R. Hibbing. 1981. "Increased Incumbency Advantage in the House." *Journal of Politics* 43 (4):1042-1061; Gelman, Andrew, and Gary King. 1990. Estimating incumbency advantage without bias. *American Journal of Political Science* 34(4): 1142-1164 (see esp. Figure 2, p. 1158); Jacobson, Gary C. 2015. "It's Nothing Personal: The Decline of the Incumbency Advantage in US House Elections." *Journal of Politics* 77(3): 861–873. https://www.journals.uchicago.edu/doi/10.1086/681670 (Accessed October 20, 2018).

I expect the incumbency advantage to be even greater in non-partisan elections than in partisan elections since these elections lack a partisan cue that would lead some voters to support a candidate of the party to which the voter was closest almost regardless of the voter's level of knowledge of the candidate or his/her opponent.

In the elections of 2014 and 2016, because there was a change from the previous nine district plan to a five-district plan with two at-large seats, in one sense there were no incumbents. But there were individuals who had previously been on the School Board who were running for re-election to the School Board, albeit usually from districts with different configurations and district numbers or running at-large rather than from their previous district. Plaintiff's Trial Exhibit 34 shows that five of the candidates in the 2014 School Board bi-racial contests reviewed in the Court Opinion were, in this sense, incumbents. Four of the five won, and the only one who lost was one who ran against a fellow incumbent. Of the five, two were Black (Edith Ann Green in District 5 in 2014, formerly from District 8; Alice Green in District 1 in 2014, formerly from District 9) and three were White (Michael Busman running at-large, formerly from District 5, who defeated Kevin Pless, formerly from District 3, in the 2014 at-large election; and Meda Krenson in District 2 in 2014, formerly from District 2).[51] In the 2016 bi-racial contest for the at-large seat being contested that year, the White incumbent, Sylvia Roland won.[52] Overall, this data reinforces the expectation[53] that *ceteris paribus*, School Board incumbents who seek re-election are likely to win re-election.

(b) The realistic chances of a minority candidate to prevail in the election are also strongly related to minority turnout in the election.[54] It is well established in the political science literature that, *ceteris paribus*, the absence of minority candidates depresses minority turnout.[55] If the minority candidate is seen as having a realistic chance to win, then minority community registered voters have a stronger incentive to participate (unless the success of the minority candidate can be viewed as more or less of a foregone conclusion). This statement obviously applies to situations where there is a minority incumbent, but it can also apply in a newly crafted district if that district seems open for potential minority success, and it can also apply in a district whose configuration has been changed to add minority voters

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[51] Only Meda Krenson was running in 2014 from a district with the same number as her previous district.

[52] School Board member Roland did marginally less well in 2016 than she did in 2014 when she ran for this same seat against the same challenger.

[53] According to Ballotpedia, , in America's largest school districts, "81.31 percent of school board incumbents who ran for re-election in 2014 won another term." https://ballotpedia.org/Analysis_of_incumbency_advantage_in_the_2014_school_board_elections

[54] Hajnal (2010) shows that, compared with high-turnout municipal elections, low-turnout elections tend to produce electorates that are Whiter, wealthier, older, and better educated." (Hajnal, Zoltan. 2010. *America's Uneven Democracy*. New York and London: Cambridge University Press.)

[55] Barreto, Matt A. 2007. "Sí, Se Puede! Latino Candidates and the Mobilization of Latino Voters." *American Political Science Review* 101(3): 425–441.

even if the district has not changed that greatly, or if the district is one whose previous bi-racial contest was close enough that the district is now seen as one where a get out the vote effort directed to the minority community may pay off in the form of the election of a candidate of choice of the minority community. [56] Moreover, if there is potential for the success of a candidate of choice of the minority community such a candidate is more likely to run. Candidates (both minority and non-minority) are unlikely to run in districts that they think they have no chance of winning -- but this may be especially true for minority candidates given their limited economics resources relative to Whites. [57] It is straightforward that the higher the minority proportion of the potential electorate, *ceteris paribus*, the higher the likely minority proportion of the actual electorate Thus, when district configurations change, we should not assume that minority turnout share will remain the same. Moreover, changing the district minority voting age population sufficiently that it now becomes a minority opportunity district will, in general, be expected to increase minority turnout. [58] Minority population sufficient to make realistically possible the election of a minority candidates of choice has a double effect on the likelihood of minority electoral success. It

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[56] Because I have been able to reach conclusions about "minority opportunity to elect" using only publicly available data on election outcomes, voting age percentages by race from the U.S. Census, and Secretary of State data on voter registration and turnout by race projected into districts in the Enacted Map and illustrative alternatives to it, as noted earlier, my conclusions about that question have not relied upon the ecological regression and ecological inference estimates of voting behavior provided by Dr. McBride (Doc 38-1) cited by the Court in its Court's March 17, 2019 Opinion.

[57] As Regina Branton observes (2009. The Importance of Race and Ethnicity in Congressional Primary Elections. *Political Research Quarterly,* Vol. 62, No. 3 (September), pp. 459-473 at p. 460, with full citations to references cited in the quote omitted): "The strategic-politician approach … argues that candidates tend to enter races in which they stand a chance of winning and tend to avoid races in which the likelihood of failure is high (Jacobson and Kernell 1983; Cox and Katz 2002). Accordingly, the incentive for a would-be African American or Latino candidate to seek office in districts with a small African American or Latino population may be low, as the likelihood that an African American or Latino candidate will win in this type of district is low. It is plausible to expect that in districts lacking a sizeable African American population, the likelihood of an African American candidate entering the race will be low; likewise, the likelihood of a Latino candidate emerging in a district with a small Latino population will be low. Consequently, would-be African American or Latino candidates may be more willing to test the electoral waters in districts characterized by a large African American or Latino population, respectively, as this is the type of venue in which they are most likely to win (D. Canon 1999; Krebs 1999)."

[58] Of course, even if there is a minority candidate on the ballot, if the district is one in which there is not a realistic opportunity for the minority community to elect a candidates of choice, turnout among potential minority voters will be reduced, since it is also well established in political science that, for potential voters of all races, contests in which their preferred candidate has little chance to win tends to depress incentives to vote. There is a vast literature in political science on the role of electoral competition in increasing electoral participation, much of it building on the insights in Anthony Downs, *An Economic Theory of Democracy*. New York: Harper and Row, 1957.

increases the incentives for minority candidates to run, and it increases their chances of winning if they do run both because the district now has a higher minority population and because turnout among the potential minority voters is apt to increase.

(c) Whether or not the Sumter Correctional facility is included in a district can affect the nature of the relationship between electoral success of a candidate of choice of the minority community and the Black VAP in the district since we the adults housed in the that correctional facility have either lost the right to vote or are registered elsewhere. Because the adult prisoners are disproportionately Black (77%), the "effective Black VAP percentage" in any district that includes the correctional facility must be slightly adjusted downward. But we will only be concerned with this adjustment for districts that are Black majority in voting age population. In Illustrative Maps 1 (a, b, c) and Illustrative Map 2 the correctional facility is not located in any district with an African American voting age majority. In Illustrative Map 3, District 2 includes the facility but, as noted previously, it remains a heavily majority-minority VAP district even after we correct for "effective" VAP.

(d) The geographic and community of interest nature of the district can affect minority turnout. In Sumter County, on average Whites are considerably more affluent than Blacks (see the March 17, 2019 Court Opinion for details). Thus, we would expect White candidates to generally have more campaign resources, However, if there is a more dense population area with a high minority concentration within the district, and the district's overall dimensions are not so far spread out geographically that campaigning across the entire district is more difficult for candidates with limited resources, then door-to-door campaigning available to minority candidates may partially compensate for lack of financial resources.[59]

62. When district configurations change then there can be changes in incentives for turnout that affect the relative turnout levels of Black and White voters. Nonetheless, given that we have data on Black registration and turnout percentages that we can project into individual districts, it is invaluable for us to examine those percentages directly.[60] See Table 7 below.

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[59] Bernard L Fraga (2018. *The Turnout Gap: Race, Ethnicity, and Political Inequality in a Diversifying America*. Cambridge University Press. (Kindle Edition at p. 139 of 274: with full citation to articles cited in the text omitted) writes: "Office seekers running in heavily minority districts have a strong incentive to focus mobilization efforts on minorities (Rosenstone and Hansen 1993; Leighley 2001), such that politicians of any race should tailor their campaign strategies to district conditions (Uhlaner 1989a). This does not mean that all candidates can do so equally well; minority candidates may be able to tap into previous experience to mobilize co-ethnic constituents more easily (Shaw, de la Garza, and Lee 2000; McConnaughy et al. 2010; Rocha et al. 2010), perhaps leveraging shared ethnicity in order to build a connection with voters (Barreto 2010) or using racially inclusive get-out-the-vote strategies to mobilize otherwise low turnout groups (García Bedolla and Michelson 2012)."

[60] Such an analysis is an important part of the "intensely local appraisal" that is required (*Thornburg v. Gingles* 478 U.S. at 79 : quoting *Rogers v. Lodge* 458 U.S. 613, 622) to determine vote dilution and also to determine which districts offer the minority community a realistic

Table 7 – Number of Districts with a Black Majority of the Total Electorate

	Enacted	Plaintiffs	Map1a	Map1b	Map1c	Map2	Map3
Majority of Districts							
Black Voting Age	2	3	3	3	3	4	4
Black Registration	2	3	3	3	3	4	4
Black Turnout							
May 2014	2	2	3	3	3	3	3
November 2014	2	2	3	3	3	3	4
May 2016	2	2	2	3	3	1	2
November 2016	2	3	3	3	3	3	4
May 2018	2	2	3	3	3	2	3
November 2018	2	2	3	3	3	2	4

Note: *Black majority in this context means having over 50% of all the voters, not of just those voters who are either White or Black. In some additional districts, Black voters may outnumber White voters without being a majority of all voters.*

63. As the chart above demonstrates, even when holding district configurations constant, there is an additional factor which needs to be taken into account when we are assessing the realistic probability of the minority participating fully in the electoral process and electing a candidate of choice, namely election calendar.[61]

64. The other contests (or initiatives or referenda) that are on the same ballot as the non-partisan School Board contest can also affect the relative levels of White and Black turnout. In general, in partisan contests, we expect higher levels of turnout if there are contested primaries or closely contested general elections.[62] Also, candidates at other levels of government who are strongly favored (or opposed) by the minority community may generate higher levels of minority turnout for the School Board if those elections are at the same time as School Board elections. In general, the more important the highest office on

opportunity to elect candidates of choice. In particular, I would note that the ratio of Black turnout to Black Voting Age population need not be the same in all parts of the county.

[61] I informed Counsel of my probable attention to election calendar in my email on September 17, 2019, writing: "relative levels of minority and non-minority turnout might be affected by the timing of elections … ."

[62] Of course, presidential primaries are on a different calendar than primaries for state offices or for federal offices such as the U.S. House of Representatives

the ballot the higher the overall level of turnout.[63] *Ceteris paribus*, the absence of a major top of the ticket election on the ballot, or some other election which would provide a strong incentive to vote, acts to depress turnout, and this is especially true for minority voters. It is normally the most important office on the ballot that establishes the principal spur to turnout, e.g., turnout in presidential election years is higher than turnout when there is no presidential contest on the ballot. [64] In general, the lower the overall turnout, *ceteris paribus*, the lower we expect the minority share of the electorate to be. In particular, turnout in general elections will, *ceteris paribus*, be expected to be higher than turnout in primaries, since a partisan competition is more likely to bring voters to the poll. This expectation has been widely confirmed by looking at turnout data comparing primary and general elections within the same constituency. Moreover, since primaries are low turnout elections, *ceteris paribus*, we expect minority turnout share in a primary to be lower than minority turnout share in the general election.

65. The data I report in the table above suggests how minority turnout levels relative to those of Whites can be affected by the election calendar. Local or county elections are often scheduled jointly with other state-wide elections, or with federal elections, in order to minimize administration costs. But *ceteris paribus*, the nature of the offices on a ballot (e.g., which are seen as important offices), and which contests are competitive, and how many different elections are on a ballot, affect the incentives voters have to get to the polls. Thus, exactly which contests get placed together with a non-partisan election matters for the relative levels of minority and non-minority turnout in that non-partisan election. In particular, other elections on the ballot, including which party primaries are on a ballot and how competitive each is, or whether there is a general election coincident with the School Board election, can, *ceteris paribus*, be expected provide even greater incentives to get minority voters to the polls than the opportunity to influence the outcome in a nonpartisan school board election. As noted above, a clear implication of the political science literature on the determinants of voter turnout is that, *ceteris paribus,* minority turnout in primaries is expected to be lower than minority turnout in general elections.

66. Now that I have State of Georgia provided validated data on turnout by race that has been geocoded, I am able to test the expectation for Sumter County that Black turnout relative to White turnout will be higher in the general election in November than in May, when the non-partisan School Board election is held at the same time as primary elections for state

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[63] Of course, as noted above, turnout is impacted by multiple factors.

[64] However, we might also expect, holding constant the nature of the most important election on the ballot, that the more contests on a ballot there are the more likely is voter turnout since, *ceteris paribus*, a multiplicity of election contests can increase the number of contests in which voters have a particular interest in affecting the outcome and/or in which the contest is expected to be competitive.

and federal offices.[65] The results (see Table 8Table 8 below) reinforce many decades of social science research in many different jurisdictions, that, *ceteris paribus*, minority turnout relative to White turnout is lower in elections held at dates that do not coincide with the date of a general election. This data shows clearly that if the (first round) non-partisan election for School Board is held concurrently with the first round of partisan primary elections in the state in May, that the minority share of the electorate (looking at the voting behavior of the present set of registered voters) will be lower than would be the case if the non-partisan election were held at the same time as a general election in November when there are federal level (and/or state) elections on the ballot.[66] This result holds for each of the three elections paired comparisons (2014, 2016, 2018). See below.

Table 8 -- **Sumter County Voter Actual Turnout by Race in May and November Elections 2014-2018**

Sumter County Turnout	Total Voters	White	Black	White %	Black %	White/Black
2014						
May	**4,525**	2,289	1,508	50.6%	33.3%	**1.52**
November	**8,125**	3,636	3,103	44.8%	38.2%	**1.17**
2016						
May	**5,807**	3,229	1,956	55.6%	33.7%	**1.65**
November	**11,092**	5,244	4,298	47.3%	38.7%	**1.22**
2018						
May	**3,741**	1,993	1,544	53.3%	41.3%	**1.29**
November	**10,529**	5,438	4,394	51.6%	41.7%	**1.24**

Source: *GA Secretary of State Voter Registration file merged with Voter History Files downloaded from https://elections.sos.ga.gov/Elections/voterhistory.do (current active registered voters only).*

67. The data above are for current registered voters whose past voting behavior we examine. By using the present set of registered voters, we can be sure that our findings can better be projected as applying to future elections. The pattern in the table above is quite clear; the black share of turnout is uniformly higher in November than in May of the same year. I have, however, also gone to the Georgia Secretary of State website and obtained the actual racial composition of the electorate in each of these six elections, and the pattern shown in the table above, where the black proportion of turnout is higher in the November election than in the May election uniformly holds, but the percentages are different since now I am using contemporaneous registration data, rather than data limited to present-day registered

[65] Presidential primaries are held at a different time than the non-partisan general election or partisan primaries for state office or other federal offices. In 2016, both the Democrats and the Republicans held their nominating primary on March 1, 2016.

[66] This disparity holds even when the federal election does not include a presidential contest.

voters.[67] We find that in 2014, 2016, and 2018, the Black share of May turnout was 39.6%, 36.5%, and 42.5%, respectively; while the Black share of November turnout was 44.1%, 42.8%, and 42.9% respectively.

68. In two of the three years, the difference in Black turnout between November and May is 4 to 6 percentage points, using either contemporaneous registration data or data on current registered voters projected back in time. Only in 2018 are the black turnout differences between the two dates not that large, but even in 2018 the ratio of Black turnout to White turnout is lower in May than it is in November. The 2018 election demonstrates the effect on minority turnout that comes with the presence of a minority candidate in an important Democratic primary contest that is highly contested. The 2018 election was distinctive in that Stacey Abrams, an African American, ran against White Democratic opponent Stacey Evans for Governor of Georgia. Stacey Abrams went on to (narrowly) win the Democratic primary and then lost (again narrowly) in the general election to White Republican opponent Brian Kemp.

69. Since primaries for a given party primarily affect only the turnout incentives of identifiers with that party and African Americans in Georgia (and elsewhere) are overwhelmingly Democratic identifiers, and White in Georgia are preponderantly Republican identifiers, especially in Sumter County,[68] which party has a primary on the ballot and whether or not that primary is contested, can be expected to affect the relative levels of White and Black turnout in the County. The 2018 comparisons of May and November turnout indicates the effect of a highly contested Democratic primary for an important office featuring a biracial contest on increased Black turnout in May, but there is also the potential for important contested Republican primaries to have a similar effect on the White turnout in May. This variability in which party's supporters have the strongest incentive to go the polls creates variability in relative minority and non-minority turnout levels that affects whether or not we expect the minority community to be able to elect a candidate of choice to the non-

[67] We expect both White and Black turnout percentages to be higher using contemporaneous data than using only the set of voters registered in 2019, since there are voters in 2014, 2016 and 2018 who are not still registered as of 2019 given that there has been some loss of population in the County over the decade. There are a small number of voters who are neither Black nor White (mostly Hispanic and Asian-American), but here I have focused on the Black share of the full set of voters, since I make no assumptions about how other minorities vote in bi-racial School Board elections with at least one Black and at least one White candidate.

[68] The participation of Sumter County African-Americans in Republican primaries is miniscule. See https://sos.ga.gov/index.php/Elections/voter_registration_statistics. In 2018, only 22 out of 1,831 Republican primary voters were Black. In 2018, of the White voters in the May primary, 1,772 voted in the Republican primary and only 272 voted in the Democratic primary.

partisan Sumter County School Board elections that are held simultaneously with partisan primaries.

70. As shown in the table below comparing the various plans, when we examine data at the district level in the various illustrative maps, we find that, because of the difference in Black turnout levels relative to those of Whites for elections held in May as compared to elections held in November when there is a general election, in each of my illustrative maps in each of the three election years (2014, 2016, 2018) the number of districts where Black voters are a majority of the actual electorate is never lower in November than it is in May. In some plans, however, we have the same number of majority Black turnout districts in a map for both the May and the November election.[69] That uniformity is, however, not true when we examine Map 3, the one plan with the potential for creating four Black majority turnout districts. For Map 3 the number of majority Black turnout districts is uniformly lower in May than in November. For an election held concurrent with the general election in November, Illustrative Map 3 always yields four majority Black turnout districts.

Table 9 -- Majority-Minority Voting Turnout Districts by Election Timing

	2014		2016		2018	
	May	Nov	May	Nov	May	Nov
Enacted	2	2	2	2	2	2
Plaintiffs	2	2	2	3	2	2
Map1a	3	3	2	3	3	3
Map1b	3	3	3	3	3	3
Map1c	3	3	3	3	3	3
Map2	1	3	1	3	2	2
Map3	3	4	2	4	3	4
Map5	2	3	1	3	3	3

Note: *Number of districts calculated from GA voter history files. For a district to count as a majority-turnout district, it must have at least 50% of the voters be African-American.*

71. These findings of consistent turnout disparities between elections held in May and elections held in November in the Black share of the actual electorate, and potential reduction in the number of districts that would be majority Black in turnout in May as compared to November, in my view, raise potential issues of equal protection in terms of the election calendar. The potential equal protection argument about the inappropriateness of tying the non-partisan School Board election to the calendar for partisan primaries rise in magnitude

[69] That is true, for example, in the Enacted Map, since that map has no potential for allowing the number of majority-minority turnout districts to rise above 2 of 7.

when we note the dramatically lower levels of overall turnout for both minorities and non-minorities in the primaries as compared to the general election, and we also take cognizance of the way in which tying the date of non-partisan School Board elections to the election calendar for partisan primaries leaves minority turnout relative to non-minority turnout almost certain to be affected by which party has any contested primaries and how competitive those primaries might be.

72. As the Court notes in its March 17, 2019 opinion, the five-two plan (five geographic districts and two districts at-large) now found to be a Voting Rights Act violation was readopted on February 17, 2014. The bill that selected that plan also "moved school board elections from the November general election to the **…** election held in May.[70] Thus, scheduling School Board elections to again be in November would be consistent with past state and county practices. It was when elections were held in November that the plan then in effect led to an election of a Black majority on the School Board.

[70] The Court characterizes these May elections as "non-partisan" but, as noted above, they include partisan primaries.

IV. Traditional Districting Principles

73. Below are listed the basic principles of traditional districting (sometimes referred to as "good government" redistricting criteria). These include the criteria emphasized in the instructions to me in the Court Order of September 23, 2019.

74. (a) conformity to a standard of one person, one vote. In particular, pursuant to the Court order, in all maps that I submit to the Court, district populations fall within a plus or minus five percentage point deviation from ideal. Using data from the 2010 Census, a seven-district plan for the County School Board has an ideal population per district of 4,688 (=32,819/7). [71]

(b) avoiding the creation of districts which are divided into two or more discontiguous parts;

(c) avoiding splits (partition into two or more districts) of long-standing political subunits such as cities, unless these splits become obligatory by the need to satisfy population equality, or for some other compelling reason, such as equal protection;[72]

(d) avoiding use of race as a preponderant criterion for redistricting;

(e) avoiding either fragmentation or packing of geographically concentrated minority populations that might have the effect or purpose of minimizing or diluting the voting strength of constitutionally protected minorities, and/or lead to retrogression in the ability of minority communities to realistically have an "equal opportunity" to elect candidates of choice;

(f) avoiding unnecessarily ill-compact districts. The concept of compactness can be interpreted in at least three different ways,[73] with the first two of these (area measures and

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[71] Using the estimates in the 2013-17 ACS, a seven-district plan for the County School Board has an ideal population per district of 4,438 persons (=31,070/7); while a five-district plan has an ideal population per district of 6214 persons (=31,070/5).

[72] I have also avoided "fracked" districts. The concept of "fracking" is closely related to the preservation of city boundaries to the greatest extent feasible and to the concept of contiguity. (Cervas, Jonathan R., and Bernard Grofman. 2019. "Tools for identifying partisan gerrymandering with an application to congressional districting in Pennsylvania." *Political Geography* . https://linkinghub.elsevier.com/retrieve/pii/S0962629818303342.) A district is *fracked* when two or more discontiguous pieces of a city (or some other relevant political subdivision) are found within the same district. Fracking is normally an indicator of sloppy districting and a potential indicator of gerrymandering. However, in situations where there are cities with highly irregular boundaries (such as is the case with Americus) fracking can be difficult to avoid.

[73] See Niemi, Richard G., Bernard Grofman, Carl Carlucci and Thomas Hofeller. 1990. "Measuring compactness and the role of a compactness standard in a test for partisan and racial gerrymandering." *Journal of Politics* 52(4):1155-1181.

perimeter measures) regarded as the most important. Mapping programs now regularly calculate a variety of measures of each type. In this Report, I make use of the most common measure of each type, ones repeatedly cited in court opinions: The *Polsby-Popper* measure looks at perimeter irregularity by examining the area of the district compared to that of a circle with similar perimeter, while the *Reock* measure compares the area of a district with that of the district's circumscribing circle (Reock 1961; Polsby and Popper 1991).[74]

I interpret "unnecessarily compact" in the context of the other criteria listed above. In particular, I note that the City of Americus is very ill-compact in perimeter terms (see map of Americus below). The Reock compactness score for the City of Americus is 0.35, but the Polsby-Popper score for that city is an abysmally low 0.05. There are six city council districts within that city and each has very low Polsby-Popper compactness scores.[75] Thus, whenever one of my illustrative plans uses Americus city borders as a part of district boundaries, that plan will contain some districts that are less compact than plans that might be drawn that split that city in multiple ways and contain no districts whose perimeter is defined in part by the city's boundaries. The tradeoff between compactness and crossing of city boundaries is one reason why I chose to present for consideration/illustration more than one remedial redistricting plan. That tradeoff between the competing criteria of maintaining the Americus boundaries, on the one hand, and compactness, on the other, is one best left to the Court.[76]

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[74] Let A_D = area of district, P_D= perimeter of district, $Circle_D$= minimum circumscribing circle;

$$\text{POLSBYPOPPER} = \frac{4\pi A_D}{P_D 2}$$

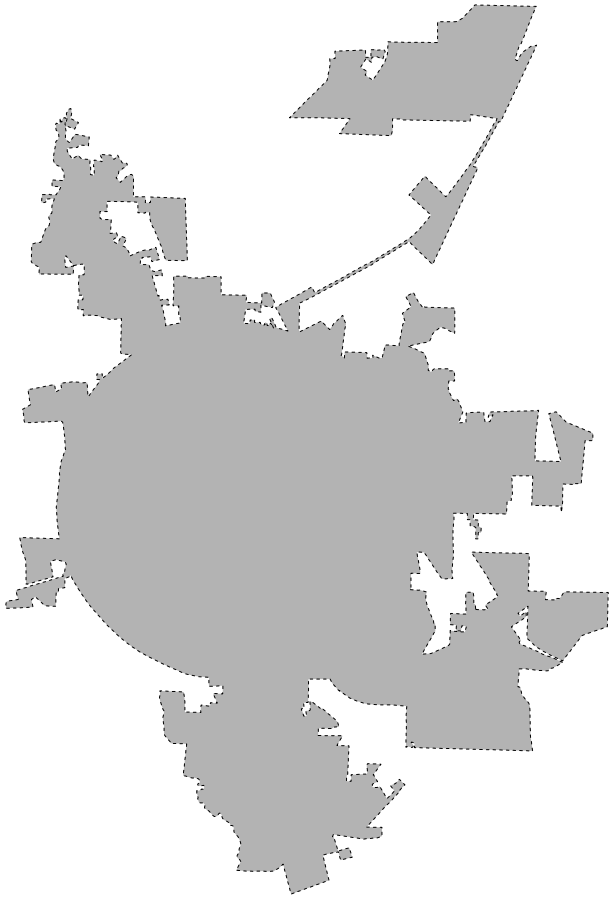
$$\text{REOCK} = \frac{A_D}{A(Circle_D)}$$

[75]

	City Council Mean	Dist 1	Dist 2	Dist 3	Dist 4	Dist 5	Dist 6
Reock	0.31	0.17	0.24	0.41	0.34	0.29	0.38
Polsby Popper	0.13	0.09	0.09	0.14	0.2	0.12	0.16

[76] In my view, and I believe the view of most redistricting experts, compactness is to be sought not as an end it itself but because it contributes to the satisfaction of other principles of representation: (1) avoiding the appearance of arbitrariness of district boundaries, and the creation of boundaries which suggest the possibility of gerrymandering; (2) making gerrymandering somewhat more difficult by placing a constraint on permissible map-making; (3) assisting election administrators in locating polling stations close to where voters live; (4) assisting voters in being able to finding a polling station in an area with which they might be expected to be familiar. However, the tradeoff between compactness and preservation of city boundaries issues can be much less salient when dealing with districts drawn almost wholly within a city, since the boundaries may be such that most voters in the district both within and outside the city can readily recognize them.

Figure 3 -- Map of the City of Americus



In addition, as an additional factor that might be considered after higher order priorities had been met, there is also

(h) avoiding unnecessary pairings of incumbents. Here, as I noted earlier, a pairing of one of the at-large incumbents with other incumbents is virtually impossible to avoid, but I have been able to avoid pairings of one geographically designated incumbent against another geographically designated incumbent.

(i) Furthermore, since this is a School Board whose elections we are considering, it may be useful to consider school locations in relation to districts, with the notion that having more representatives with a particular school or schools located within their district might be desirable. But this criterion has no legal status, and the location of four schools within a cluster eliminates the possibility of each School Board member having a school in their district. Nonetheless, for informational purposes, I report how many districts in each plan have at least one school located within them. (This same information is also reported in Table 1.)

Table 10 -- Districts Containing at least one School							
	Enacted	Plaintiff	Map 1a	Map 1b	Map 1c	Map 2	Map 3
Districts with Schools	3	4	2	3	2	3	4

75. I began my conceptual and illustrative remedial line drawing by taking as my three top priorities, the first three of the neutral good government criteria identified above, i.e., (a) population equality across districts (no more than a plus or minus five percentage point deviation), (b) district contiguity, and (c) the preservation of existing political subunit boundaries to the greatest extent feasible.

76. In all my illustrative maps, all smaller cities and places were kept whole. If compactness concerns dictated that some boundaries were to be drawn outside of the City of Americus, I sought to limit the extent to which the districts extended outside the city boundaries.[77]

77. I did line drawing *de novo*, paying no attention to past district boundaries in a plan found to violate the Voting Rights Act, nor to the location of incumbents elected under that invalidated plan. Only after I had drawn plans according to neutral criteria, and only after I had then examined those plans for compliance with equal protection standards, as I would judge these from the perspective of a social science expert on redistricting, did I look at incumbency-related issues.

78. At no time during my line drawing did I make use of data linked to political parties. In the data set I used for line drawing I had no political data on voter partisan affiliations, and no data on the outcomes of partisan elections.[78]

79. After determining how many Black VAP majority districts were found in plans that had been drawn according to neutral principles without taking race into account, in order to determine if there were ways to improve such plans from an equal protection perspective, I then asked whether there were was a need to reconfigure those Black majority districts within the plan so as to better satisfy equal protection concerns, i.e., so as avoid either "cracking" or "packing" of minority populations.

[77] And, as noted earlier, I also sought to avoid "fracked" districts (see definition in a footnote above).

[78] My analysis of the voter turnout implications of the Stacy Abrams race in 2018 did not come until after I had completed line drawing.

80. At no time did I apply a standard of racial proportionality in determining how many "minority opportunity" districts should be drawn; rather I drew plans reflecting the overall population geography of the county (and of the City of Americus).

81. There are several communities of interest that are identified on the Sumter County website: (1) The Andersonville Civil War Village Brickyard Plantation and RV Park (in the City of Leslie), (3) the Jimmy Carter National Historic Site (near Plains), (4) Habitat for Humanity Global Village and Discovery Center (in the City of Americus), and (5) Koinonia Farm (in the City of Americus). As far as I am aware all of these have been kept intact within a single district.

82. Based on my explorations of the geography and demography of the County, as noted earlier, I have concluded that any seven-district plan that fairly reflects the very large population and high minority population in the City of Americus and its immediate surroundings will result in at least three districts of seven with clear African-American voting age majorities if that plan is drawn in accordance with traditional districting criteria. And, given the high black population concentrations in the City of Americus and areas immediately proximate to it, plans that contain four districts with African American voting age majorities can also readily be drawn based on traditional districting principles.

83. The table below shows a more detailed comparison of compactness scores across the plans. To facilitate comparisons, each plan's compactness scores are ordered from highest to lowest, since district configurations vary across maps. Plaintiff Map and Illustrative Map 2 each have overall Reock and Polsby-Popper scores lower than the corresponding scores in the Enacted Map on both measures (i.e., they are each less compact on both measures). Illustrative Maps 1a and 1b have higher scores than the Enacted Map on one compactness measure and lower on the other. Illustrative Map 1c and Illustrative Map 3 have higher compactness scores than the Enacted Map on both measures, with Illustrative Map 3 the most compact of all maps. Of course, as I have earlier empasized, *ceteris paribus*, the more that a plan has districts configured wholly within Americus, the lower the likely overall compactness scores of the plan, especially with respect to the Polsby-Popper measure. Illustrative Map 1c and Illustrative Map 3, which are the most compact of the illustrative plans, each have only one district wholly within Americus.

Table 11 -- Reock Compactness

BOE	Plaintiffs	Map1a	Map1b	Map1c	Map 2	Map3
0.39	***0.36***	***0.44***	***0.41***	***0.46***	***0.34***	***0.5***
0.47	0.55	0.72	0.6	0.58	0.5	0.63
0.46	0.47	0.51	0.49	0.54	0.45	0.58
0.41	0.41	0.42	0.47	0.54	0.43	0.51
0.33	0.38	0.41	0.39	0.51	0.41	0.5
0.27	0.3	0.38	0.38	0.4	0.3	0.47
	0.25	0.35	0.28	0.39	0.16	0.45
	0.19	0.27	0.27	0.27	0.13	0.36

Note: *The average value is in bold in the first gray cell.*

Table 12 -- Polsby-Popper Compactness

BOE	Plaintiffs	Map1a	Map1b	Map1c	Map 2	Map3
0.35	***0.26***	***0.29***	***0.34***	***0.39***	***0.24***	***0.44***
0.44	0.37	0.5	0.52	0.58	0.48	0.62
0.44	0.36	0.42	0.46	0.43	0.45	0.5
0.38	0.29	0.4	0.38	0.39	0.25	0.42
0.3	0.25	0.25	0.36	0.37	0.17	0.42
0.17	0.24	0.25	0.31	0.35	0.14	0.39
	0.21	0.13	0.24	0.33	0.09	0.37
	0.11	0.08	0.08	0.29	0.08	0.37

Note: *The average value is in bold in the first gray cell.*

84. I also call the reader's attention to Table 1, a chart presented earlier in the opening Overview Section of this Report, which is asummary comparison of the five illustrative seven-district remedial plans I am conveying to the Court,[79] along with comparisons to the current plan found unconstitutional and to Plaintiff's plan 2 shown in Document 38-1.[80] In the next section I present the maps and information about each illustrative seven-district map. Maps for each of the individual districts in these plans, and a color map for each illustrative plan

[79] Full data on these of these illustrative maps along with maps, is provided in the Exhibits appended to this Report.

[80]A variety of information is contained in Table 1 about each plan: treatment of the geographic integrity of the smaller cities, treatment of the geographic integrity of the City of Americus, information about the share of Black voting age population in the four districts in the plan which have the largest Black voting age percentages, average Reock and Polsby Popper compactness scores, and information about the pairing of incumbents.

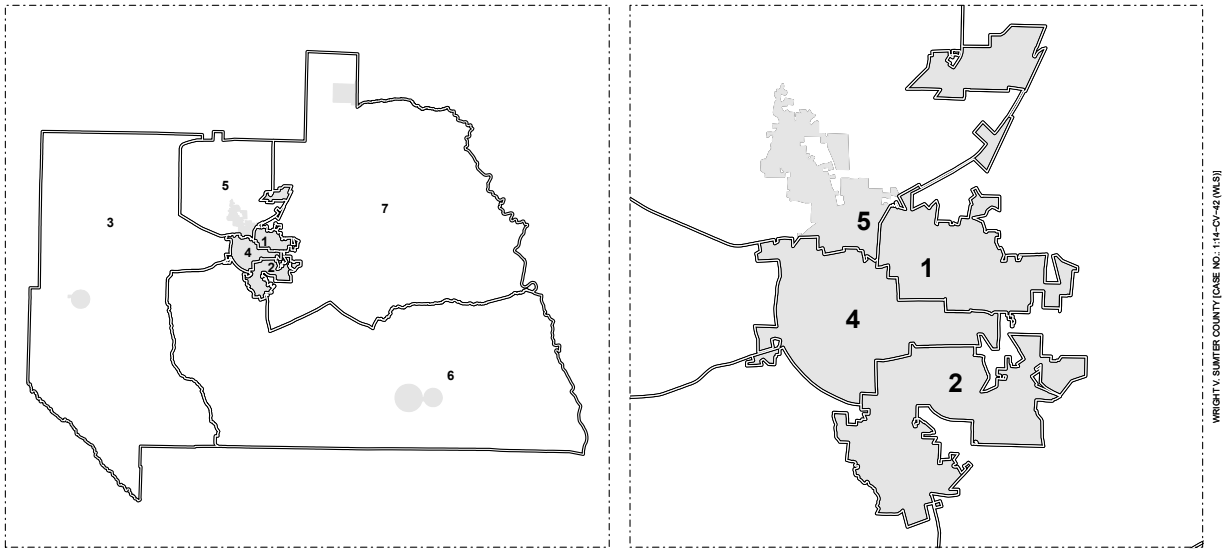
using a common coloring scheme is found in Exhibits 1-6 and 8, which include maps for the Enacted Plan and also for Plaintiff Plan 2. The Enacted Map and Plaintiff Map 2 are also briefly discussed in an Appendix to this Report.[81]

[81] A five-district plan is described in Exhibit 7 (see below).

V. Overview of Illustrative Maps

85. Below is a figure showing the overall configuration of Map 1a.

Figure 4 -- Illustrative Map 1a



Map 1a

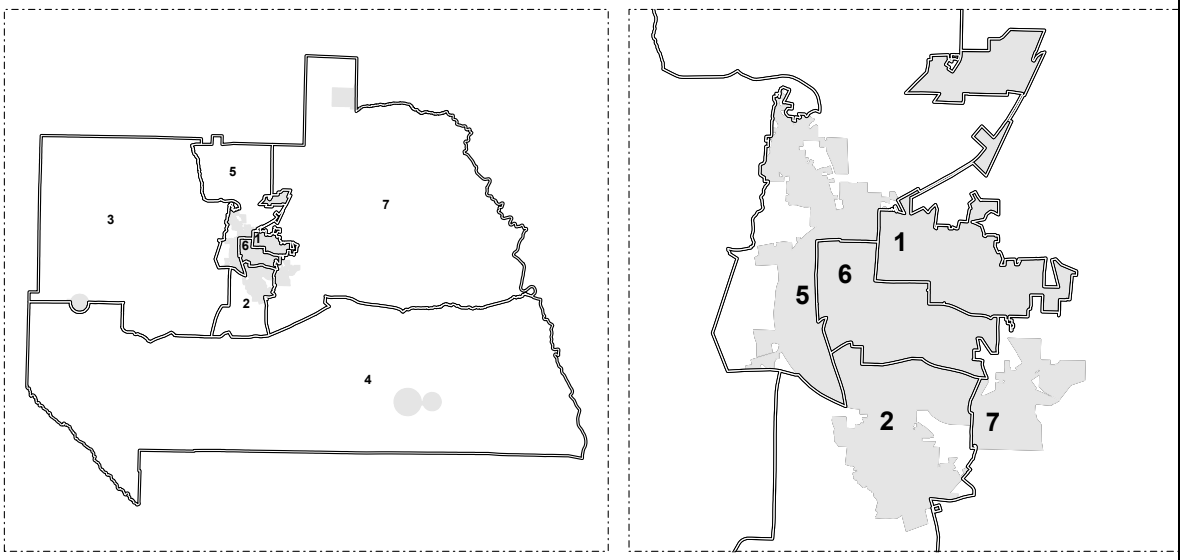
86. The table below shows the population and racial characteristics of the districts in the Map 1a seven district plan, along with population numbers for each district and population deviation.

Table 13 – Map1a Summary Data

Map 1a	Population	Deviation	White	Black	VAP	White VAP	Black VAP	WVAP%	BVAP%
Total	32,819		13,852	17,001	24,518	11,437	11,790	47%	48%
District 1	4,621	(67)	1,117	3,245	3,154	908	2,073	***29%***	***66%***
District 2	4,655	(33)	2,708	1,557	3,910	2,421	1,187	***62%***	***30%***
District 3	4,547	(141)	2,267	2,063	3,539	1,866	1,545	***53%***	***44%***
District 4	4,744	56	2,678	1,748	3,625	2,164	1,251	***60%***	***35%***
District 5	4,699	11	1,461	3,071	3,313	1,155	2,058	***35%***	***62%***
District 6	4,727	39	1,018	3,437	3,334	856	2,304	***26%***	***69%***
District 7	4,826	138	2,603	1,880	3,643	2,067	1,372	***57%***	***38%***

87. Below is a figure showing the overall configuration of Map 1b.

Figure 5 -- Map 1b



Map 1b

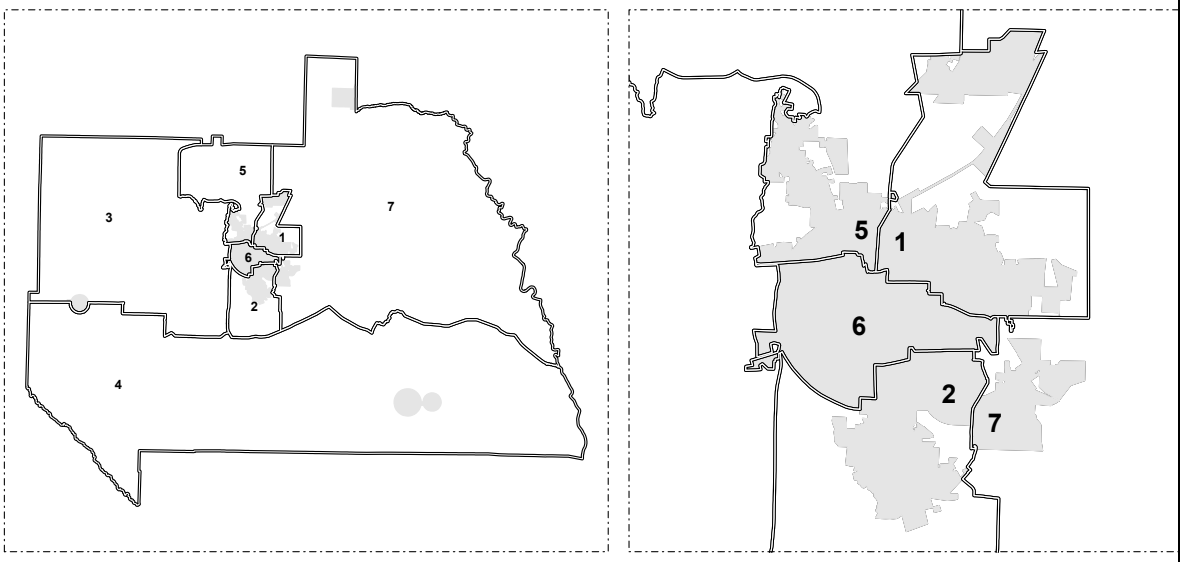
88. The table below shows the population and racial characteristics of the districts in the Map 1b seven district plan along with population numbers for each district and population deviation.

Table 14 – Map1b Summary Data

Map 1b	Population	Deviation	White	Black	VAP	White VAP	Black VAP	WVAP%	BVAP%
Total	32,819		13,852	17,001	24,518	11,437	11,790	47%	48%
District 1	4,467	(221)	1,110	3,106	3,038	903	1,968	***30%***	***65%***
District 2	4,730	42	2,751	1,640	3,940	2,443	1,246	***62%***	***32%***
District 3	4,845	157	2,754	1,829	3,730	2,220	1,350	***60%***	***36%***
District 4	4,695	7	2,429	1,985	3,632	1,995	1,457	***55%***	***40%***
District 5	4,517	(171)	1,057	3,343	3,081	825	2,183	***27%***	***71%***
District 6	4,736	48	1,171	3,217	3,453	1,002	2,213	***29%***	***64%***
District 7	4,829	141	2,580	1,881	3,644	2,049	1,373	***56%***	***38%***

89. Below is a figure showing the overall configuration of Map 1c.

Figure 6 -- Map 1c



Map 1c

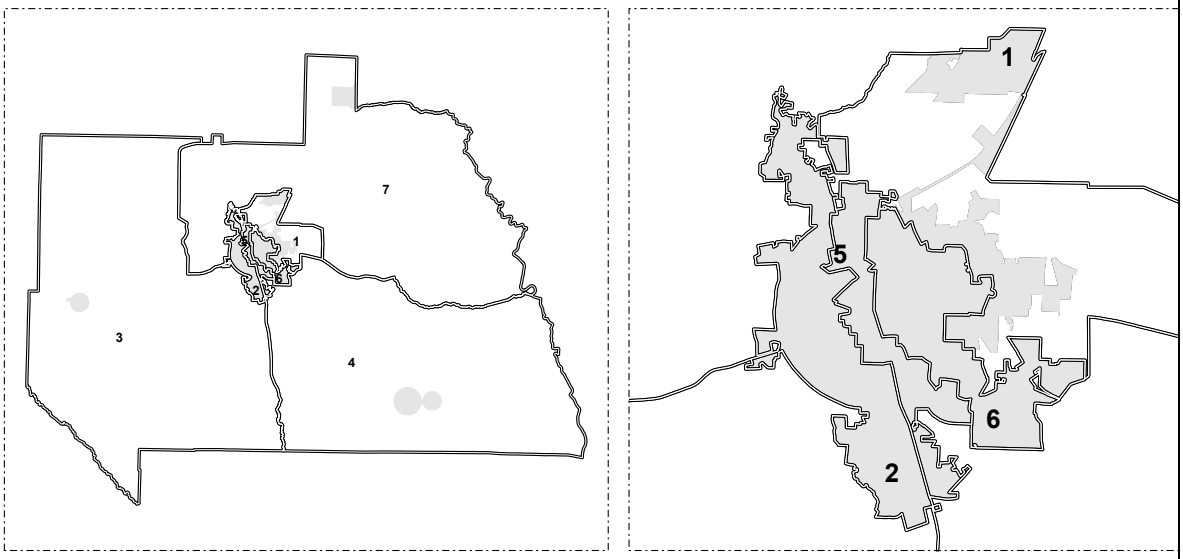
90. The table below shows the population and racial characteristics of the districts in the Map 1c seven district plan along with population numbers for each district and population deviation.

Table 15 – Map1c Summary Data

Map 1c	Population	Deviation	White	Black	VAP	White VAP	Black VAP	WVAP%	BVAP%
Total	32,819		13,852	17,001	24,518	11,437	11,790	47%	48%
District 1	4,764	76	1,358	3,144	3,292	1,108	2,010	***34%***	***61%***
District 2	5,016	328	3,020	1,607	4,183	2,666	1,218	***64%***	***29%***
District 3	4,884	196	2,712	1,887	3,749	2,190	1,390	***58%***	***37%***
District 4	4,489	(199)	2,248	1,977	3,457	1,838	1,449	***53%***	***42%***
District 5	4,553	(135)	1,129	3,304	3,162	891	2,193	***28%***	***69%***
District 6	4,616	(72)	1,016	3,321	3,286	856	2,251	***26%***	***69%***
District 7	4,497	(191)	2,369	1,761	3,389	1,888	1,279	***56%***	***38%***

91. Below is a figure showing the overall configuration of Map 2.

Figure 7 -- Illustrative Map 2



Map 2

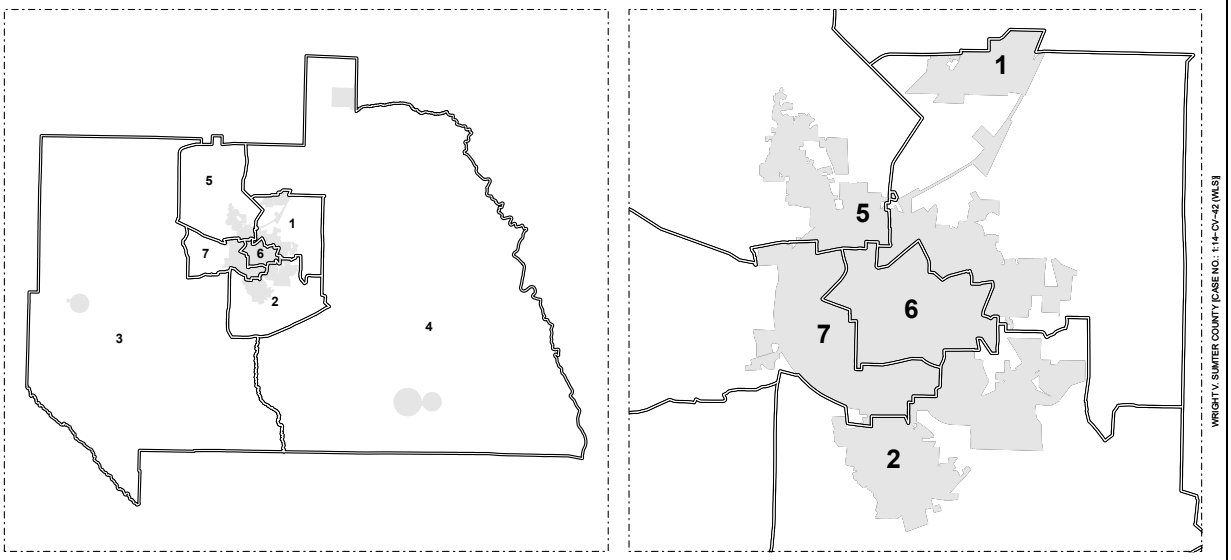
92. The table below shows the population and racial characteristics of the districts in the Illustrative Map 2 seven district plan along with population numbers for each district and population deviation.

Table 16 – Map2 Summary Data

Map 2	Population	Deviation	White	Black	VAP	White VAP	Black VAP	WVAP%	BVAP%
Total	32,819		13,852	17,001	24,518	11,437	11,790	47%	48%
District 1	4,720	32	1,604	2,892	3,345	1,306	1,884	***39%***	***56%***
District 2	4,593	(95)	1,680	2,771	3,335	1,415	1,838	***42%***	***55%***
District 3	4,926	238	2,797	1,774	3,733	2,249	1,259	***60%***	***34%***
District 4	4,750	62	2,351	2,009	3,640	1,941	1,457	***53%***	***40%***
District 5	4,630	(58)	1,517	2,755	3,623	1,362	1,995	***38%***	***55%***
District 6	4,542	(146)	1,158	3,062	3,269	996	2,050	***30%***	***63%***
District 7	4,658	(30)	2,745	1,738	3,573	2,168	1,307	***61%***	***37%***

93. Below is a figure showing the overall configuration of Map 3.

Figure 8 -- Illustrative Map 3



Map 3

94. The table below shows the population and racial characteristics of the districts in the Map 3 seven district plan along with population numbers for each district and population deviation.

Table 17 – Map3 Summary Data

Map 3	Population	Deviation	White	Black	VAP	White VAP	Black VAP	WVAP%	BVAP%
Total	32,819		13,852	17,001	24,518	11,437	11,790	47%	48%
District 1	4,838	150	1,513	3,110	3,434	1,226	2,065	***36%***	***60%***
District 2	4,782	94	1,512	3,105	3,532	1,260	2,172	***36%***	***61%***
District 3	4,502	(186)	2,539	1,659	3,405	2,042	1,177	***60%***	***35%***
District 4	4,906	218	2,980	1,692	3,846	2,421	1,269	***63%***	***33%***
District 5	4,536	(152)	1,479	2,889	3,195	1,161	1,934	***36%***	***61%***
District 6	4,492	(196)	1,143	3,006	3,172	968	1,980	***31%***	***62%***
District 7	4,763	75	2,686	1,540	3,934	2,359	1,193	***60%***	***30%***

VI. Conclusions

95. Based on my evaluation of the evidence presented in the March 17, 2019 Court Opinion, and of other publicly available data on bi-racial election contests in the County for non-partisan offices, there is no reason to draw districts at percentage of 69% Black VAP in order to provide minorities a realistic opportunity to elect candidates of choice in non-partisan elections such as those for the School Board. This conclusion is fully reinforced by my analysis of data from the Georgia Secretary of State on voter registration and turnout by race which I have been able to map at the census block level. On the other hand, based upon past elections, and observed differences in turnout among the White and Black communities, it is also implausible to expect a (Black) candidate of choice of the African American community to have a realistic chance of election in the non-partisan contests for the School Board in a district that is only barely above 50% Black VAP – at least if the minority candidate is not already a sitting incumbent in that same (or very similarly configured) district or in a district where other factors of the sort identified above may facilitate success, such as a district configured entirely (or nearly entirely) within the City of Americus that includes a geographically compact minority population.

96. In the illustrative maps that I draw with three black majority VAP districts (Maps 1a, 1b, 1c), the lowest Black VAP percentage in any of these districts is 61.1%, and that is a district with a black incumbent. Each of these maps has three black majority districts in 2018, and all three consistently show three of seven districts to be Black turnout majority districts in both May 2018 and November 2018. Thus, I classify Illustrative Map 1a, Map 1b and Map 1c, as having three minority opportunity districts.

97. I repeat my earlier statement that a minority opportunity district is not a "safe seat." Outcomes depend upon choices of the voters. Rather a minority opportunity district is one in which, given the historical context, the African American community in the county has a realistic opportunity to participate in the political process and to elect a candidate of choice.

98. In Map 2, with four black majority VAP districts, only one has a Black VAP higher than 60%, the rest are in the middle of the 50%-60% range. Map 2 varies in the number of districts with a Black majority of turnout, from one such district to three such districts. The presence of a White incumbent in District 2 also can be expected to discourage a potential (non-incumbent) minority candidate of choice from running. Such a candidate might be preferred by African-American voters to that White incumbent. In the light of these facts, I would prefer to be cautious, and assess Map 2 as having only two minority opportunity districts.[82]

99. In Map 3, with four black majority VAP districts, the lowest Black VAP percentages, 60.1% and 60.5%, respectively, occur in districts with Black incumbents, and the black turnout percentage in the lowest black turnout district in that map, District 2, is 49.1% as of the May 2018 election. Moreover, District 2 also has a White incumbent, and it contains the Sumter Correctional Institution. So, here, too I will err on the side of caution and characterize Illustrative Map 3 as having three minority opportunity districts. However, I would change this classification to four minority opportunity districts in Map 3 were (a) the election calendar returned to November, and (b) there was no White incumbent in the contest. There would have been four Black majority turnout districts in Illustrative Map 3 in each recent November election (2014, 2016, and 2018). Moreover, as I have noted previously, Map 3 is the only map with any real potential to elect a fourth candidate of choice of the minority community.

100. Election calendar choice in Sumter County appears to have voting rights/equal protection implications. The discussion above and in a previous section of this Report suggests that the Court might wish to consider the question of election calendar in order to increase minority turnout and to avoid a situation in which minority turnout is so heavily dependent upon which party has competitive primaries, creating variability and unpredictability; and timing of the change from a November election to a May election occurred contemporaneous with the adoption of the now-overturned map. But the decision to review the topic of election calendar is, of course, entirely at the discretion of the Court.

[82] Plaintiff's Map 2, and the Enacted Map each have only 2 of 7 districts that are ever majority-minority in turnout, so I would characterize both plans as having only two minority opportunity districts.

101. In the process of completing the final versions of the seven-district maps I realized that the same common-sense mathematical argument that I had applied to the seven-district maps regarding population considerations and the potential for creating black majority voting age districts within or near to Americus also should apply to a five district configuration.[83] I attach as Exhibit 7 to this Report a map of a five-district which has three of its five districts as Black majority voting age population districts. This map has one district wholly within the City of Americus. This configuration, too, was drawn using traditional districting criteria, focusing on the population demography of the County and the concentration of population in and near to the City of Americus, while also maintaining the boundaries of all other cities and places within the County intact. Moreover, this plan is as compact (actually marginally more so) than the Enacted Map. This configuration has three of its five districts with Black voting age majorities, of 53.3% (District 1), 60.8% (District 2), and 63.0% (District 5). This configuration also has three of its five districts with Black registration majorities, 58%, 58%, and 66%. This configuration also illustrates the implications of election calendar for equal opportunity. In May 2014 only two of the three majority minority VAP districts in this plan also had Black majorities of the actual election day turnout. But in November 2014, there were three of five districts in the plan in which Black voters were a majority of the actual election day electorate. In 2016, the pattern is even more severe in that the May election only has 1 out of 5 districts with a Black majority turnout, which contrast to 3 out of 5 in November 2016. Increased Black turnout in the May 2018 election, presumably to support Stacey Abrams, results in 3 out of 5 Black turnout districts in May, the same number as in November 2018. In two of the three Black majority turnout districts in Map 5, however, the Black proportion of the electorate increases in November from what it was in May.[84]

102. With respect to incumbents there is a mathematical necessity to pair at least two sets of incumbents, since the number of districts is reduced by two. One at-large incumbent is paired with District 3 incumbent, while the other at-large incumbent is paired with the District 4 incumbent.

103. Because my specific charge from the Court was to create a seven-district plan, I have placed the detailed information about this five-district plan, and maps of its districts, in a separate Exhibit (Exhibit 7). It is, of course, entirely up to the Court as to whether it wishes to review this five-district plan in making choices about which plan to adopt.[85]

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[83] As shown above, in a seven-district plan, basic arithmetic establishes that it is possible to drawn three majority Black voting age districts wholly with the City of Americus, each with substantial Black voting age population. Taking into account electoral geography, namely the existence of black population in areas proximate to Americus, we can also readily establish that it is possible to draw four of seven districts that were majority Black in voting age in a plan that had four districts substantially drawing from the Americus population and black population proximate to Americus, and we can draw such districts in a compact way.

[84] This map was labelled Map 5 as a mnemonic to indicate that it was a five-district plan.

[85] If the Court chooses not to examine this plan, I will remove from my time sheet the hours I spent creating it, and similarly, the time my research assistant worked on the plan will also not be billed.

104. After feedback from Counsel, I am confident that the data and analyses presented above will allow the Court to expeditiously reach a decision as to which map to adopt (subject perhaps to final refinements ordered by the Court).

APPENDIX: Brief Overview of Enacted Map and the Plaintiff Remedial Plan Described in the Expert Witness Report of Dr. McBride (Court Docket 38, Ex 38-1)

105. According to the 2010 census, the current Sumter County School Board Districts in the plan found unconstitutional have Black and White populations and voting age populations as shown below for the five non-at-large districts. As shown in Table 18, similar to from Exhibit 38-1 (Expert Witness Report of Dr. McBride), there are only two districts with a majority African American population in the Enacted Map. One of these districts has a Black VAP of 70.6% (district 5);[86] the other has a Black VAP of 62.7% (district 1). The district in the current plan with the next highest Black VAP is district 3, with a Black VAP of 43.9%.

Table 18 -- Board of Education Enacted plan (BOE)

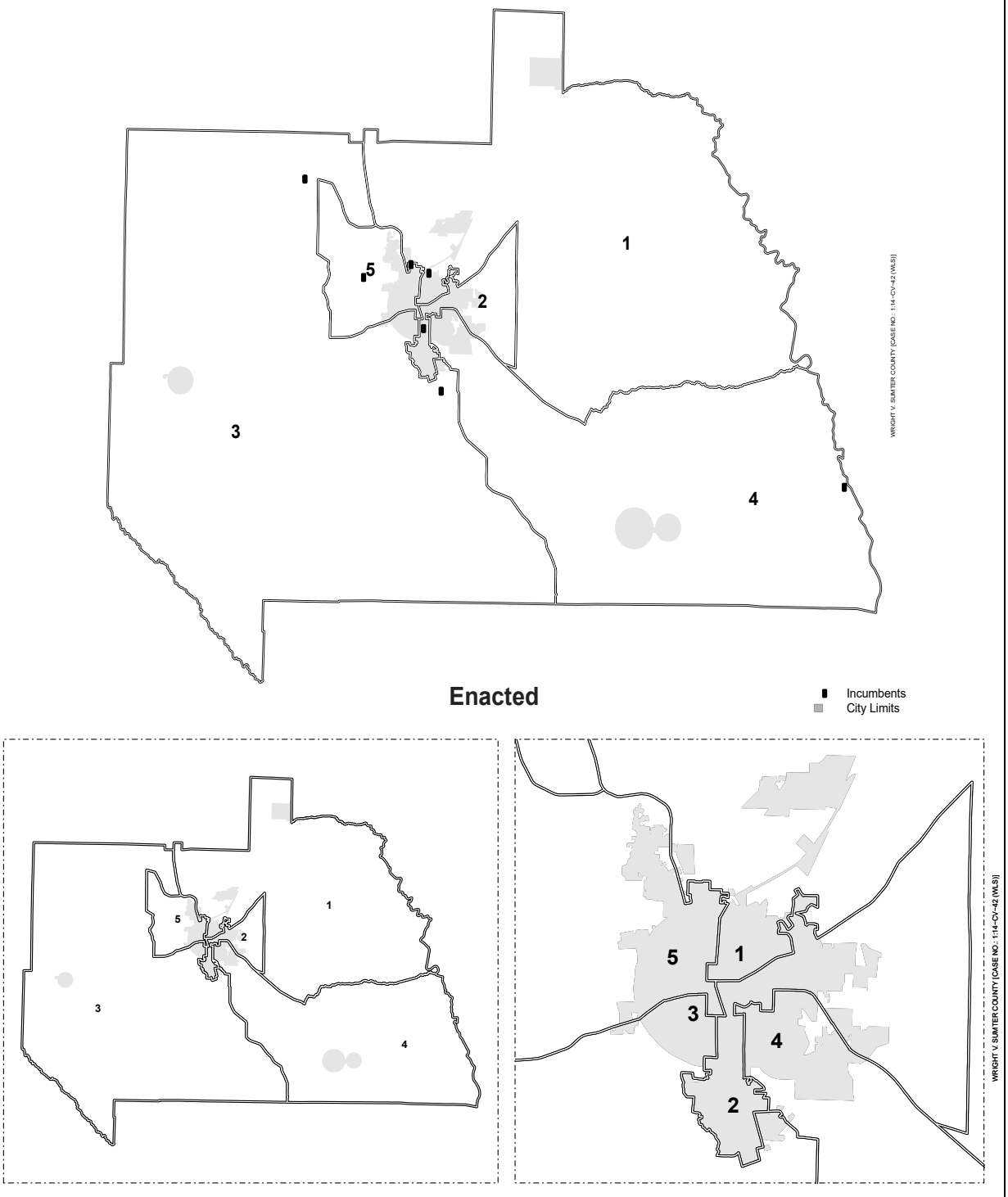
BOE	Population	Deviation	Americus	Other	Americus %	White	Black	VAP	White VAP	Black VAP	WVAP%	BVAP%
Total	32,819		17,041	15,778	52%	13,852	17,001	24,518	11,437	11,790	47%	48%
District 1	6,467	(97)	3,490	2,977	***54%***	1,998	4,237	4,524	1,560	2,852	***34%***	***63%***
District 2	6,654	90	4,854	1,800	***73%***	3,754	2,303	5,050	3,141	1,529	***62%***	***30%***
District 3	6,544	(20)	961	5,583	***15%***	3,542	2,540	4,953	2,863	1,791	***58%***	***36%***
District 4	6,681	117	3,483	3,198	***52%***	2,991	3,184	5,328	2,617	2,341	***49%***	***44%***
District 5	6,473	(91)	4,253	2,220	***66%***	1,567	4,737	4,663	1,256	3,277	***27%***	***70%***

106. A map of the Enacted plan is shown below. It is visually apparent from this map how the City of Americus has been fragmented in the Enacted map.

107. Circles show the location of present incumbents. It is visually apparent that five of the seven incumbents live in or near Americus, with a sixth not that far away. This proximity of incumbent locations makes it hard to draw a remedial plan according to traditional districting principles that does not result in incumbent pairings, since avoiding incumbent pairing completely (especially pairing involving one of the at-large incumbents) will result in more tortuously configured lines.

[86] When we look at "effective VAP" for this district, taking into account the fact that it included the Sumter Correctional Institution, we find a value of 69% BVAP rather than 70 %.

Figure 9 -- Board of Education Enacted plan (BOE)



108. The Plaintiffs have proposed four different remedial plans. Here we limit the discussion to the one of these plans that is described in detail in the Expert Witness Report of Dr. McBride, Docket item 38-1). The population and voting age population statistics for that plan are shown below.[87]

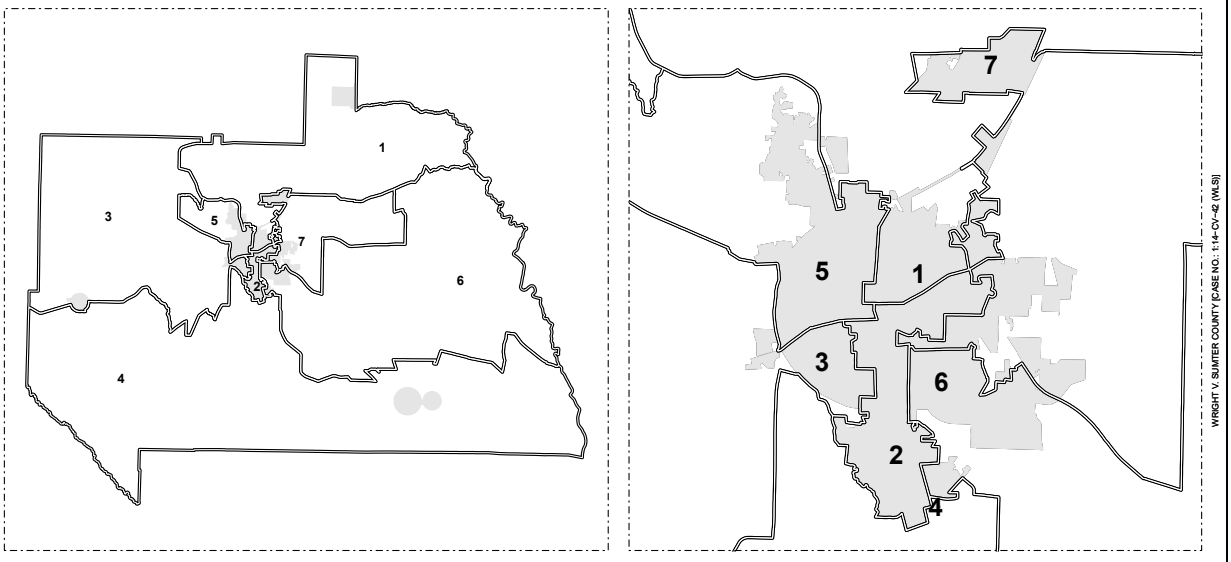
Table 19 -- Plaintiff (Plan 2) Details

Plaintiffs	Population	Deviation	Americus	Other	Americus %	White	Black	VAP	White VAP	Black VAP	WVAP%	BVAP%
Total	32,819		17,041	15,778	52%	13,852	17,001	24,518	11,437	11,790	47%	48%
District 1	4,663	(25)	2,960	1,703	63%	1,367	3,170	3,290	1,083	2,120	***33%***	***64%***
District 2	4,686	(2)	4,686	-	100%	2,871	1,448	3,636	2,446	957	***67%***	***26%***
District 3	4,722	34	419	4,303	9%	2,438	2,070	3,605	1,975	1,490	***55%***	***41%***
District 4	4,675	(13)	-	4,675	0%	2,361	2,029	3,575	1,924	1,476	***54%***	***41%***
District 5	4,703	15	4,079	624	87%	896	3,642	3,279	717	2,472	***22%***	***75%***
District 6	4,677	(11)	2,414	2,263	52%	2,336	1,873	3,797	1,999	1,457	***53%***	***38%***
District 7	4,693	5	2,483	2,210	53%	1,583	2,769	3,336	1,293	1,818	***39%***	***54%***

109. A map of the Plaintiff's proposed remedial plan 2 is shown below (See Exhibit 38-1, Expert Witness Report of Dr. McBride). It is visually apparent from this map that the City of Americus continues to be fragmented in this proposed remedial map but not to the same extent as in the current map since there is one district that is essentially wholly within the City of Americus. This plan does not avoid incumbent pairings. But as noted previously, given the proximity of incumbent locations in the current map, it is essentially impossible to avoid incumbent pairing of the at-large representatives in a map that addresses the voting rights violation fully using traditional districting principles.

[87] I have reviewed key statistics for the other three possible remedial plans and believe that only the plan in 38-1 needs to be discussed in any detail, and that discussion is only for comparison purposes with the illustrative remedial plans I present to the Court, since this Plaintiff plan has already been rejected by the Court. It is inferior on a number of grounds to various of the illustrative maps presented in this Report (see Summary Table 1 above)

Figure 10 -- Plaintiff's Plan 2 (McBride Expert Witness Report, Doc. 38-1)



Plaintiffs

110. As shown in a table above, taken from Exhibit 38-1 (Expert Witness Report of Dr. McBride), there are three districts with a majority African American population in the plaintiff's remedial plan (Plaintify Plan 2) reviewed in that document. One of these districts has a Black VAP of 74.5% (district 5); the second has a Black VAP of 64.5 % (district 1), and the third has a Black VAP of 54.5% (district 6). The district in that plan with the next highest Black VAP is district 7, with a Black VAP of 41.3%, but district 3 also has a Black VAP of 41.3%.

111. In terms of equal protection, the key difference between the Plaintiff's plan delineated in Court Docket 38, Exhibit 38-1 and the current unconstitutional plan is that the plaintiff's plan increases the number of Black voting age majority districts from two to three, adding district 6 as a new Black VAP majority district.

112. In geographic terms, Dr. McBride indicated in his Expert Witness Report (38-1) that he drew his seven district map in such a fashion as to adhere as closely as practicable to the boundaries used in the current map for the five districts that were not at-large. Of course, there are limits to this correspondence since Dr. McBride was (a) drawing seven districts, not five, and (b) he was concerned with seeking to remedy voting rights violations identified in this lawsuit.

113. The Plaintiff's plan (38-1) also increases the Black voting age population percentage in the existing two Black majority VAP districts, from 70.6% to 74.5%, and from 62.7% to 64.5%.

114. The Plaintiff's plan reported by Dr. McBride (Doc. 38-1) demonstrates that a third Black VAP majority district can be drawn; thus, on its face, satisfying the third prong of the *Gingles* Test.