May 26, 2023

TO THE COMMISSION ON REDISTRICTING MEMBERS:

There will be a **Special Meeting** of the City of Bridgeport's **Commission on Redistricting** to be held on **Tuesday** evening at **5:00 p.m., May 30, 2023.** This meeting will be held in Wheeler Rooms A & B, at City Hall, 45 Lyon Terrace, Bridgeport, Connecticut 06604.

AGENDA

Approval of Committee Minutes: April 24, 2023 (Special Meeting)
Approval of Committee Minutes: May 2, 2023 (Public Hearing)
Approval of Committee Minutes: May 2, 2023 (Special Meeting)
Approval of Committee Minutes: May 4, 2023 (Special Meeting)
Approval of Committee Minutes: May 9, 2023 (Special Meeting)
Approval of Committee Minutes: May 16, 2023 (Public Hearing)
Approval of Committee Minutes: May 16, 2023 (Special Meeting)

I. Discussion, including with redistricting consultant Kim Brace's staff and legal staff, concerning the Draft proposed revised Plan of Redistricting (Plan No. 2) and any associated census documentation, such discussion to include input, data, reports and any other documentation as presented by legal and redistricting consultant staff (both in writing and electronically).

II. Possible amendment of Plan No. 2.

III. Possible vote to adopt revised Plan No. 2, as finally amended, and to referral of the Plan of Redistricting. as adopted, to the City Council for amendment of the Bridgeport Code of Ordinances in accordance with the Plan of Redistricting.

Very truly yours,

Frances Ortiz
Assistant City Clerk

FO: lp

Cc: Mayor Joseph P. Ganim
City Council Members
Redistricting Commission
J. Hawkins, CAO
D. Shamas, Chief of Staff
T. Gaudett, Deputy Chief of Staff
E. Adams, Dir., Gov't Accountability & Integrity
M. Anastasi, City Attorney
J. Bohannon, Deputy City Attorney
J. Maye, Associate City Attorney
B. Levin, Associate City Attorney
K. Brace, Election Data Services, Inc.

Brace Report on Bridgeport, CT Redistricting

May 27, 2023

The following is a report from Redistricting Consultant Kimball Brace and Election Data Services to the Bridgeport Redistricting Commission on our efforts in the city.

Election Data Services. Inc. was hired by the City of Bridgeport's Attorney's Office to coordinate, draw redistricting alternative plans and support the city's redistricting effort this decade. We served a similar role for the 2000 and 2010 round of redistricting in Bridgeport. Each decade we worked with members of the City Council to understand their districts and the neighborhoods within. Public testimony was taken at hearings and outside individuals were also encouraged to submit ideas on district boundaries. As in previous decades, members of Election Data Services' staff have been called upon to make presentations at hearings and meetings on the subject, including census data and geography along with redistricting law and procedural practices around the nation. This decade we also worked with the new Bridgeport Redistricting Commission which was implemented as part of a court settlement. Once the plan is adopted, we will, and have, worked with the Registrar's office to implement the plan through the adjustment of their street file in the voter registration system.

Since 1979, Election Data Services, Inc. (E.D.S. Inc.), has been actively involved in many aspects of the redistricting process around the nation, having gone through four full census and redistricting cycles. We have been a consultant to many state and local governmental organizations around the nation, providing strategic advice and consulting on redistricting matters, coordinating the development of extensive databases used in the redistricting process, creating and assisting others with the creation of districting plans, and analyzing many aspects of districts and district configurations. Over the past four decades, Election Data Services, Inc.'s redistricting clients have come from more than half the states and members of our team been called upon to provide reports, expert witness testimony, and assistance to attorneys in more than 75 different court cases.

A more extensive description of our redistricting work is shown in **Attachment A** to this report, including a review of President Kimball Brace efforts in the past five decades and his extensive vita (**Attachment B**).

When we were first approached by the city to again handle their redistricting for the 2020 cycle, we built a large database that combined Census geography (depicted in the Bureau's TIGER files) with Census demographic data (combining both the 2010 Census numbers and then the 2020 data when it was released). A more comprehensive description of this normal process is attached to this report (as **Attachment C**), including the treatment of racial and ethnic origin data in the Census. Most of the data reported in this report is based on the total population numbers reported by the Census Bureau. Total population is generally recognized as being the key data for the purpose of the "one-person, one-vote" equal districts calculations. Voting Age Population (VAP) is generally used in the evaluation of racial considerations in redistricting practices.

For a number of decades, the U.S. Census Bureau has a practice of counting persons where they have a usual residence. For the purposes of prisoners, this has meant these individuals were counted at the physical location of the prison. However, this decade, the Connecticut Legislature (as well as a number of other states) adopted a policy to handle prisoners differently and count them where they resided before being sent to prison. In adopting this policy change, the Legislatures utilized prison records they collected to determine the alternative address of the inmate, and then adjust the data to reflect this change. This resulted in census blocks containing prisons to reduce population size, while some residential blocks were adjusted upwards. Unfortunately, for Connecticut, the racial data for the prisoners was not deemed of sufficient quality, so only a change was made in the total population numbers but not to the racial data. As a result, for Connecticut, racial totals will not sum to the total population data, both on a numeric and percentage basis.

Once the database is built and the new census numbers are released, the first task of any redistricting process is to determine the population numbers and deviations of the previous decade's districts under the new census data. This information will help guide where, and by how much, the existing districts will need to change. Because the mapping software we use creates districts starting with number 1, we have converted the normal Bridgeport practice of calling their districts as 130 through 139 to be 131, 132, 133, etc., with district 10 being Bridgeport's 130. The tables and maps shown in this report show single digit district numbers, but the text in this report converts the numbers to the 130 series.

Besides Federal and state laws and court precedents, the Bridgeport City Charter (in Section 2(a)) provides additional guidance in creating the City's ten districts: "Such districts shall be established in conformity with provisions of the general law and by making each such district as equal in population to each other such district as possible, taking into consideration senate and assembly district lines and natural boundaries and divisions."

Before any redistricting work is done, the 2020 Census showed the total population for the City of Bridgeport to be 148,654. The state's adjustment of population for the prisoners added 706 persons to the city's count or a new total of 149,360. **Table 1** in this report shows the resulting ideal district size for 10 districts in the city (14,936) and what would be the acceptable population ranges under established practices according to the courts. Prior court decisions have found acceptable population deviation ranges that stay below a sum of ten percentage points. For Bridgeport, as shown in **Table 1,** this means each of the ten districts need to be between 14,189 and 15,683 when using the prisoner adjusted data.

The new 2020 population data before adjustment showed that population change is not uniform across the city (see **Map 1**). District 131 is the only district in the city that experienced an absolute loss in population from 2010 to 2020. All

other districts experienced an increase in population over the past 10 years, but that growth varied. District 139 increased the most in that time-period, adding 1,190 people or 8.34%. Districts 132 and 137 also experienced a better than 5% growth rate. District 138 only added 6 people in the decade or 0.04%, the lowest positive change in the city.

Combining the district's population data together with the ideal district size information allows the redistricter to see where changes need to take place within the city. **Map 2** in this report shows the raw number deviation for each of the districts under the original census population data (left side of map) and then the adjusted data for prisoners (right side of map). The maps show that districts 131 and 138 are the most underpopulated districts in the city. But they are bordered by the most overpopulated districts in the city (districts 139 and 135).

Converting the raw number deviations into percentages can be seen in **Map 3**. The color scheme for this map is designed to highlight those districts that fall outside the generally accepted deviations of 5 percent above and 5 percent below the ideal district size (hence the combined sum of 10 percent talked about by the courts). The darker shade of purple (above 5%) or gray (below 5%) are shown in the eastern most districts of the city. The other pattern that is observable is that the districts in the western side of the city are nearly all over-populated. From a redistricting point of view that means that the districts on the west need to shrink in size so that the districts in the east can expand and get additional population territory.

These tables demonstrate that the City of Bridgeport must redraw at least some of their districts because the existing district plan falls outside the generally accepted legal range of 10 percent (determined by adding the highest population deviation percentage together with the absolute value of the lowest population deviation percentage). The existing 2011 plan's total deviation is 10.4% with the unadjusted population data, and 12.2% with the prisoner-adjusted population

data. At the very least, districts 138 and 139, along with district 131 would need to change their configurations because they are above the 5% acceptable range.

Demographically, Bridgeport is a mixed city, with no single race or ethnic group possessing a majority of the population. **Table 2** shows the city's demographic characteristics in the 2020 Census while **Table 3** shows the same information for 2010. Comparing the data from the two decades shows that the Hispanic and African American population concentrations have increased at the expense of the White population. But the largest increase comes in the "Some Other Race" category, along with those persons marking "two or more" races.

This demographic information is shown for every census block in the city, which has been utilized in **Map 4** (attached to this report). The most solid colors in each color pattern show blocks that a majority of the population is connected with that racial/ethnic group, while the lighter shades show the racial/ethnic group that are plurality in that census block. Generally, the map shows the white population are most concentrated in the western side of the city, with African Americans in the northern and south-eastern sections of the city. The Hispanic populations tend to be concentrated in the middle of the city, stretching from the north-eastern section down to the south-western neighborhoods. This mix is also reflected in the city's ten districts. In only district 137 is there a majority of the population from a single race or ethnic group, that being Hispanic.

Commission on Redistricting Work

All of the above factors (population change, district deviations, and racial composition) form the basis for the Commission on Redistricting's work. Following our briefing of these factors and data to the Commission, members of the Commission in several meetings resolved to make the following changes to the districts. These changes are shown in map form where the previous district boundaries are shown in blue outline and the proposed district configuration is shown in color shading on the census blocks. The 2020 adjusted total population counts are the numbers in each census block in the map.

CHANGE 1 MAP – This map shows the four census blocks (with populations of 63, 61, 70 and 58 or a total of 252 people) that would be moved from the current district 132 into the new district 131. This brings down the excess population in district 132 in order to increase the underpopulated district 131's population and bring it into acceptable range. District 131 is still 524 people below the ideal district size, but it is now just 3.51% low and within the established 5% margin.

CHANGE 2 MAP – While district 135 is only slightly over populated and district 136 is slightly under populated (both within the 5% deviation range), the Commission was concerned about the appearance (or compactness) of the district boundaries. This was particularly the case on district 135's appendage into district 136, the bottom of which is composed of land of the Park Cemetery. The 224 people found by the Census Bureau in this block were not dead individuals, but instead those persons living in houses on the outside of Pond Street and Fairview Avenues. The Commission felt the 136th district would be better served by using Chopsey Hill Road as the district's northern boundary. This added 535 people to the 136th district but put it on the upper edge of the 5 percent range window. To help even out the two districts, the three census blocks (with populations of 72, 71 and 72 people, for a total of 215 people) were moved from the 136th district into the 135th district. Both districts are still slightly over populated, but within an acceptable range (district 135 -- +2.39% and district 136 -- +0.71%).

CHANGE 3 MAP – In order to deal with the excess population in district 139 and the under population in district 138, the Commission decided to add the census blocks with 61, 0, 217, 118, 192 and 268 people in them (for a total of 856 persons moved) into district 138 and out of district 139. District 138 is still slightly low in population, but only 110 under the ideal size (or -0.74%). This puts the district boundary further along Boston Ave (something desired by at least one speaker before the Commission) but the large populations in three of the remaining four blocks on the north side of Boston Ave would make district 138 one of the largest districts in the city.

The census block with 19 people in it is mainly composed of Harding High School (a polling place) but desired by the person representing district 138. I met with both party's Registrars in one of my trips to the city, who both said there is no large building on the south side of Boston Ave to handle the growing number of registered voters in that area. As someone who has been involved in election administration issues for the past 50 years, I am particularly sensitive to the problems experienced by other election administrators, especially moving a voting site out of the precinct it serves.

CHANGE 4 MAP – In a subsequent Commission meeting there was one further change made south of Boston Ave between districts 137 and 139. Ten years ago, this same area was pulled out of district 139 and given to district 137 to remove a political opponent. This year there was a desire to move back and use the river as the boundary between the two districts. This would move the census blocks with 64, 108 and 130 people within them, along with the four zero populated blocks along the river back into district 139. This change could be made without causing either of the two districts to fall outside the acceptable population range allowed by court precedent.

With the above four changes to the map for this decade, the overall plan deviation sits at 6.27%, well within the 10% margin generally accepted by the courts. Three districts (districts 3, 4, and 10) did not change at all during the redistricting process, retaining their original boundaries created last decade. Nearly all of the other districts improved their population equality calculation from those reported before redistricting was undertaken (only district 137 expanded their equality calculation, but it still stayed well within the accepted 10% range). The two districts that form this outer margin in the plan are districts 131 and 133. Attached to this report is **Table 4**, which shows the populations of each of the city's 10 districts, the population deviation from the ideal (in both raw and percentage terms) and the racial demographics of each district. All districts continue to be a majority combined-minority in both population and voting age population. District 137 continues to be a majority Hispanic seat, as it was before the changes brought about by this decade's census and resulting redistricting.

While there are probably dozens, if not hundreds of different ways to configure the ten districts in the City of Bridgeport, the plan that went through changes suggested by the Commission members could be considered as a "least change" plan and one that is consistent with established law & court proceedings. This plan creates a configuration that is more balanced in population than the plan that was created ten years ago. It also brings the population deviations into an acceptable range, according to court precedents, and does not harm minority voting rights so that they can continue to elect candidates of their choice. In addition, none of the current incumbents are moved out of their districts.

Under all the factors and considerations noted above, and based on the 2020 Census, it is my professional opinion that the plan known as Draft 2, as amended, is proper for adoption by the Commission, and sending it to the Council for their adoption.

Kimball Brace

Redistricting Consultant

Election Data Services, Inc.

ATTACHMENT A

Election Data Services, Inc.

Since 1979, Election Data Services, Inc. (E.D.S. Inc.), has been actively involved in many aspects of the redistricting process, having gone through four full census and redistricting cycles. We have been a consultant to many state and local governmental organizations around the nation, providing strategic advice and consulting on redistricting matters, coordinating the development of extensive databases used in the redistricting process, creating and assisting others with the creation of districting plans, and analyzing many aspects of districts and district configurations. Over the past four decades, Election Data Services, Inc.'s redistricting clients have come from more than half the states and members of our team been called upon to provide reports, expert witness testimony, and assistance to attorneys in more than 75 different court cases.

An example of Election Data Services, Inc.'s role in a jurisdiction's redistricting process is the State of Rhode Island, where the company has responsible for coordinating all meetings and has testified at every meeting of their redistricting commission for the past three decades. In addition, it is our standard practice to meet with every state legislator of both parties, in both chambers, to review the member's district, its neighborhoods and the demographic characteristics of its voters. When the Census data is released, we conduct regional meetings around the state to review what the numbers mean for representation. We then work with legislative members, staff, and the general public to draw potential plan configurations. Plan alternatives are then taken to various parts of the state for further public input, in most instances in conjunction with the redistricting commission. In Rhode Island, the commission makes recommendations to the Legislature, who ultimately passes the plan as a piece of legislation.

Election Data Services, Inc. has also had extensive experience in a number of major metropolitan areas of the nation. Since 1980 we have assisted the City Council for the City of Chicago, IL in every redistricting each decade. This included creating the redistricting database, installing and utilizing redistricting software on local machines in city council chambers and working with councilpersons and staff to draft hundreds of redistricting plan concepts. We also set up the redistricting operation for New York City in 1990 and worked with council members that decade in drafting and finalizing a redistricting plan. We were involved in testifying in the City of Los Angeles about their redistricting plan

during the 1980s. A full set of all our redistricting involvement through out the decades can be found in Kimball Brace's vita, which is attached to this proposal.

Between decades, Election Data Services has contracted with several states to perform work to update Census Bureau TIGER files and draw and adjust precinct boundaries for submission to the Bureau. This has included addresses matching statewide voter registration files to decipher where precincts are located. This has included on-going work in both Rhode Island and Illinois for each of the past three decades.

E.D.S. Inc. has been providing redistricting services since before the advent of GIS redistricting software and was uniquely placed when GIS was introduced into the process. We developed our own redistricting software for the 1990 round of redistricting which was used in numerous state and local redistricting projects. We continued developing GIS software applications to help state governments compile precinct configurations for submission to the Census Bureau under P.L. 94-171 (whereby, census data was compiled by precinct for use in redistricting). During the 2000 and 2010 redistricting process we developed our own analysis software and utilized both major redistricting software packages, including AutoBound.

Since the early 1990s, E.D.S., Inc. has studied and issued yearly reports on the apportionment process as new population estimates have been released by the US Census Bureau and private demographic firms. We have become a staple for the press and others to cite when commenting on the impact of population shifts between different states. These reports can be found at our website: www.electiondataservices.com, under the "Research" tab. We have maintained a historical table back to 1789, along with decennial calculations conducted on Census data each decade from 1940 to current, as well as interim census estimates back to the early 1990s.

E.D.S. Inc. regularly collects election returns for every state in the nation. In 1992 we published a 500-page volume of county-level voter registration and voter turnout data, and election returns for the entire nation (*The Election Data Book: A Statistical Portrait of Voting in America, 1992* (Bernan Press, 1993)). While we only published the single volume, we have continued to compile an electronic county-level database for each general election since that time, which we sell to numerous institutions and organizations.

E.D.S. Inc. offers a wide variety of graphics services, from the creation of maps and posters to working with Census Bureau electronic mapping files. For

every election year since 1988, E.D.S. Inc. has produced a full color poster of the nationwide election results within days after the November general elections. This poster can be seen in most congressional offices and the White House and is sold worldwide.

Election Data Services, Inc. has been viewed by clients, the press, academics, and the general public as a research facility and consulting firm dealing with many aspects of the electoral process. Because of our specialization in redistricting, we have been hired by state and local governments across the nation to provide software, database development services, and consulting services for the creation of districting plans and the analysis of many aspects of the redistricting process.

In addition, the company provides assistance in the election administration field to state and local jurisdictions in such areas as precinct management, voter registration systems, and voting equipment evaluation. Since 1980, the company has also maintained a county and township level database of which voting equipment is used in every jurisdiction in the nation.

Kimball Brace

Kimball Brace has been president of Election Data Services, Inc. since he started the company in 1977. As a result, he has been involved in all of the past redistricting activities of the company, in most instances directing the focus and development of tasks, computer programs and research efforts as they relate to redistricting, reapportionment, the census, and election administration.

Mr. Brace frequently gives speeches to groups and organizations and participate in numerous conferences and panels on various aspects of apportionment, redistricting, and the census. Since the early 1980s, he has been a regular participant and speaker at annual and bi-annual meetings of the Task Force on Redistricting of the National Conference of State Legislatures ("NCSL"). He has also been on their faculty, as NCSL has conducted five regional "Get Ready for Redistricting" seminars each decade since 1980.

Mr. Brace was also appointed by the U.S. Secretary of Commerce to the 2010 Census Advisory Committee, a 20-person advisory board to the Director of the Census Bureau. In 2020 he was asked to be NCSL's representative on an on-going series of half-day small-group expert meetings, arranged by the Committee on National Statistics (CNSTAT), to delve deeply into and provide informal discussion/feedback with Census Bureau staff as they develop the differential

privacy-based Disclosure Avoidance System for the 2020 census. He was also sent by the U.S. State Department and the International Foundation for Electoral Systems (IFES) to the Central Asian country of Kazakstan to present a three-day workshop on redistricting. He has also been regularly called upon by members of the press with questions on redistricting, reapportionment, the census, election administration issues, and politics in general.

Over the past four decades, Mr. Brace has also been involved in many aspects of the election administration process. This includes assisting federal, state, and local governments in such areas as voting equipment evaluation and selection, improvements to voter registration systems, and maintenance of precincts and street files. Beginning in 2008, he has been a poll worker in Prince William County, VA where he lives. Because the state holds elections every year and due to his interest in all aspects of election administration, he has graduated to being "chief judge" in the precincts to which he has been assigned.

In 2012 the county experienced long lines at the polls on Election Day and he was appointed to a 20-person task force by the County Board of Supervisors to investigate the cause of the problems. Because of his data background, he compiled and analyzed all the data collected by the task force and presented updates at their bi-weekly meetings over the 5-month life of the task force. With the retirement of the County's General Registrar (director of elections for the county), he was asked to take over the 11-person office. While he declined the full-time job offer, he did agree to serve as the Acting General Registrar for four months while the county conducted a search for a full-time replacement. He has continued to be actively involved in election administration issues within the county since that time.

Following the 2000 Presidential election, Mr. Brace was called by 40 to 50 reporters a day to provide information and comment on the election administration field around the nation. He was also interviewed by NBC, CBS, ABC and CNN numerous times about the 2000 election controversy. In addition, he was retained by the Gore-Lieberman Campaign Committee and provided expert witness testimony about voting equipment in the Bush v. Gore lower court evidentiary hearing on December 2, 2000. In 2004, 2006 and 2008, he was a consultant to NBC News on election administration matters and provided on-air commentary on election night.

ATTACHMENT B

VITA

KIMBALL WILLIAM BRACE

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kbrace@electiondataservices.com or **kbrace@aol.com**

Kimball Brace is the president of Election Data Services Inc., a consulting firm that specializes in redistricting, election administration, and the analysis and presentation of census and political data. Mr. Brace graduated from the American University in Washington, D.C., (B.A., Political Science) in 1974 and founded Election Data Services in 1977.

Redistricting Consulting

Activities include software development; construction of geographic, demographic, or election databases; development and analysis of alternative redistricting plans; general consulting, and onsite technical assistance with redistricting operations.

Congressional and Legislative Redistricting

Arizona Independent Redistricting Commission: Election database, 2001

Arizona Legislature, Legislative Council: Election database, 2001

Colorado General Assembly, Legislative Council: Geographic, demographic, and election databases, 1990–91

Connecticut General Assembly

- Joint Committee on Legislative Management: Election database, 2001; and software, databases, general consulting, and onsite technical assistance, 1990–91
- Senate and House Democratic Caucuses: Demographic database and consulting, 2001

Florida Legislature, House of Rep.: Geographic, demographic, and election databases, 1989–92

Illinois General Assembly

- Speaker of House and Senate Minority Leader: Software, databases, general consulting, and onsite technical assistance, 2000–02,
- Speaker of House and President of Senate: Software, databases, general consulting, and onsite technical assistance, 2018-current, 2009-2012, 1990–92, and 1981-82

Iowa General Assembly, Legislative Service Bureau and Legislative Council: Software, databases, general consulting, and onsite technical assistance, 2000–01 and 1990–91

Kansas Legislature: Databases and plan development (state senate and house districts), 1989

(Redistricting Consulting, cont.)

Massachusetts General Court

- Senate Democratic caucus: Election database and general consulting, 2001–02
- Joint Reapportionment Committees: Databases and plan development (cong,, state senate, and state house districts), 1991–93, 2010-2012

Michigan Legislature: Geographic, demographic, and election databases, 1990–92; databases and plan development (cong., state senate, and state house districts), 1981-82

Missouri Redistricting Commission: General consulting, 1991–92

Commonwealth of Pennsylvania: General consulting, 1992

Rhode Island General Assembly and Reapportionment Commissions

- Software, databases, plan development, and onsite assistance (cong., state senate, and state house districts), 2016- current, 2010-2012, 2001–02 and 1991–92
- Databases and plan development (state senate districts), 1982-83

State of South Carolina: Plan development and analysis (senate), U.S. Dept. of Justice, 1983–84

Local Government Redistricting

Orange County, Calif.: Plan development (county board), 1991–92

City of Bridgeport, Conn.: Databases and plan development (city council), 2011-2012 and 2002–03

Cook County, Ill.: Software, databases, and general consulting (county board), 2010-2012, 2001–02, 1992–1993, and 1989

Lake County, Ill.: Databases and plan development (county board), 2011 and 1981

City of Chicago, Ill.: Software, databases, general consulting, and onsite technical assistance (city wards), 2010-2012, 2001–02 and 1991–92

City of North Chicago, Ill.: Databases and plan development (city council), 1991 and 1983

City of Annapolis, Md.: Databases and plan development (city council), 1984

City of Boston, Mass.: Databases and plan development (city council), 2011-2012, 2001-2002, and 1993

City of New Rochelle, N.Y.: Databases and plan development (city council), 1991–92

City of New York, N.Y.: Databases and plan development (city council), 1990–91

Cities of Pawtucket, Providence, East Providence, and Warwick, and town of North Providence, R.I.: Databases and plan development (city wards and voting districts), 2011-2012, 2002

City of Woonsocket and towns of Charlestown, Johnston, Lincoln, Scituate and Westerly, R.I.: Databases and plan development (voting districts), 2011-2012, 2002; also Westerly 1993

City of Houston, Tex.: Databases and plan development (city council), 1979 — recommended by U.S. Department of Justice

City of Norfolk, Va.: Databases and plan development (city council), 1983–84 — for Lawyers' Committee for Civil Rights

(Redistricting Consulting, cont.)

Virginia Beach, Va.: Databases and plan development (city council), 2011-2012, 2001–02, 1995, and 1993

Other Activities

International Foundation for Electoral Systems (IFES) and U.S. Department of State: redistricting seminar, Almaty, Kazakhstan, 1995

Library of Congress, Congressional Research Service: Consulting on reapportionment, redistricting, voting behavior and election administration

National Conference of State Legislatures (NCSL): Numerous presentations on variety of redistricting and election administration topics, 1980 - current

Election Administration Consulting

Activities include seminars on election administration topics and studies on voting behavior, voting equipment, and voter registration systems.

Prince William County, VA:
2013 – Appointed by Board of County Supervisors to 15 member Task Force on Long Lines following 2012 election. Asked and appointed by County's Electoral Board to be Acting General Registrar for 5-month period between full-time Registrars.
2008 - current – poll worker and now chief judge for various precincts in county

U.S. Election Assistance Commission (EAC): Served as subcontractor to prime contractors who compiled survey results from 2008 and 2010 Election Administration and Voting Survey.

U.S. Election Assistance Commission (EAC): Compile, analyze, and report the results of a survey distributed to state election directors during FY–2007. Survey results were presented in the following reports of the EAC: *The Impact of the National Voter Registration Act of 1993 on the Administration of Elections for Federal Office, 2005–2006, A Report to the 110th Congress,* June 30, 2007; *Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA), Survey Report Findings,* September, 2007; and *The 2006 Election Administration and Voting Survey, A Summary of Key Findings,* December, 2007.

U.S. Election Assistance Commission (EAC): Compile, analyze, and report the results of three surveys distributed to state election directors during FY–2005: Election Day, Military and Overseas Absentee Ballot (UOCAVA), and Voter Registration (NVRA) Surveys. Survey results were presented in the following reports: *Final Report of the 2004 Election Day Survey,* by Kimball W. Brace and Dr. Michael P. McDonald, September 27, 2005; and *Impact of the National Voter Registration Act of 1993 on the Administration of Elections for Federal Office, 2003–2004, A Report to the 109th Congress,* June 30, 2005.

Rhode Island Secretary of State: Verification of precinct and district assignment codes in municipal registered voter files and production of street files for a statewide voter registration database, on-going maintenance of street file, 2004-2006, 2008-2014, 2016-2017.

Rhode Island Secretary of State, State Board of Elections & all cities & towns: production of precinct maps statewide, 2012, 2002, 1992

(Election Administration Consulting, cont.)

District of Columbia, Board of Elections and Ethics (DCBOEE): Verification of election ward, Advisory Neighborhood Commission (ANC), and Single-Member District (SMD) boundaries and production of a new street locator, 2003. Similar project, 1993.

Harris County, Tex.: Analysis of census demographics to identify precincts with language minority populations requiring bilingual assistance, 2002–03

Cook County, Ill., Election Department and Chicago Board of Election Commissioners:

- Analysis of census demographics to identify precincts with language minority populations requiring bilingual assistance, 2019, 2010-2013, 2002–03
- Study on voting equipment usage and evaluation of punch card voting system, 1997

Chicago Board of Election Commissioners: Worked with Executive Director & staff in Mapping Dept. to redraw citywide precincts, eliminate over 600 to save costs, 2011-12

Library of Congress, Congressional Research Service: Nationwide, biannual studies on voter registration and turnout rates, 1978–2002

U.S. General Accounting Office (GAO), U.S. Dept. of Justice, and numerous voting equipment vendors and media: Data on voting equipment usage throughout the United States, 1980–present

Needs assessments and systems requirement analyses for the development of statewide voter registration systems:

- Illinois State Board of Elections: 1997
- North Carolina State Board of Elections, 1995
- Secretary of Commonwealth of Pennsylvania, 1996

Federal Election Commission, Office of Election Administration:

- Study on integrating local voter registration databases into statewide systems, 1995
- Nationwide workshops on election administration topics, 1979–80
- Study on use of statistics by local election offices, 1978–79

Cuyahoga County, Ohio, Board of Elections: Feasibility study on voting equipment, 1979

Winograd Commission, Democratic National Committee: Analysis of voting patterns, voter registration and turnout rates, and campaign expenditures from 1976 primary elections

Mapping and GIS

Activities include mapping and GIS software development (geographic information systems) for election administration and updating TIGER/Line files for the decennial census.

2000 Census Transportation Planning Package (CTPP), 1998–99: GIS software for the U.S. Department of Transportation to distribute to 400 metropolitan planning organizations (MPOs) and state transportation departments for mapping traffic analysis zones (TAZs) for the 2000 census; provided technical software support to MPOs

Census 2000, 2010 and 2020 Redistricting Data Program, Block Boundary Suggestion Project (Phase 1) and Voting District Project (Phase 2), 1995–99: GIS software and provided software, databases, and technical software support to the following program participants:

- Alaska Department of Labor
- Connecticut Joint Committee on Legislative Management

(Mapping & GIS Support, cont.)

- Illinois State Board of Elections
- Indiana Legislative Services Agency
- Iowa Legislative Service Bureau

- New Mexico Legislative Council Service
- Rhode Island General Assembly
- Virginia Division of Legislative Services

Developed PRECIS® Precinct Information System—GIS software to delineate voting precinct boundaries—and delivered software, databases, and technical software support to the following state and local election organizations (with date of installation):

- Cook County, Ill., Department of Elections (1993)
- Marion County, Fla., Supervisor of Elections (1995)
- Berks County Clerk, Penn. (1995)
- Hamilton County, Ohio, Board of Elections (1997)
- Brevard County, Fla., Supervisor of Elections (1999)
- Osceola County, Fla., Supervisor of Elections (1999)
- Multnomah County, Ore, Elections Division (1999)
- Chatham County, Ga., Board of Elections (2000)
- City of Chicago, Ill., Board of Election Commissioners (2000)
- Mahoning County, Ohio, Board of Elections (2000)
- Iowa Secretary of State, Election and Voter Registrations Divisions (2001)
- Woodbury County, Iowa, Elections Department (2001)
- Franklin County, Ohio, Board of Elections (2001)
- Cobb County, Ga., Board of Elections and Voter Registration (2002)

Illinois State Board of Elections, Chicago Board of Election Commissioners, and Cook County Election Department: Detailed maps of congressional, legislative, judicial districts, 1992

Associated Press: Development of election night mapping system, 1994

Litigation Support

Activities include data analysis, preparation of court documents and expert witness testimony. Areas of expertise include the census, demographic databases, district compactness and contiguity, racial bloc voting, communities of interest, and voting systems. Redistricting litigation activities also include database construction and the preparation of substitute plans.

State of Alabama vs. US Department of Commerce, et al (2019-2020) apportionment & citizenship data

NAACP vs. Denise Merrill, CT Secretary of State, et al (2019-2020) state legislative redistricting and prisoner populations

Latasha Holloway, et al. v. City of Virginia Beach, VA (2019) city council redistricting

Joseph V. Aguirre vs. City of Placentia, CA (2018-2019), city council redistricting

Davidson, et al & ACLU of Rhode Island vs. City of Cranston, RI (2014-16), city council & school committee redistricting with prisoner populations.

(Litigation Support, cont.)

Navaho Nation v. San Juan County, UT (2014-17) county commissioner & school board districts.

Michael Puyana vs. State of Rhode Island (2012) state legislature redistricting

United States of America v. Osceola County, Florida, (2006), county commissioner districts.

Deeds vs McDonnell (2005), Va. Attorney General Recount

Indiana Democratic Party, et al., v. Todd Rokita, et al. (2005), voter identification.

Linda Shade v. Maryland State Board of Elections (2004), electronic voting systems

Gongaley v. City of Aurora, Ill. (2003), city council districts

State of Indiana v. Sadler (2003), ballot design (city of Indianapolis-Marion County, Ind.)

Peterson v. Borst (2002–03), city-council districts (city of Indianapolis-Marion County, Ind.)

New Rochelle Voter Defense Fund v. City of New Rochelle, City Council of New Rochelle, and Westchester County Board Of Elections (2003), city council districts (New York)

Charles Daniels and Eric Torres v. City of Milwaukee Common Council (2003), council districts (Wisconsin)

The Louisiana House of Representatives v. Ashcroft (2002–03), state house districts

Camacho v. Galvin and *Black Political Caucus v. Galvin* (2002–03), state house districts (Massachusetts)

Latino Voting Rights Committee of Rhode Island, et al., v. Edward S. Inman, III, et al. (2002–03), state senate districts

Metts, v. Harmon, Almond, and Harwood, et al. (2002–03), state senate districts (Rhode Island)

Joseph F. Parella, et al. v. William Irons, et al. (2002–03), state senate districts (Rhode Island)

Jackson v. County of Kankakee (2001–02), county commissioner districts (Illinois)

Corbett, et al., v. Sullivan, et al. (2002), commissioner districts (St Louis County, Missouri)

Harold Frank, et al., v. Forest County, et al. (2001–02), county commissioner districts (Wisc.)

Albert Gore, Jr., et al., v. Katherine Harris as Secretary of State, State of Florida, et al., and The Miami Dade County Canvassing Board, et al., and The Nassau County Canvassing Board, et al., and The Palm Beach County Canvassing Board, et al., and George W. Bush, et al (2000), voting equipment design — Leon County, Fla., Circuit Court hearing, December 2, 2000, on disputed ballots in Broward, Volusia, Miami-Dade, and Palm Beach counties from the November 7, 2000, presidential election.

Barnett v. Daley/PACI v. Daley/Bonilla v. Chicago City Council (1992–98), city wards

Donald Moon, et al. v. M. Bruce Meadows, etc and Curtis W. Harris, et al. (1996–98), congressional districts (Virginia)

Melvin R. Simpson, et al. v. City of Hampton, et al. (1996–97), city council districts (Va.)

Vera vs. Bush (1996), Texas redistricting

Litigation Support, cont.)

In the Matter of the Redistricting of Shawnee County Kansas and Kingman, et al. v. Board of County Commissioners of Shawnee County, Kansas (1996), commissioner districts

Vecinos de Barrio Uno v. City of Holyoke (1992–96), city council districts (Massachusetts)

Torres v. Cuomo (1992–95), congressional districts (New York)

DeGrandy v. Wetherell (1992–94), congressional, senate, and house districts (Florida)

Johnson v. Miller (1994), congressional districts (Georgia)

Jackson, et al v Nassau County Board of Supervisors (1993), form of government (N.Y.)

Gonzalez v. Monterey County, California (1992), county board districts

LaPaille v. Illinois Legislative Redistricting Commission (1992), senate and house districts

Black Political Task Force v. Connolly (1992), senate and house districts (Massachusetts)

Nash v. Blunt (1992), house districts (Missouri)

Fund for Accurate and Informed Representation v. Weprin (1992), assembly districts (N.Y.)

Mellow v. Mitchell (1992), congressional districts (Pennsylvania)

Phillip Langsdon v. Milsaps (1992), house districts (Tennessee)

Smith v. Board of Supervisors of Brunswick County (1992), supervisor districts (Virginia)

People of the State of Illinois ex. rel. Burris v. Ryan (1991–92), senate and house districts

Good v. Austin (1991–92), congressional districts (Michigan)

Neff v. Austin (1991–92), senate and house districts (Michigan)

Hastert v. Illinois State Board of Elections (1991), congressional districts

Republican Party of Virginia et al. v. Wilder (1991), senate and house districts

Jamerson et al. v. Anderson (1991), senate districts (Virginia)

Ralph Brown v. Iowa Legislative Services Bureau (1991), redistricting database access

Williams, et al. v. State Board of Election (1989), judicial districts (Cook County, Ill.)

Fifth Ward Precinct 1A Coalition and Progressive Association v. Jefferson Parish School Board (1988–89), school board districts (Louisiana)

Michael V. Roberts v. Jerry Wamser (1987–89), St. Louis, Mo., voting equipment

Brown v. Board of Commissioners of the City of Chattanooga, Tenn. (1988), county commissioner districts

Business Records Corporation v. Ransom F. Shoup & Co., Inc. (1988), voting equip. patent

East Jefferson Coalition for Leadership v. The Parish of Jefferson (1987–88), parish council districts (Louisiana)

Buckanaga v. Sisseton School District (1987–88), school board districts (South Dakota)

Griffin v. City of Providence (1986–87), city council districts (Rhode Island)

(Litigation Support, cont.)

United States of America v. City of Los Angeles (1986), city council districts

Latino Political Action Committee v. City of Boston (1984–85), city council districts

Ketchum v. Byrne (1982–85), city council districts (Chicago, Ill.)

State of South Carolina v. United States (1983–84), senate districts — U.S. Dept. of Justice

Collins v. City of Norfolk (1983–84), city council districts (Virginia) — for Lawyers' Committee for Civil Rights

Rybicki v. State Board of Elections (1981–83), senate and house districts (Illinois)

Licht v. State of Rhode Island (1982–83), senate districts (Rhode Island)

Agerstrand v. Austin (1982), congressional districts (Michigan)

Farnum v. State of Rhode Island (1982), senate districts (Rhode Island)

In Re Illinois Congressional District Reapportionment Cases (1981), congressional districts

Publications

"EAC Survey Sheds Light on Election Administration", *Roll Call*, October 27, 2005 (with Michael McDonald)

Developing a Statewide Voter Registration Database: Procedures, Alternatives, and General Models, by Kimball W. Brace and M. Glenn Newkirk, edited by William Kimberling, (Washington, D.C.: Federal Election Commission, Office of Election Administration, Autumn 1997).

The Election Data Book: A Statistical Portrait of Voting in America, 1992, Kimball W. Brace, ed., (Bernan Press, 1993)

"Geographic Compactness and Redistricting: Have We Gone Too Far?", presented to Midwestern Political Science Association, April 1993 (with D. Chapin and R. Niemi)

"Whose Data is it Anyway: Conflicts between Freedom of Information and Trade Secret Protection in Redistricting", *Stetson University Law Review*, Spring 1992 (with D. Chapin and W. Arden)

"Numbers, Colors, and Shapes in Redistricting," *State Government News*, December 1991 (with D. Chapin)

"Redistricting Roulette," *Campaigns and Elections*, March 1991 (with D. Chapin)

"Redistricting Guidelines: A Summary", presented to the Reapportionment Task Force, National Conference on State Legislatures, November 9, 1990 (with D. Chapin and J. Waliszewski)

"The 65 Percent Rule in Legislative Districting for Racial Minorities: The Mathematics of Minority Voting Equality," *Law and Policy*, January 1988 (with B. Grofman, L. Handley, and R. Niemi)

"Does Redistricting Aimed to Help Blacks Necessarily Help Republicans?" *Journal of Politics*, February 1987 (with B. Grofman and L. Handley)

"New Census Tools," *American Demographics*, July/August 1980

Professional Activities

Member, Task Force on Long Lines in 2012 Election, Prince William County, VA

Member, 2010 Census Advisory Committee, a 20-member panel advising the Director of the Census on the planning and administration of the 2010 census.

Delegate, Second Trilateral Conference on Electoral Systems (Canada, Mexico, and United States), Ontario, Canada, 1995; and Third Trilateral Conference on Electoral Systems, Washington, D.C., 1996

Member, American Association of Political Consultants

Member, American Association for Public Opinion Research

Member, American Political Science Association

Member, Association of American Geographers, Census Advisory Committee

Member Board of Directors, Association of Public Data Users

Member, National Center for Policy Alternatives, Voter Participation Advisory Committee

Member, Urban and Regional Information Systems Association

Historical Activities

Member, Manassas Battlefield Trust Board Member, 2018 -- current

Member, Historical Commission, Prince William County, VA., 2015 – current. Elected Chairman in 2017, re-elected 2018

Member of Executive Committee & head of GIS Committee, Bull Run Civil War Round Table, Centerville, VA. 2015 – current

Member, Washington Capitals Fan Club, Executive Board 2017 -- current

February, 2020

ATTACHMENT C

Redistricting Databases

Over the past 44 years Election Data Services, Inc. has compiled extensive databases for use in the redistricting process and redistricting and voting rights court cases in many different states and localities. These databases form the heart of the redistricting process, but also are an essential building block for racial bloc voting analysis. Generally, these databases merge four different elements through the use of geography. Over the past four decades Mr. Brace has spoken before many groups and courts about what he terms the "redistricting data cube". The sketch to the left depicts that cube.

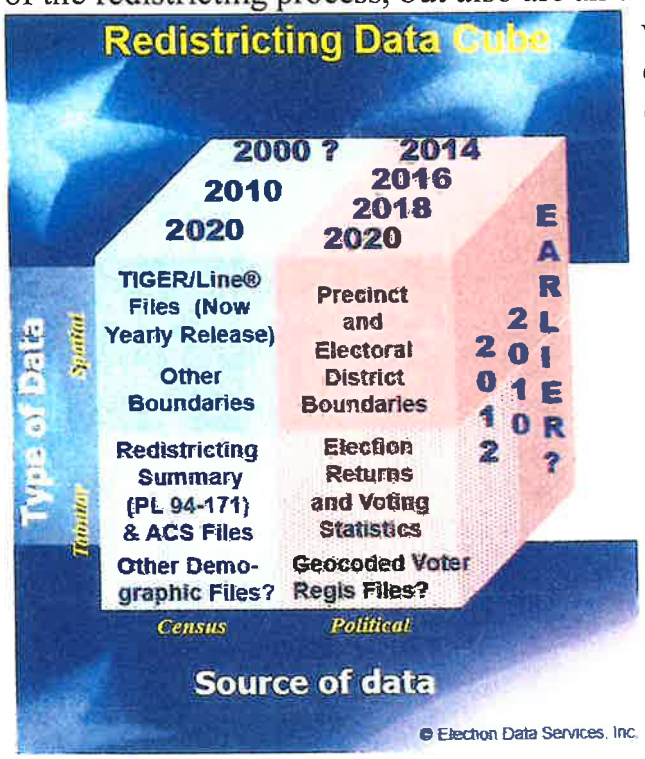


Figure 1

Redistricting issues always deal with territory. In previous decades, the Census Bureau depicted data collection areas on paper maps. In 1990, the Bureau was able to create an electronic map of the entire country, called the Topologically Integrated Geographic Encoding and Referencing system, or TIGER. Census geography in the form of TIGER files becomes the **first element of the data cube**, shown in the upper left side of the cube (i.e., type of data: spatial; source of data: Census).

The TIGER files are actually massive databases in themselves and encompass all the lines that one sees on a map. These lines or "segments" are depicted with a latitude and a longitude coordinate point at the beginning and end of each line segment. These line segments have no population data associated with them, but they do have an extensive set of other attribute information. For example, each line segment has information about whether it is a stream, road, railroad, or power line, etc. If the segment is a road or stream, there is also

information about its name. If the segment is a road, there is also information in many instances about address ranges.

All line segments have geographic codes that identify the census tract and block on the left and right sides of the line. If one were to travel along a series of line segments and make a right turn at the end of each segment onto an intersecting line segment, one would eventually return to the starting point. Upon arrival at the starting point, one would be "closing" a polygon. This resulting polygon would form the basic census block. Census blocks are linked to block-level population and demographic data, but these numeric data are not in the TIGER files.

This numeric data, the **second element in the data cube** (lower left of the cube), is reported by the Census Bureau after each decennial census and consists of population and demographic counts associated with each census tract and block in each state. This data is first released for redistricting purposes in a computer file called the Census Redistricting (PL 94–171) Summary File. For each census tract and block there are both total population and voting age population (18 years old and over) counts, along with sub-counts of the different racial and Hispanic origin categories tabulated by the Census Bureau. For the first time in the 2000 Census, persons could choose multiple racial or ethnic origins, which caused the PL 94–171 population files to expand from 12 columns of data in 1990 to 291 columns of data in 2000 and 2010. Despite this seemly massive amount of data, it is generally not until the year ending in a "2" when more detailed demographic data, such as income or education information, is released by the Census Bureau.

The availability of the Census Bureau's PL94-171 population data files is still undetermined as of 2/9/2021. It is our understanding in discussions with Bureau staff that the release of the PL files will again be delayed in an announcement expected by this Friday. We understand that the PL files may not be released until August or September of 2021, which will pose major problems for being able to meet the state's redistricting deadlines.

These two Census computer files (TIGER and PL) form the heart of any redistricting effort and are absolutely necessary for drawing and analyzing districts.

If one wishes to perform an electoral analysis of voting behavior for a given area, election returns are required. This is the **third element in the data cube** (lower right of cube). In the past these returns had to be collected from each county in a state, although more states are centralizing that collection effort. However, when redistricting deals with local contests, returns from multiple years must be collected from local election offices and, if not in electronic form, must be

keypunched to perform the analysis. State of Michigan is extremely fortunate in that the County's election office makes precinct level returns available on their website for all years and all contests.

Election returns alone are not enough to do racial voting or political analysis that is required in a redistricting and/or court case setting. One must know where the election returns come from—that is, from what part of a county or city. This is where the **fourth element of the data cube** (upper right of cube) — precinct maps — comes into play. Precinct maps for each election year must be collected and analyzed to determine the extent of change since the previous year.

It is standard practice across the United States for county governments to make massive precinct changes subsequent to statewide redistricting that occur in the years ending in "1" and "2". In addition, many larger jurisdictions change precinct boundaries on a regular basis as population shifts occur or there is a need to relocate a polling place. As a result, to analyze election contests that occur over time, one must determine the makeup of each precinct in each election in which the contests were held.

Election Data Services, Inc. has been collecting precinct maps from around the nation since the early 1980s. To study racial bloc voting or perform other types of electoral analysis, the racial makeup of each precinct needs to be determined and matched up with election returns. Unfortunately, the Census Bureau reports demographic data for only those precincts that were in existence in the year ending with "8" before the decennial census is conducted. To merge racial demographic data from the Census Bureau with the configuration of the precincts used in each election over the decade, one must overlay the precinct map boundaries that existed in each election on top of the census geographic boundaries.

It is our understanding that the State of Michigan does have precinct boundaries in the state's Center for Shared Solutions (CSS) back to the 2014 election. EDS will need to test these boundaries and make sure they match up with the election returns from the Secretary of State's office. In addition, we will need to determine whether the precinct boundaries will match up with the final TIGER geography for the 2020 Census, files of which are only now being released by the Bureau. (Michigan files were not on the Bureau's website as of 2/9/2021.)

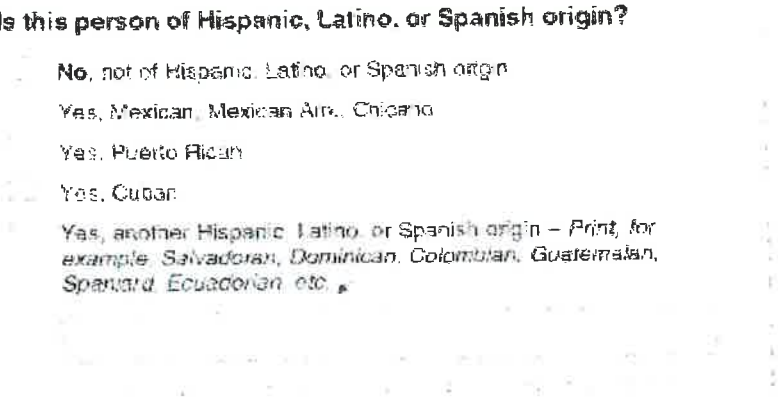
Election Data Services, Inc. has developed computer programs to assist with this process, whereby an operator assigns census tracts and blocks to individual precincts using GIS technology. Once this block-to-precinct equivalency has been developed, additional computer programs can tally up the census demographic and

racial data from the blocks to the precinct summary level. E.D.S. Inc. has loaded these files into various computer databases compiled over the years for such analysis.

Election Data Services, Inc. has spent thousands of hours of staff time compiling extensive databases of state and local election returns and combining the geography of precincts with census geography. A database that matches precinct election returns with the demographic composition of the precincts as reported by the Census is required to conduct an analysis of voting patterns by race/ethnicity. These types of databases are the central component necessary to determine the extent to which racial groups vote differently or the same. Combining all of this information creates a massive database that is internal to Election Data Services, Inc. Additional programs have been created to extract individual election contests from the massive internal database and format them into smaller ASCII datasets that can be read by statistical software programs, such as SPSS, S-Plus, or "R" used to perform racial bloc voting analyses.

Census Data Analysis and Compilation

As noted earlier, census data is one of the major elements of the "datacube." With regard to demographic information and race, the 2010 Census asked, and the 2020 Census is asking, each individual two major questions. First, they asked whether the person was Hispanic or not (the Census Bureau has not considered Hispanic as being a race). The actual Hispanic question in the questionnaire for 2020 appeared as noted in Figure 2, to the right. Second, they asked the person's race. This is show in Figure 3, below. This two-part question format has been used since Hispanic origin was first asked of every individual in 1980.


Is this person of Hispanic, Latino, or Spanish origin?

No, not of Hispanic, Latino, or Spanish origin

Yes, Mexican, Mexican Am., Chicano

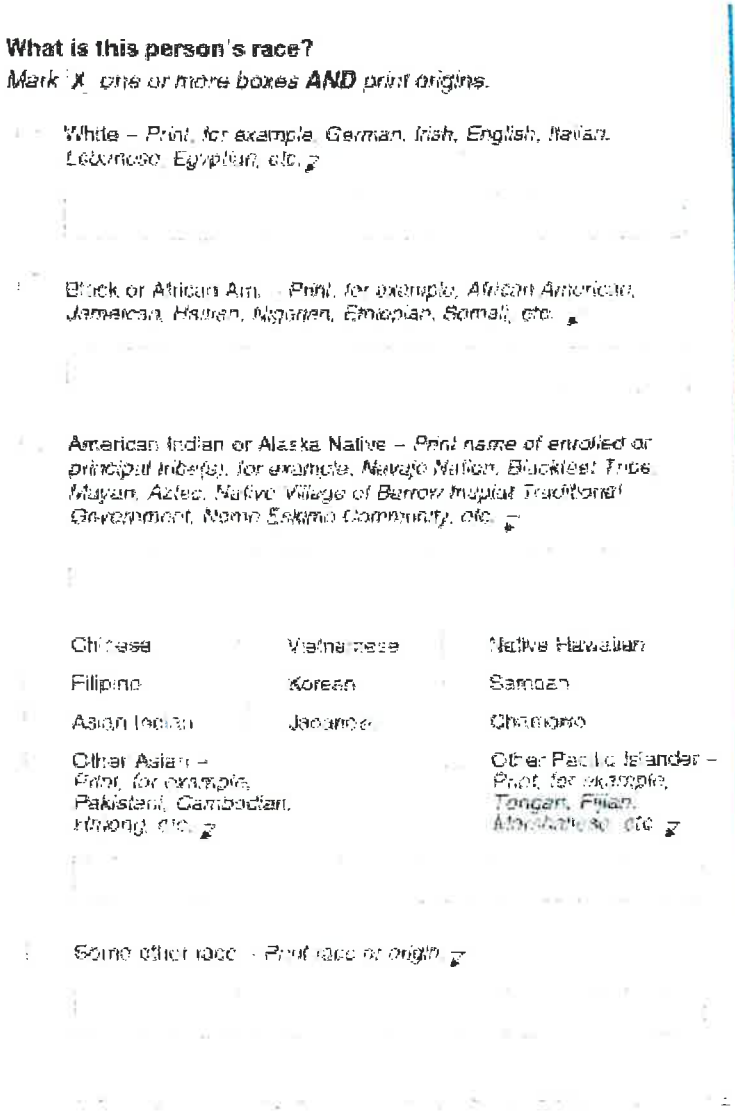
Yes, Puerto Rican

Yes, Cuban

Yes, another Hispanic, Latino, or Spanish origin – *Print, for example, Salvadoran, Dominican, Colombian, Guatemalan, Spaniard, Ecuadorian, etc.*

Figure 2

Since 1980 the Census Bureau has taken the results of the race question and created counts of five major racial groups along with a catch-all of "some other race". The five major racial groups were "*white*", "*black or African-American*", "*American American Indian or Alaska Native*", "*Asian*" (which combined the answers of Asian American Indian, Chinese, Filipino, Korean, Japanese, Vietnamese, and Other Asian), and "*Native Hawaiian or Other Pacific Islander*" (which combined the answers of Pacific Islander, Native Hawaiian, Guamanian or Chamorro, Samoan, and Other Pacific Islander). Traditionally, these five major racial groups, along with "some other race" would add to 100% or the total population reported by the census. The 2020 Census allowed more space for individuals to include ancestry answers as write-ins as a way of clarifying their race, but the data on ancestry will not be released until later in the decade, long after redistricting.


What is this person's race?
Mark "X" one or more boxes ***AND*** *print origins.*

White – *Print, for example, German, Irish, English, Italian, Lebanese, Egyptian, etc.*

Black or African Am. – *Print, for example, African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc.*

American Indian or Alaska Native – *Print name of enrolled or principal tribe(s), for example, Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, etc.*

Chinese	Vietnamese	Native Hawaiian
Filipino	Korean	Samoan
Asian Indian	Japanese	Chamorro
Other Asian – *Print, for example, Pakistani, Cambodian, Hmong, etc.*		Other Pacific Islander – *Print, for example, Tongan, Fijian, Marshallese, etc.*

Some other race – *Print race or origin.*

Figure 3

The Census Bureau also asked individuals whether they were of Hispanic origin. Because the Census Bureau and the federal government for each of the last four censuses have concluded that "Hispanic Origin" is not a racial category (anyone of any race can also be Hispanic), the Census Bureau provides cross-tabulations in its PL 94-171 data tables. Utilizing these cross-tabulations, Election

Data Services, Inc. has traditionally developed its datasets by showing Hispanic Origin as if it were a race, and then removing Hispanics from the individual racial data. As such, we report Non-Hispanic White, instead of White; Non-Hispanic Black, instead of Blacks; Non-Hispanic Asian; instead of Asians; and so-forth. When the racial data and Hispanic Origin are reported in this manner, the groups add to 100 percent of the population.

Post census studies have shown that Hispanics have tended to divide their racial designation mainly between "Some other race" and "white" in roughly equal proportions. As a result, when we take out Hispanics from their relative racial groups in order to treat Hispanic as if it was a race, then the largest decreases occur in both the "White" and the "Some Other Race" categories.

The 2000 and 2010 censuses were a marked departure from earlier censuses on the reporting of racial data. In previous decades, individuals answering the Census were supposed to mark only one racial category. However, beginning with the 2000 Census, individuals could mark any number of racial categories (as many as all six), mainly due to the growth of multi-racial families in American society. This produced unique data issues concerning racial breakdowns and how they were reported. As one of the very few organizations involved in redistricting around the nation, Election Data Services, Inc. was closely involved with census personnel in researching and understanding the ramifications of the new data structures.

There are three basic ways to calculate the racial breakdowns for the 2000 and 2010 census. The first is to exclude any individuals who have marked more than one racial category from the basic racial definitions and put these individuals into a separate "multiple-race" category. This tends to create a bottom level of racial categorization for individual race groups, but one that is more compatible with the numbers that were reported in previous censuses. Election Data Services, Inc. designated these categories as ***"Race-Alone"*** and they occupy tab or table 1 in many of our reports.

The second method of calculation is to include in the individual race groups any individual who marked that race group alone, plus any individual who marked that race group in combination with any other racial group(s). This produces the maximum number of individuals in each racial group, but it also means that the totals of all racial groups added together will result in more than 100 percent of the population being reported. Election Data Services designated these categories as ***"Combo"*** or ***"Max"*** and they occupy tab or table 2 in many of our reports

The third method of calculation was recommended by the Federal Office of Management and Budget (OMB). In a Federal Register notice published in March 2000 (at the tail end of the Clinton administration), OMB laid out how federal agencies should use racial data from the 2000 Census (no fundamental change was made in this directive for the 2010 Census). In essence, the OMB recommended that any individuals who marked themselves as both "White" and some other minority race, should be counted as part of that other minority race. This increased the numbers reported for the racial groups above the "race-alone" categories, but actually excluded individuals who marked themselves as being in two different minority groups. We have found in our research that this method of calculation tends to fall in between the other two methods. Election Data Services, Inc. designates these categories as ***"OMB"*** and they occupy tab or table 3 in many of our data reports.

Election Data Services's standard dataset incorporates all three methods of calculating racial data from the 2000 and 2010 censuses. This will continue for the 2020 Census, as the Census Bureau announced two years ago that the same basic data will be used when they published the PL file for 2020. Producing and reporting population counts based on all three calculation methods allows us to compare the different methods and how district configurations are affected over three decades.

TABLE 1

Bridgeport Wards with 2020 Census Data

	Reported #s	Adjusted for Prisoners
Number of Members	10	10
Ideal District Size (Target)	14,865	14,936
Acceptable Deviation	10.0%	10.0%
Overall Deviation Window	1,487	1,494
One-sided Deviation Window	743	747
High Range (Raw Numbers)	15,609	15,683
High Range (Percentages)	5.0%	5.0%
Low Range (Raw Numbers)	14,122	14,189
Low Range (Percentages)	-5.0%	-5.0%
Citywide Population	148,654	149,360

Analysis based on preliminary district definitions in Census Bureau files.
District boundaries have not been verified.

	Tables
Total Population	1, 2, & 3
Voting Age Population	4, 5 & 6
Race Alone	1 & 4
Combo	2 & 5
OMB Interpetation	3 & 6
No Hispanic category	Single digit tables
Hispanic category	"A" tables

Guide	
Pop =	Total Population, also shown as PopTot or TAPersons in tables
VAP =	Voting Age Population, also VAPTot
WH =	White
BL=	Black, or African American
AS=	Asian
NA, or AI=	Native American or American Indian
PI=	Pacific Islander
OT=	Some Other Race
Hisp=	Hispanic
NH=	Non-Hispanic
XX=	More than one Race
P=	Percentage
_A=	Race Alone
_C=	Combo
_W=	OMB interpetation

TABLE 3

	Total Population	White	Black	American Indian & Alaskan Native	Asian	Hawaiian & Pacific Islander	Some other race	Two or more races	Total	Hispanic	Total
1	Race Alone	39.57%	34.56%	0.55%	3.41%	0.10%	17.47%	4.34%	100.00%		
1a	Non-Hispanic Race Alone	22.74%	32.22%	0.20%	3.31%	0.05%	1.34%	1.94%		38.20%	100.00%
2	Race Combined (Max)	42.30%	36.83%	1.26%	3.93%	0.43%	19.93%		104.68%		
2a	Non-Hispanic Race Combined (Max)	23.87%	33.54%	0.62%	3.71%	0.25%	1.90%			38.20%	102.08%
3	Race Combined (OMB)	39.57%	35.35%	0.71%	3.59%	0.14%	18.80%		98.15%		
3a	Non-Hispanic Race Combined (OMB)	22.74%	32.77%	0.27%	3.46%	0.07%	1.58%			38.20%	99.09%

	Voting Age Population	White	Black	American Indian & Alaskan Native	Asian	Hawaiian & Pacific Islander	Some other race	Two or more races	Total	Hispanic	Total
4	Race Alone	43.04%	32.84%	0.53%	3.65%	0.11%	16.23%	3.60%	100.00%		
4a	Non-Hispanic Race Alone	26.92%	31.07%	0.19%	3.57%	0.05%	1.38%	1.67%		35.15%	100.00%
5	Race Combined (Max)	45.33%	34.45%	1.20%	4.09%	0.45%	18.36%		103.88%		
5a	Non-Hispanic Race Combined (Max)	27.82%	32.10%	0.60%	3.92%	0.27%	1.94%			35.15%	101.79%
6	Race Combined (OMB)	27.82%	32.10%	0.60%	3.92%	0.27%	1.94%		66.65%		
6a	Non-Hispanic Race Combined (OMB)	26.92%	31.38%	0.27%	3.70%	0.08%	1.64%			35.15%	99.14%

TABLE 2

Bridgeport data by racial calculation methods.xlsx
2020

	Total Population	White	Black	American Indian & Alaskan Native	Asian	Hawaiian & Pacific Islander	Some other race	Two or more races	Total	Hispanic	Total
1	Race Alone	22.67%	35.07%	0.94%	2.79%	0.09%	24.56%	13.88%	100.00%		
1a	Non-Hispanic Race Alone	16.42%	32.75%	0.15%	2.71%	0.02%	1.98%	3.69%		42.28%	100.00%
2	Race Combined (Max)	34.01%	38.59%	2.08%	3.36%	0.26%	36.35%		114.66%		
2a	Non-Hispanic Race Combined (Max)	19.12%	34.57%	0.68%	3.14%	0.11%	4.03%			42.28%	103.93%
3	Race Combined (OMB)	22.67%	37.16%	1.51%	3.01%	0.23%	26.66%		91.23%		
3a	Non-Hispanic Race Combined (OMB)	16.42%	33.65%	0.42%	2.87%	0.08%	2.58%			42.28%	98.30%

	Voting Age Population	White	Black	American Indian & Alaskan Native	Asian	Hawaiian & Pacific Islander	Some other race	Two or more races	Total	Hispanic	Total
4	Race Alone	25.10%	34.56%	0.89%	2.90%	0.08%	23.08%	13.38%	100.00%		
4a	Non-Hispanic Race Alone	19.33%	32.88%	0.15%	2.85%	0.02%	1.86%	3.55%		39.35%	100.00%
5	Race Combined (Max)	36.18%	37.52%	2.00%	3.38%	0.26%	34.69%		114.03%		
5a	Non-Hispanic Race Combined (Max)	21.91%	34.49%	0.70%	3.23%	0.11%	3.96%			39.35%	103.75%
6	Race Combined (OMB)	25.10%	36.44%	1.44%	3.08%	0.23%	24.97%		91.26%		
6a	Non-Hispanic Race Combined (OMB)	19.33%	33.77%	0.42%	2.98%	0.09%	2.46%			39.35%	98.40%

TABLE 4

Total Population

DISTRICT				
1	14,412	14,936	-3.51%✓	-524
2	14,903	14,936	-0.22%✓	-33
3	15,349	14,936	2.77%✓	413
4	15,269	14,936	2.23%✓	333
5	15,293	14,936	2.39%✓	357
6	15,042	14,936	0.71%✓	106
7	14,594	14,936	-2.29%✓	-342
8	14,826	14,936	-0.74%✓	-110
9	15,231	14,936	1.98%✓	295
10	14,441	14,936	-3.31%✓	-495
Assigned	149360			
Total Pop	149360			
Unassigned	0			

Racial Demographics as Percent of Total Population

NH White	NH Black	NH Native	NH Asian	Hispanic	Minority
11.04%	34.58%	0.25%	4.52%	44.11%	88.96%
15.25%	32.56%	0.15%	5.12%	41.07%	84.75%
19.72%	29.02%	0.11%	2.40%	37.13%	80.28%
40.58%	19.27%	0.18%	3.41%	27.34%	59.42%
11.28%	43.05%	0.24%	2.27%	36.81%	88.72%
9.74%	31.07%	0.09%	2.22%	48.74%	90.26%
3.68%	31.50%	0.16%	0.88%	59.31%	96.32%
15.09%	36.02%	0.10%	3.32%	40.75%	84.91%
5.27%	43.71%	0.18%	0.88%	45.15%	94.73%
30.66%	22.70%	0.05%	1.98%	40.01%	69.34%

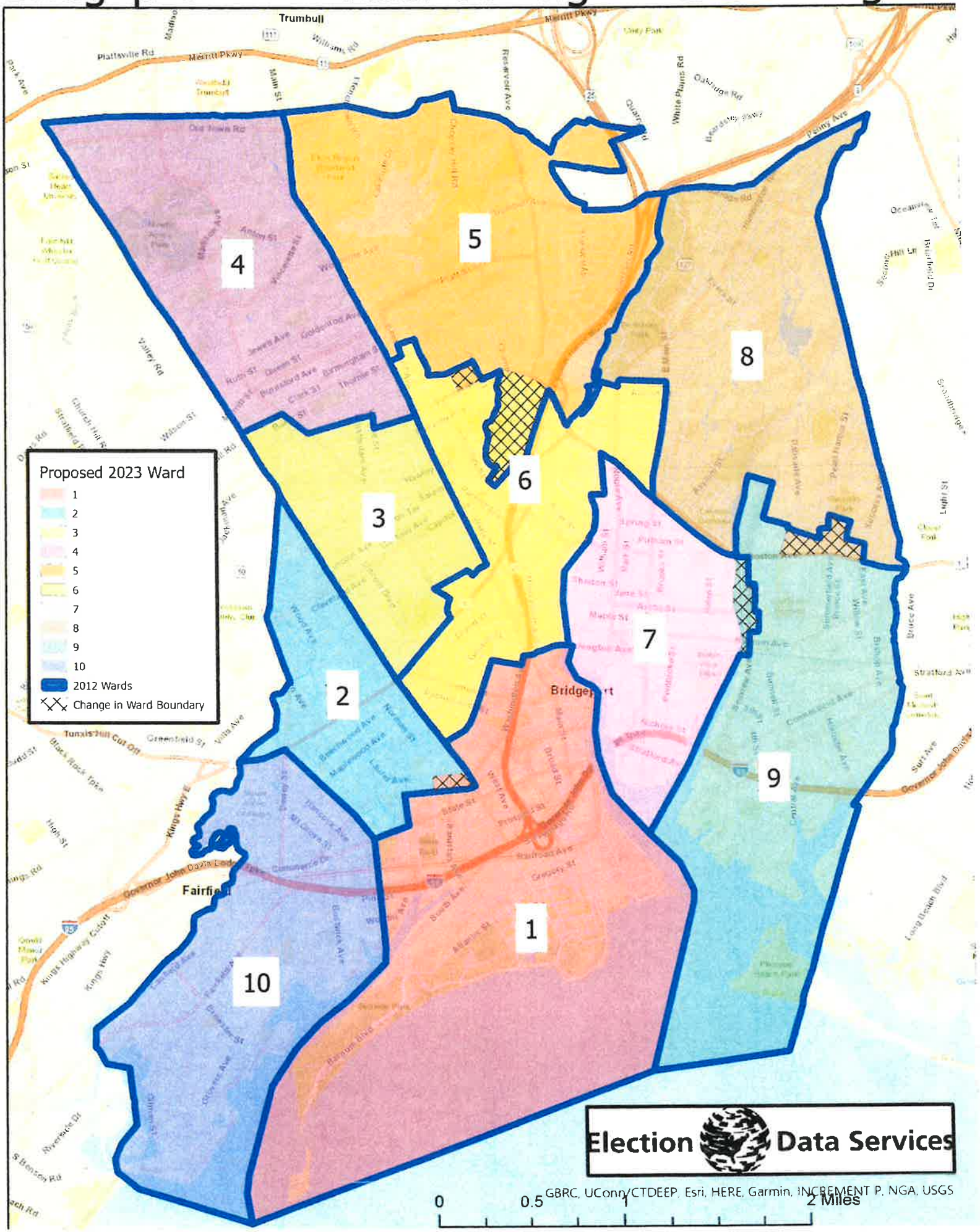
Voting Age Population

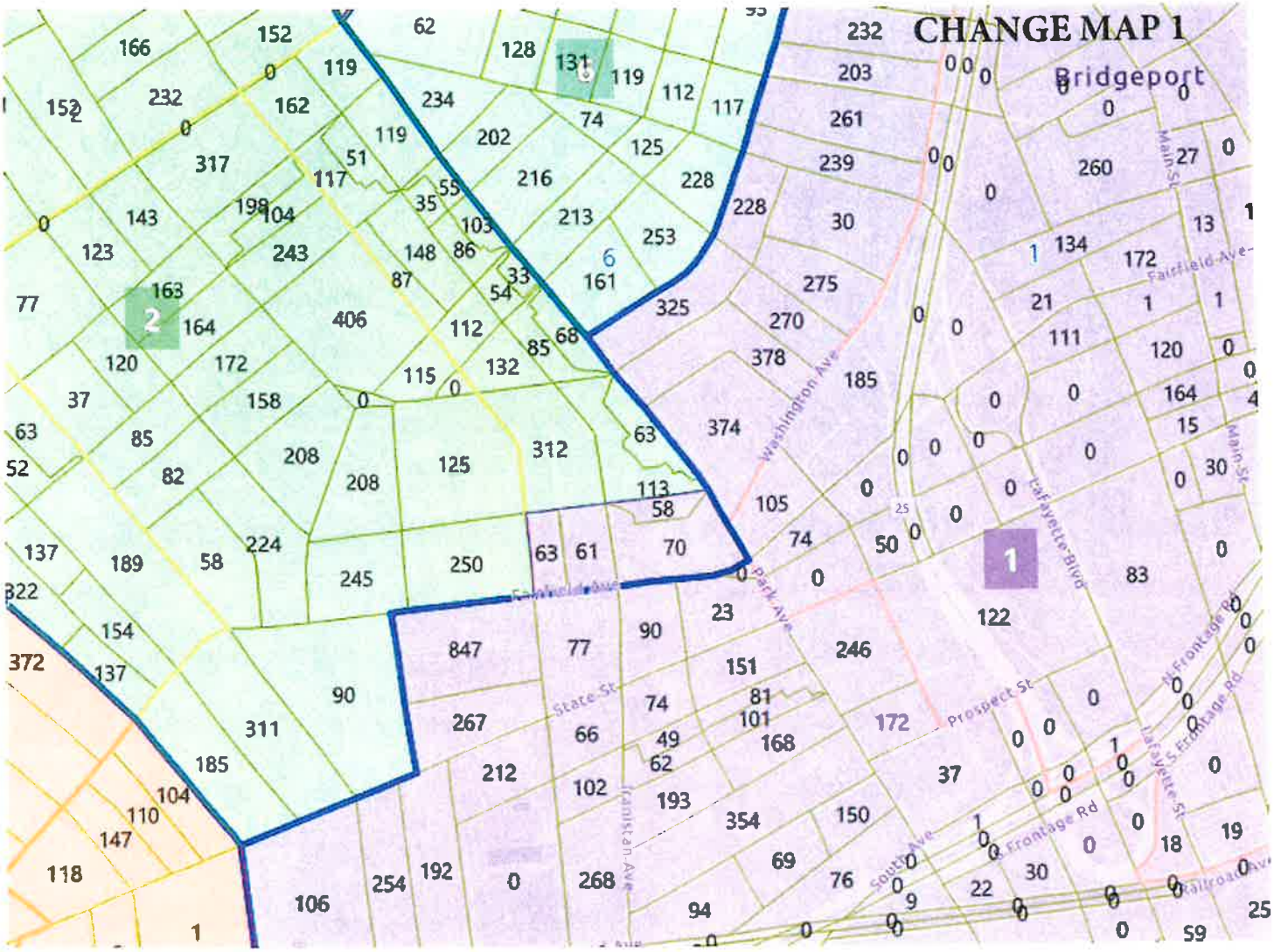
DISTRICT	Adult	VAP %
1	11,014	76.42%
2	11,340	76.09%
3	11,689	76.15%
4	12,720	83.31%
5	11,327	74.07%
6	10,989	73.06%
7	10,441	71.54%
8	11,538	77.82%
9	10,943	71.85%
10	11,072	76.67%

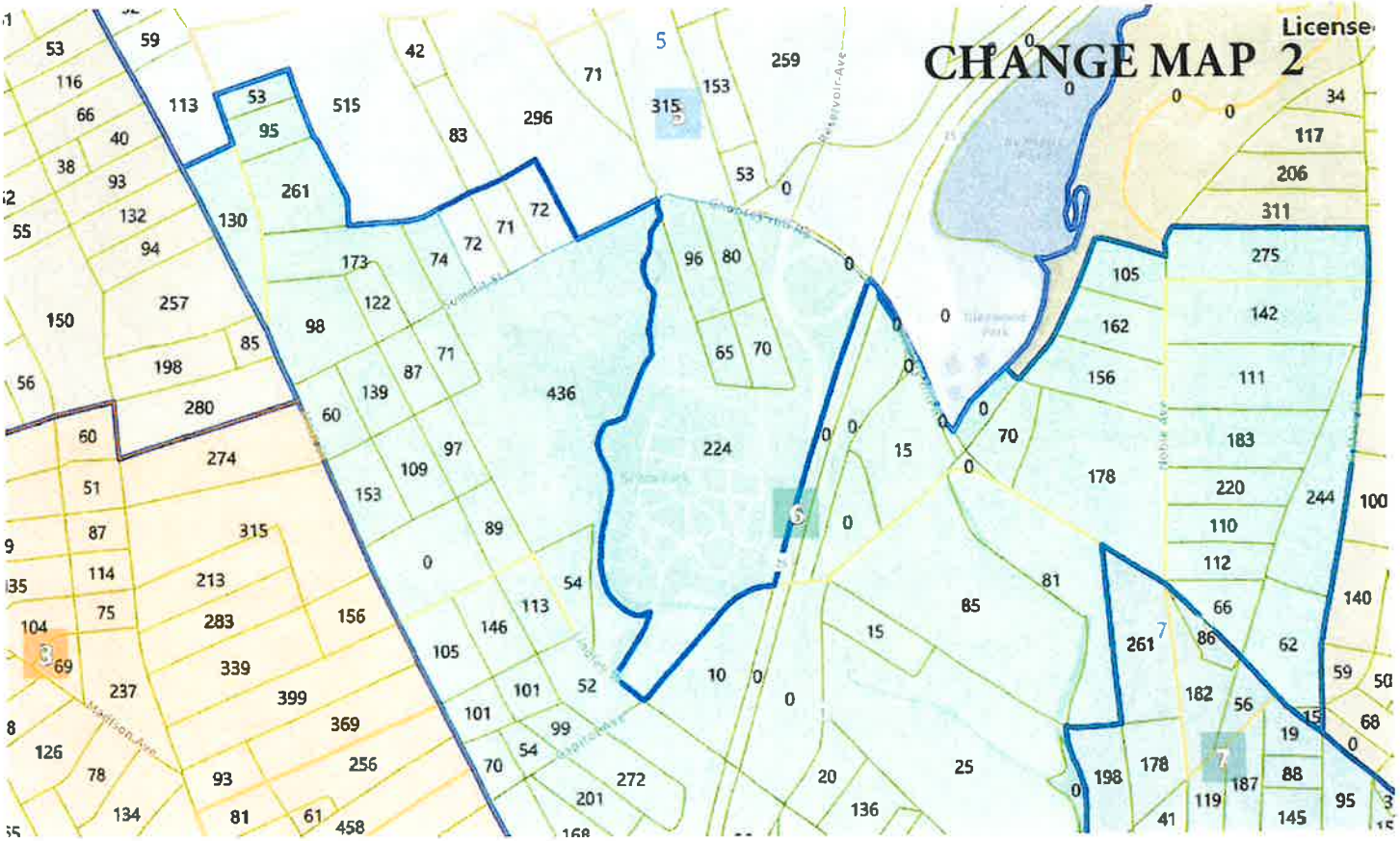
Racial Demographics as Percent of Voting Population

NH White	NH Black	NH Native	NH Asian	Hispanic	Minority
13.49%	35.84%	0.15%	4.94%	41.49%	86.51%
18.06%	32.83%	0.19%	5.32%	38.47%	81.94%
22.87%	29.22%	0.12%	2.44%	34.72%	77.13%
45.24%	18.69%	0.09%	3.38%	24.36%	54.76%
13.04%	44.70%	0.19%	2.45%	34.36%	86.96%
10.87%	32.00%	0.13%	2.40%	47.00%	89.13%
4.43%	32.59%	0.20%	1.06%	58.88%	95.57%
17.72%	35.99%	0.13%	3.32%	39.52%	82.28%
6.16%	45.94%	0.24%	0.94%	43.72%	93.84%
36.53%	22.06%	0.06%	2.19%	35.40%	63.47%

Bridgeport 2023 Redistricting - Ward Changes




CHANGE MAP 1
Bridgeport
Washington Ave
Park Ave
Lafayette Blvd
Main St
Fairfield Ave
State St
Prospect St
Frontage Rd
Lafayette St
South Ave
Railroad Ave
Translan Ave
1
2
6


CHANGE MAP 2
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Reservoir Ave
Madison Ave
Hobie Ave
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66
40
38
93
132
94
55
150
257
198
85
56
280
60
274
51
87
315
114
213
75
283
104
69
339
237
399
126
78
134
93
81
61
458
369
256
113
53
95
515
261
130
42
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296
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72
74
173
122
98
139
87
60
97
109
153
89
0
54
113
146
105
101
52
99
54
70
272
201
168
436
315
153
259
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96
80
65
70
224
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178
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142
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183
220
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112
66
86
261
182
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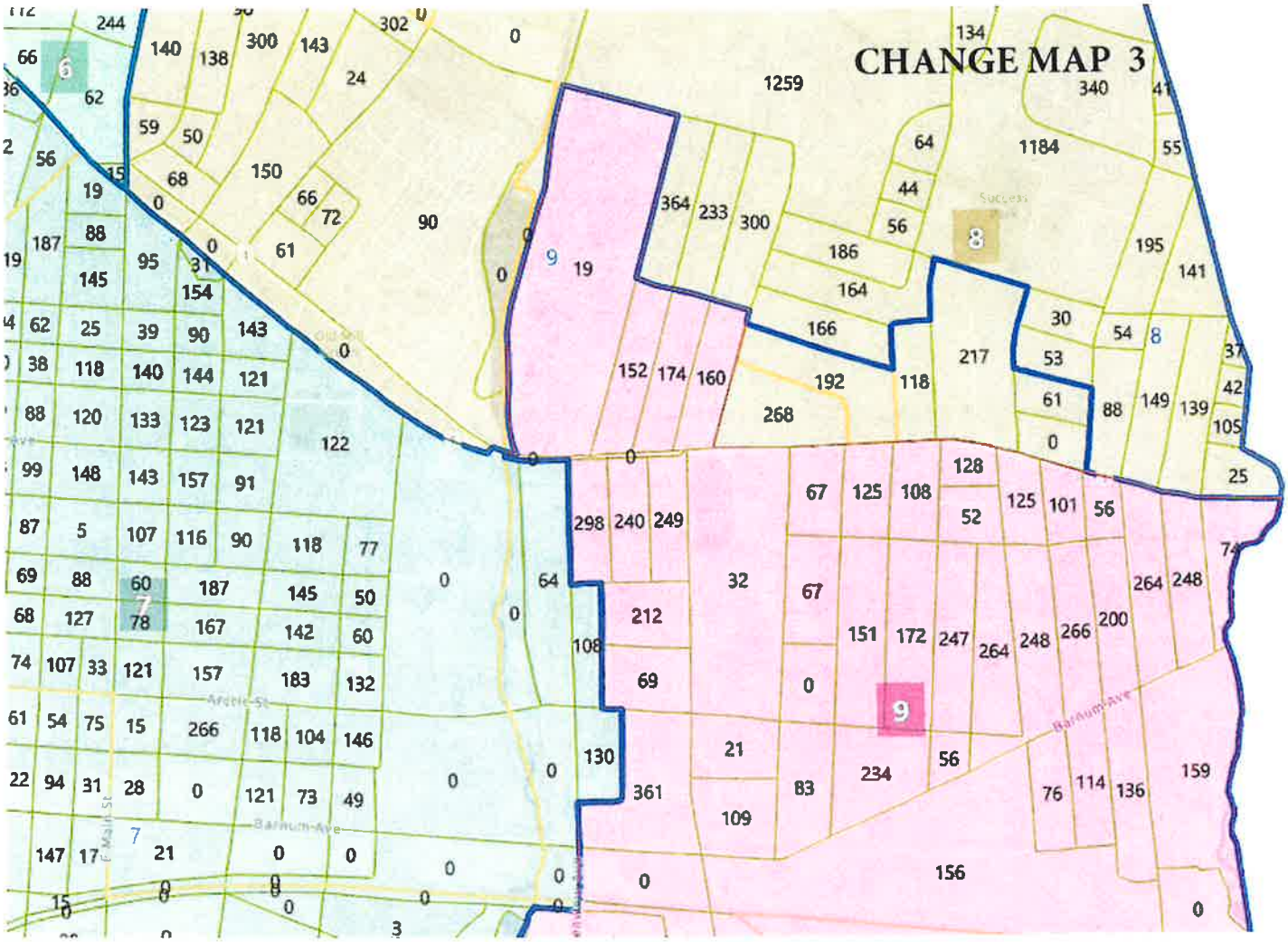
CHANGE MAP 3
Barnum Ave
Barnum Ave
Archie St
Main St
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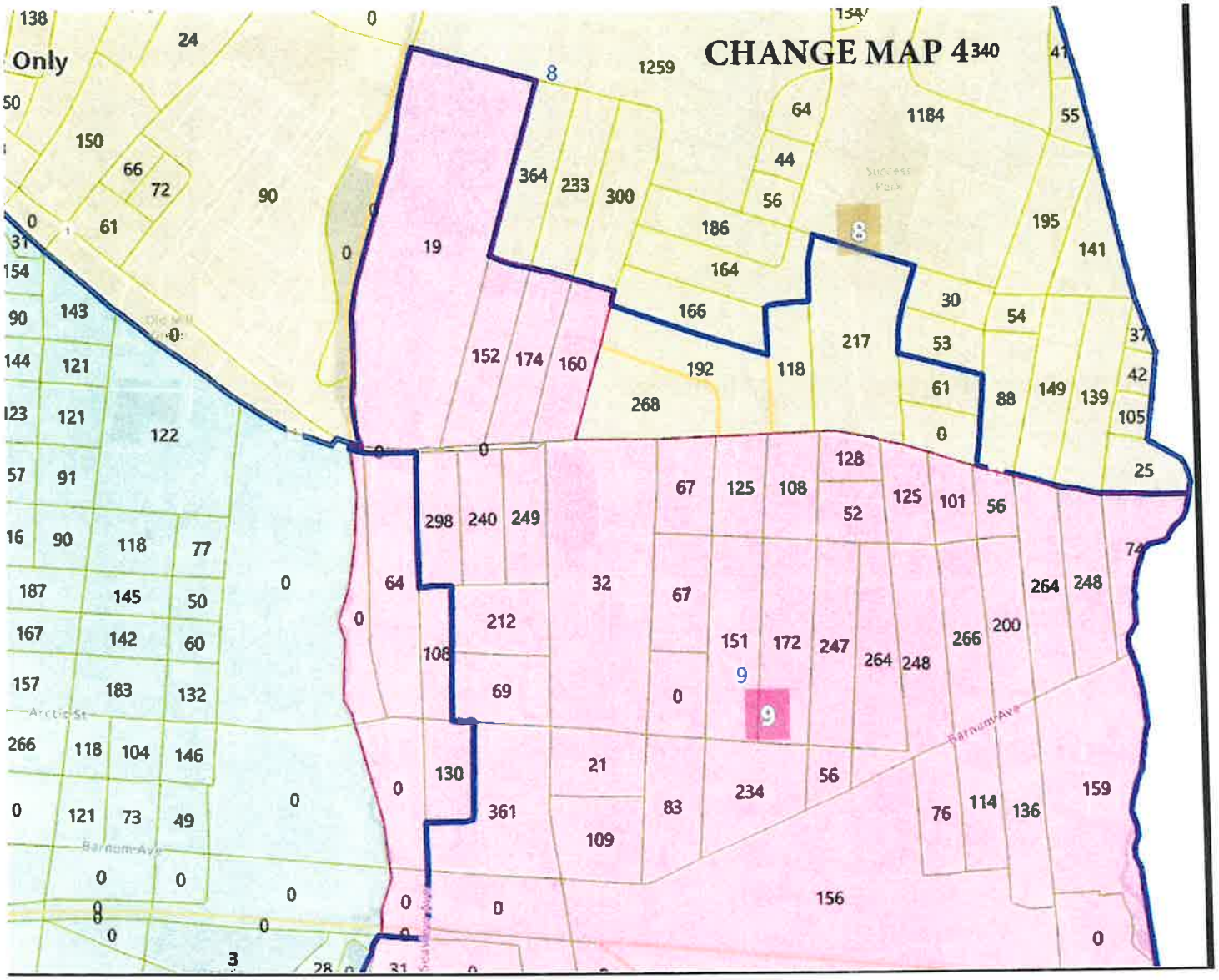
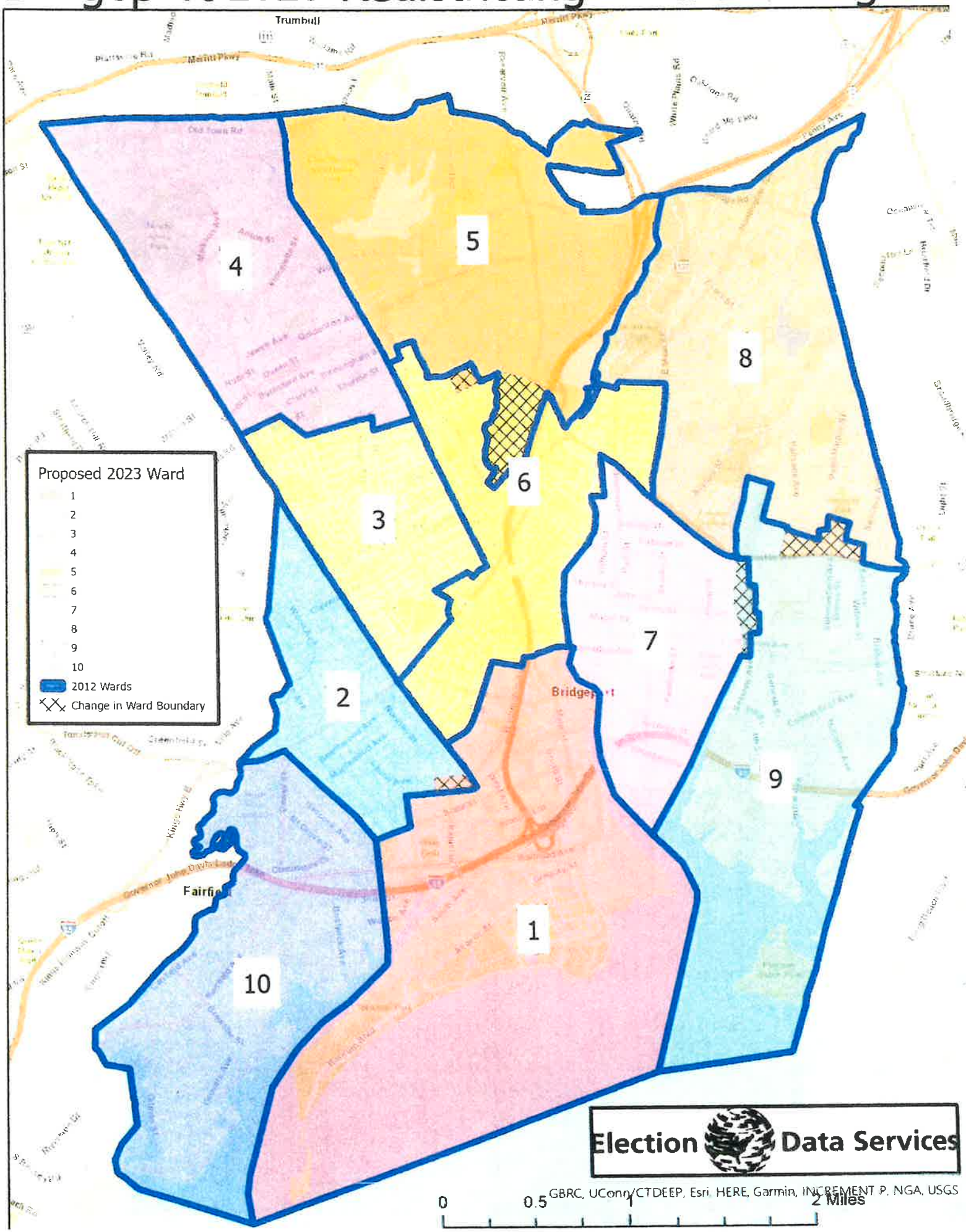
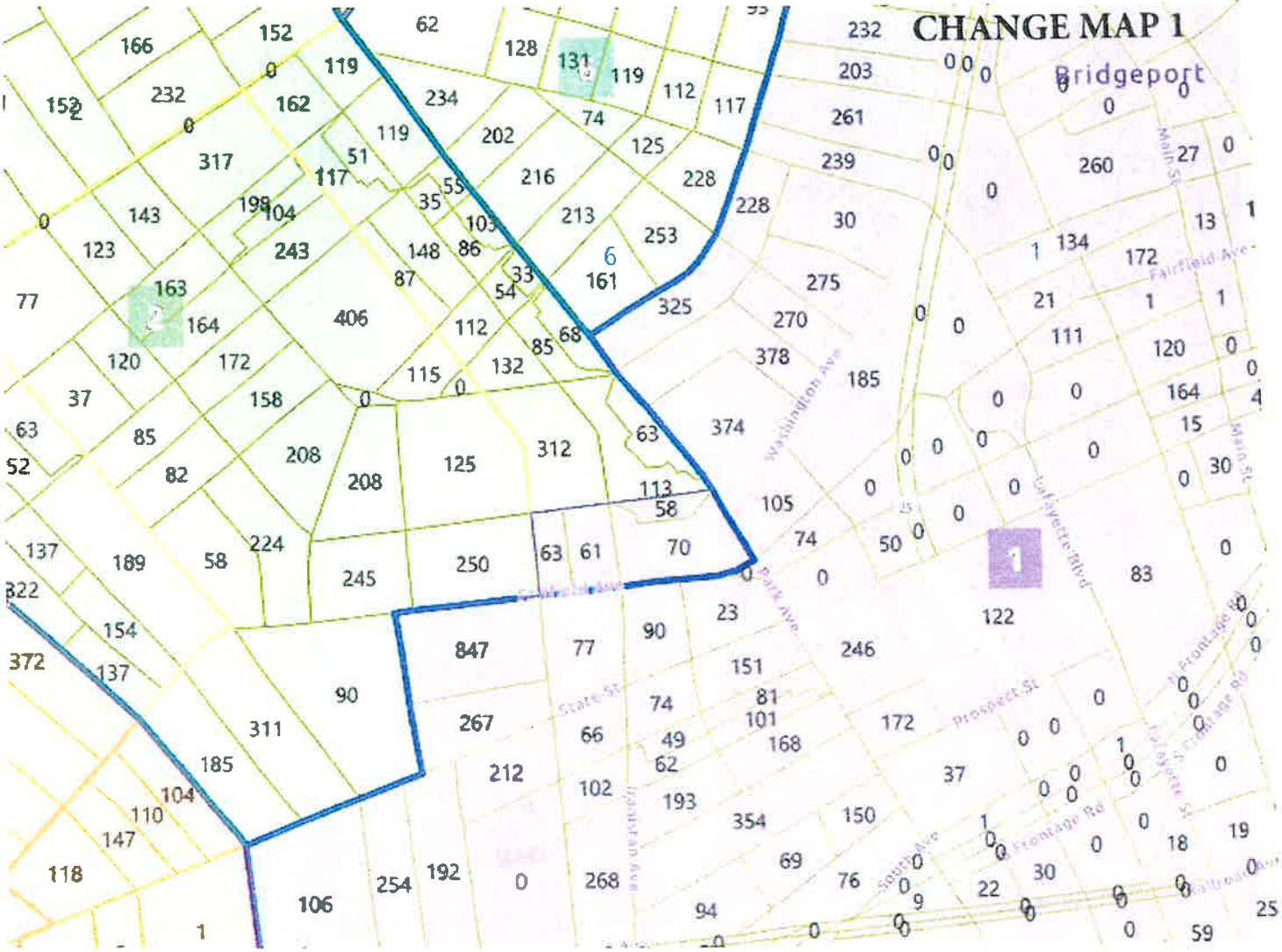
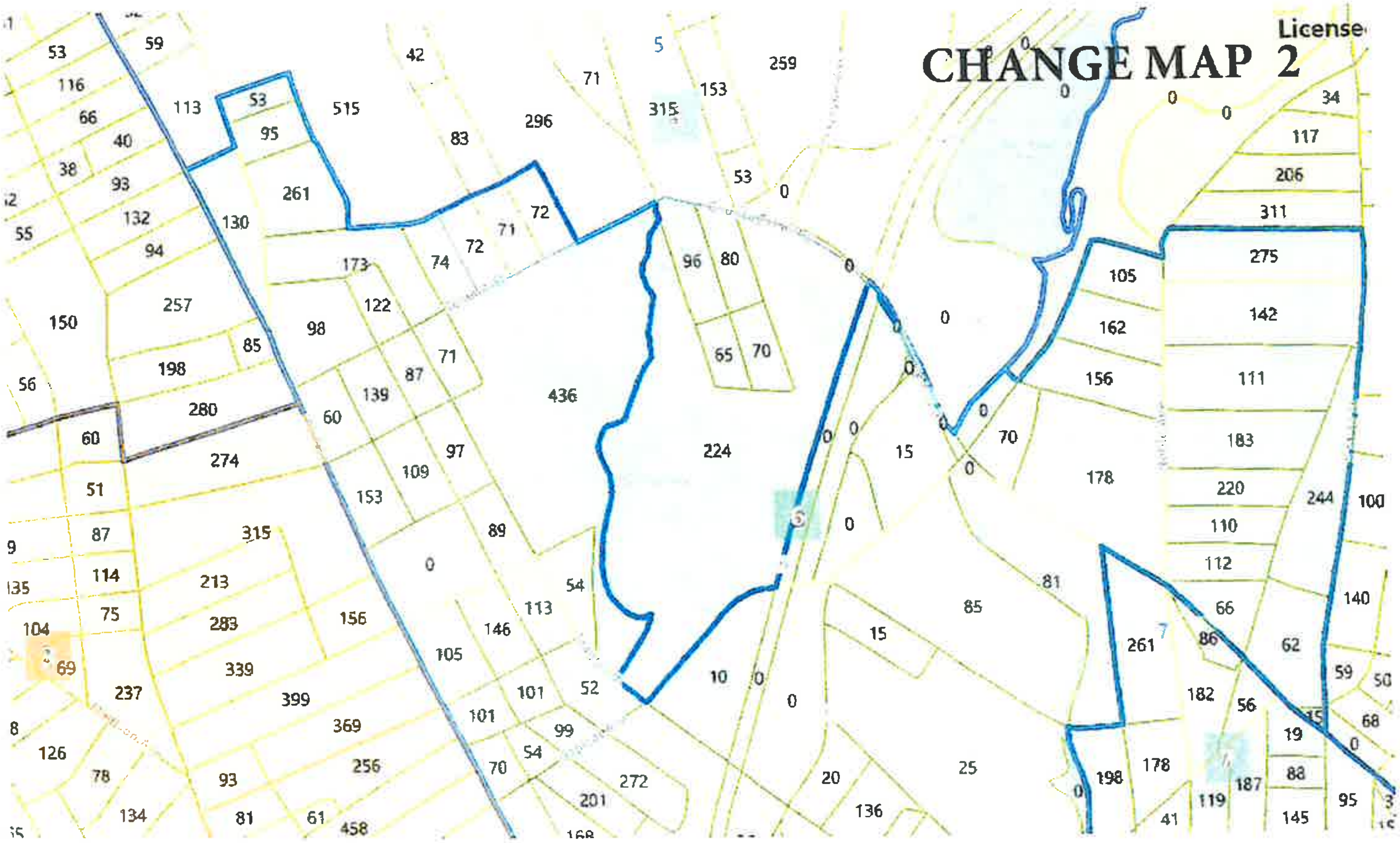
7
8
9


CHANGE MAP 4
Only
Arctic St
Barnum Ave
Success Park
8
9

Bridgeport 2023 Redistricting - Ward Changes




CHANGE MAP 1
Bridgeport
Main St
Fairfield Ave
Washington Ave
Lafayette Blvd
Park Ave
State St
Prospect St
Frontage Rd
South Ave
6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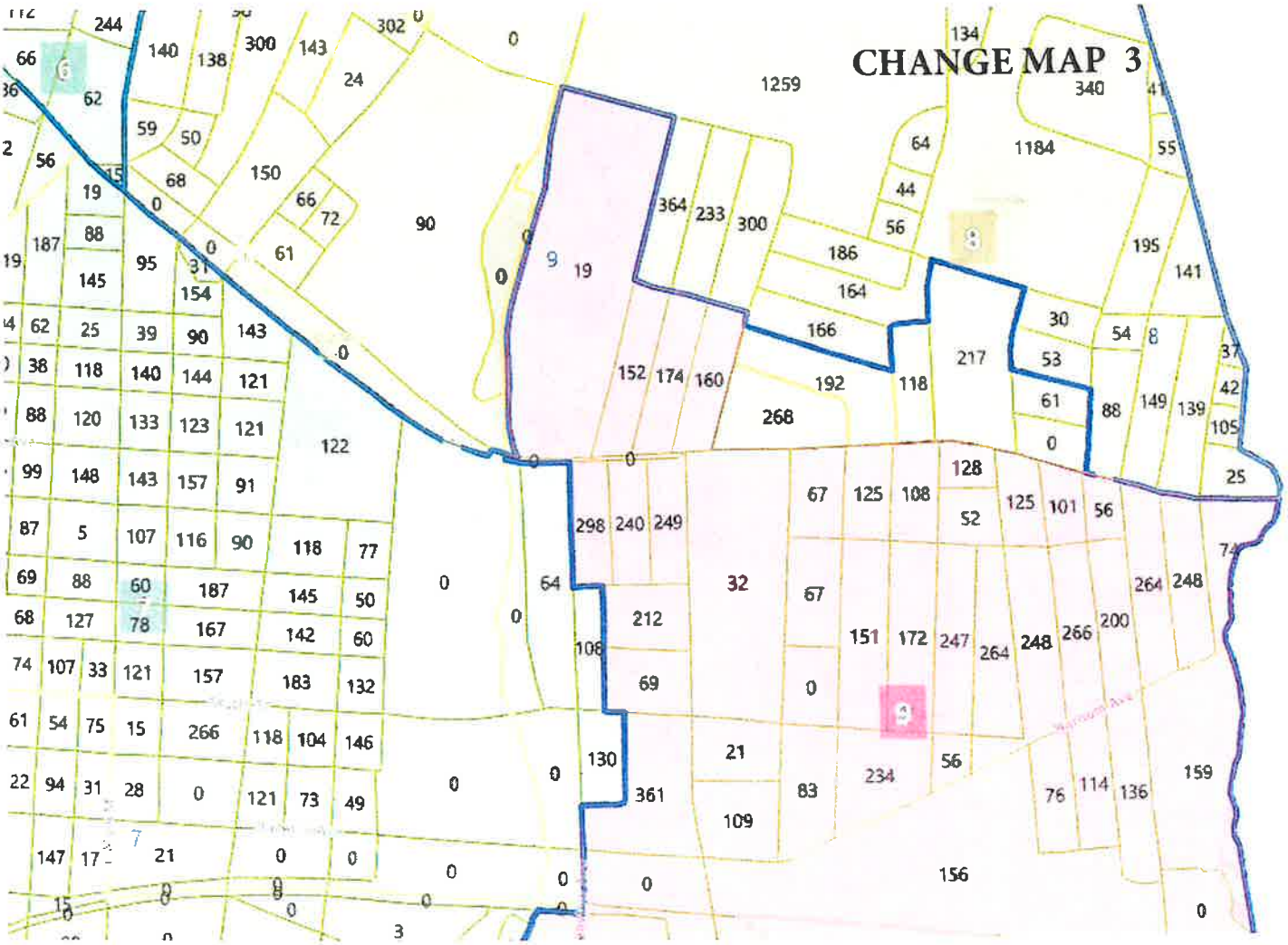
CHANGE MAP 2

CHANGE MAP 3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364
233
300
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44
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1184
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19
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31
154
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166
195
141
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54
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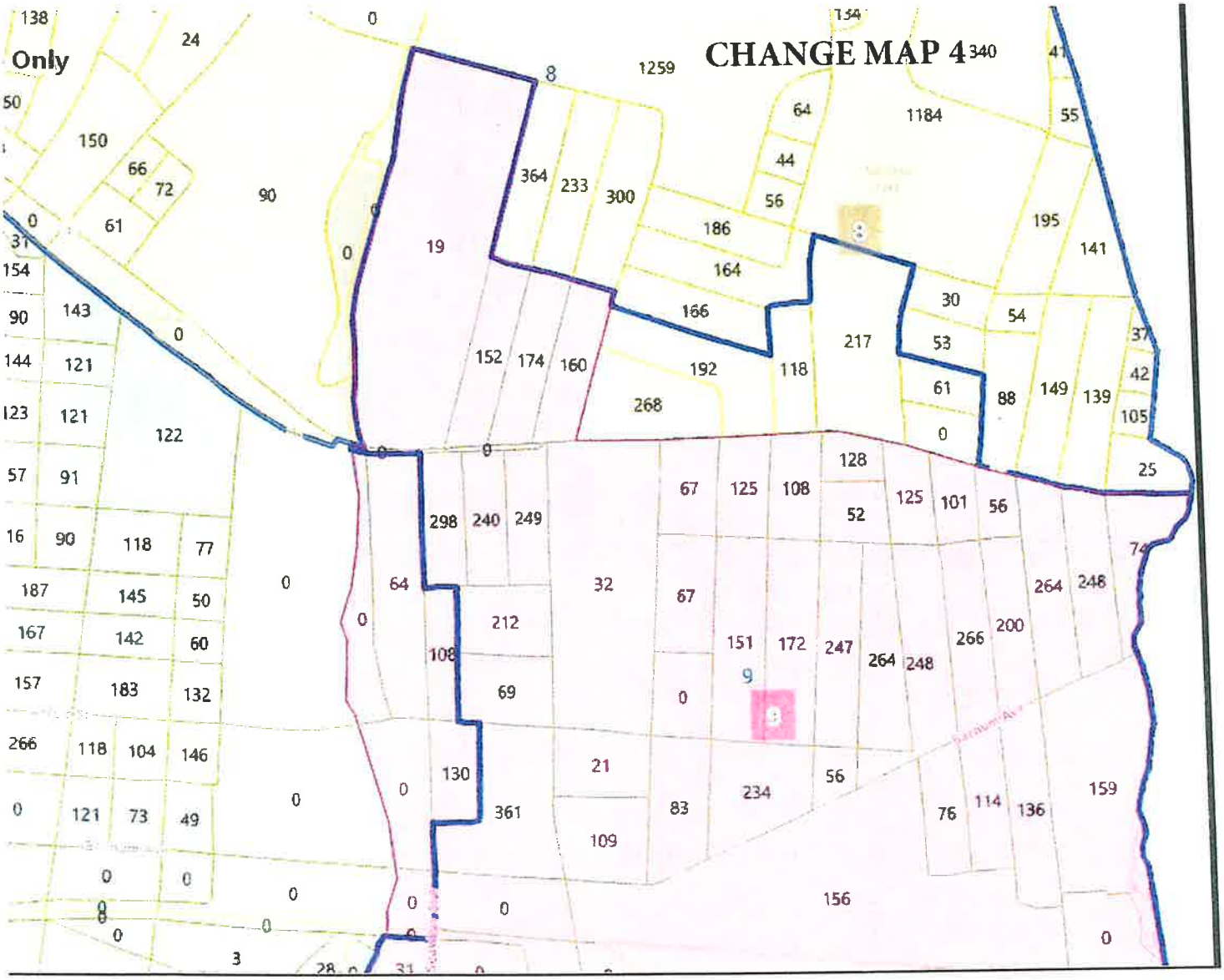
Only
CHANGE MAP 4
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24
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1259
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300
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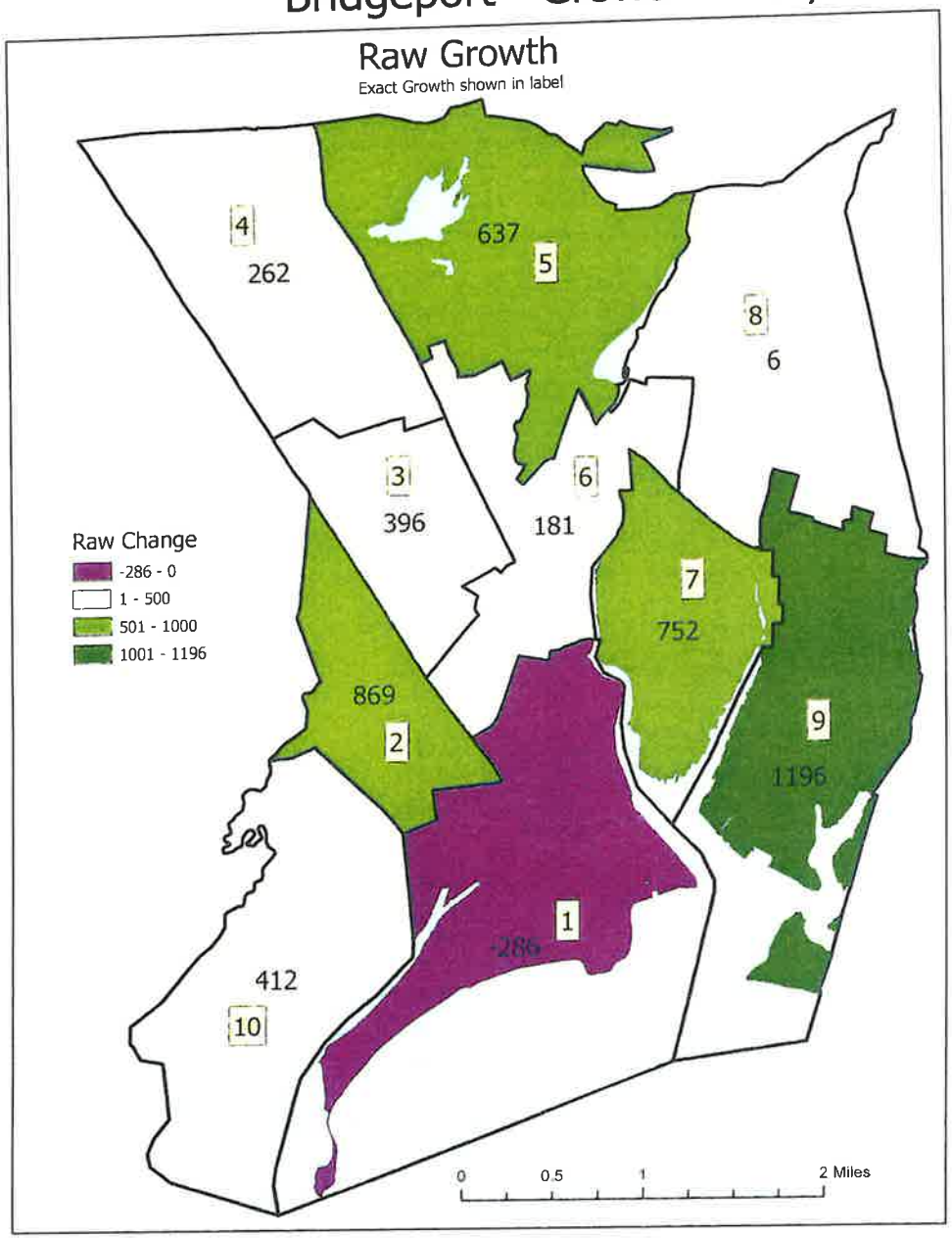
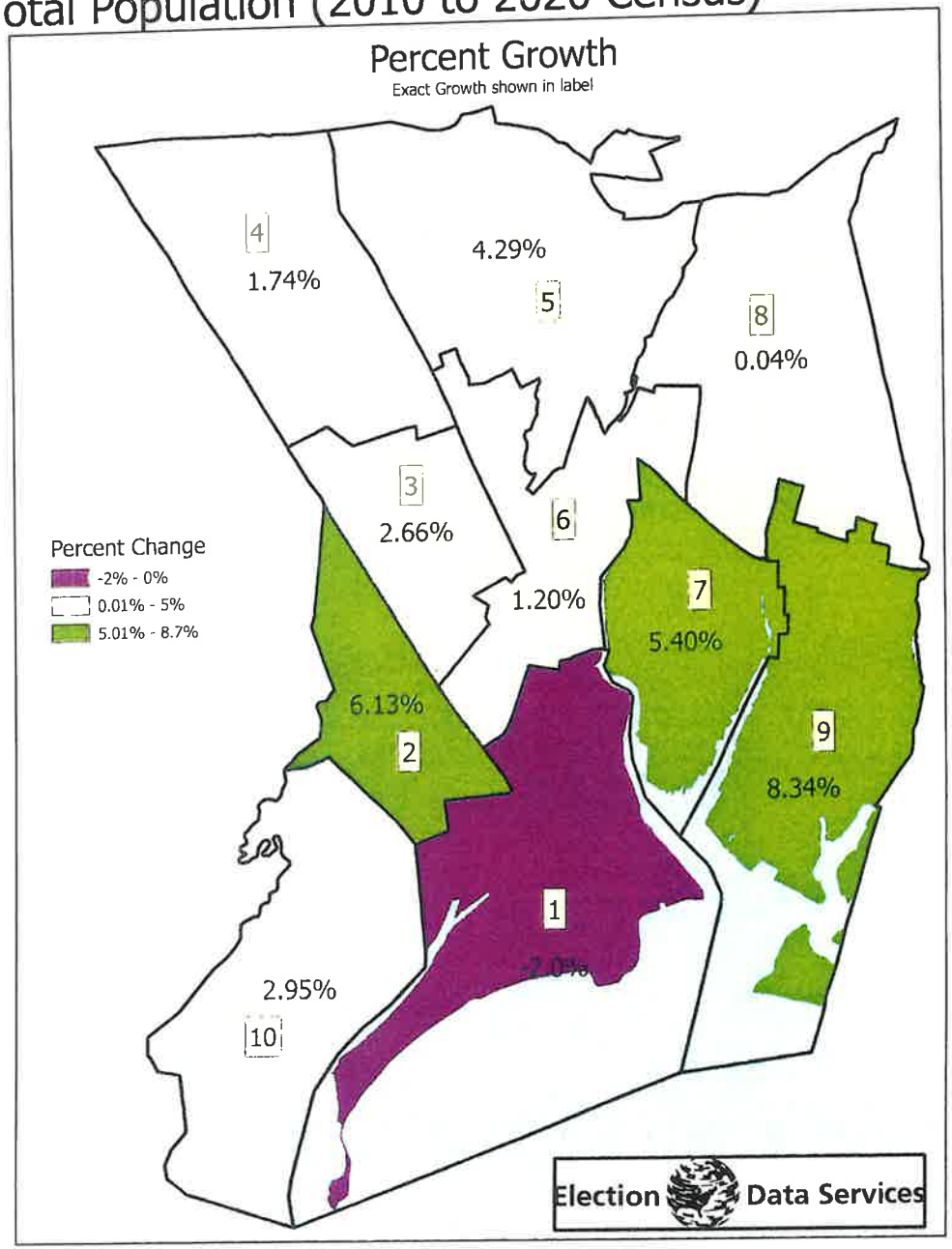
28
31

MAP 1

Bridgeport - Growth in City Ward Total Population (2010 to 2020 Census)

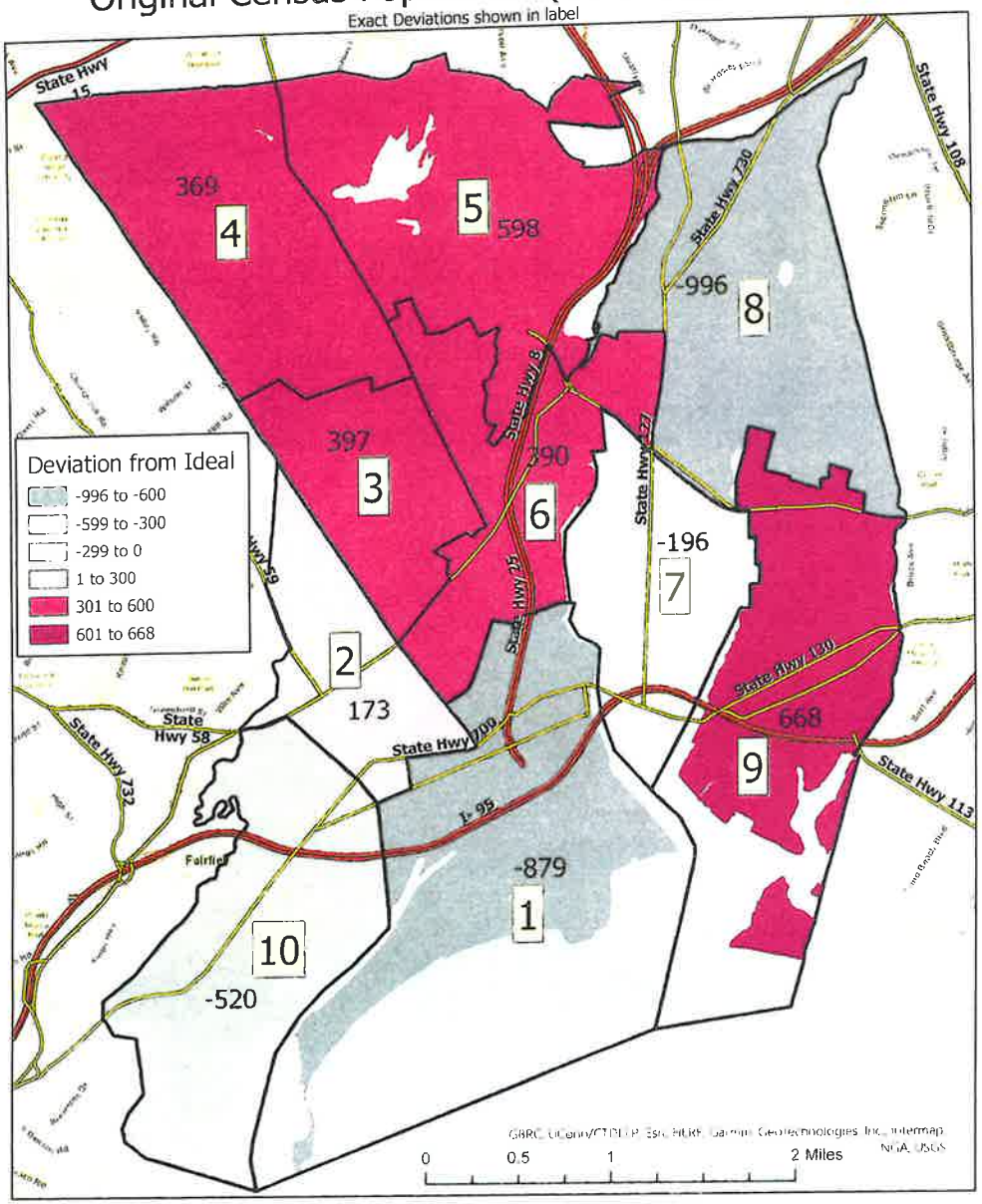




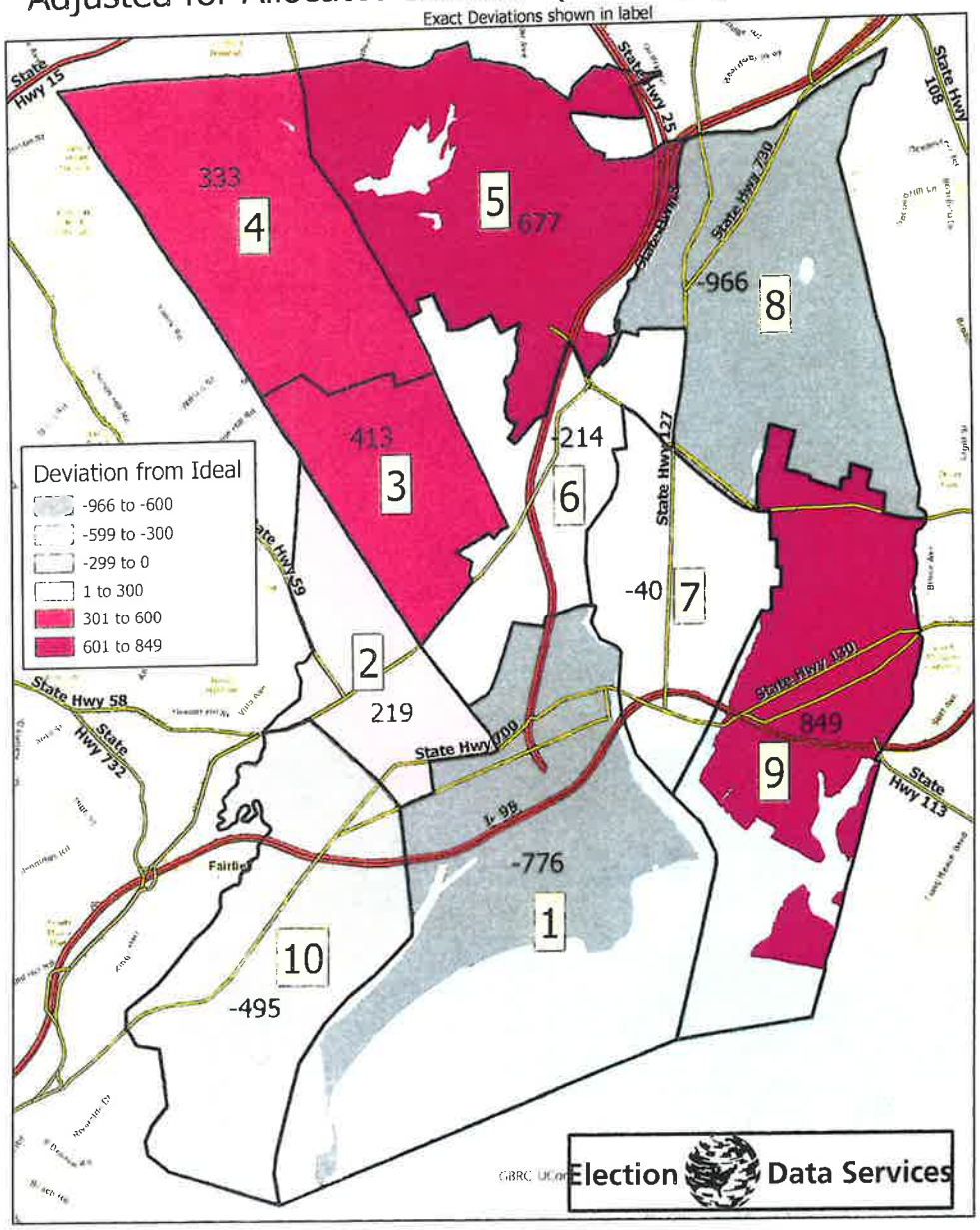
MAP 2

Bridgeport - City Ward Raw Deviation from Ideal Pop

Original Census Population (Ward target of 14,865)



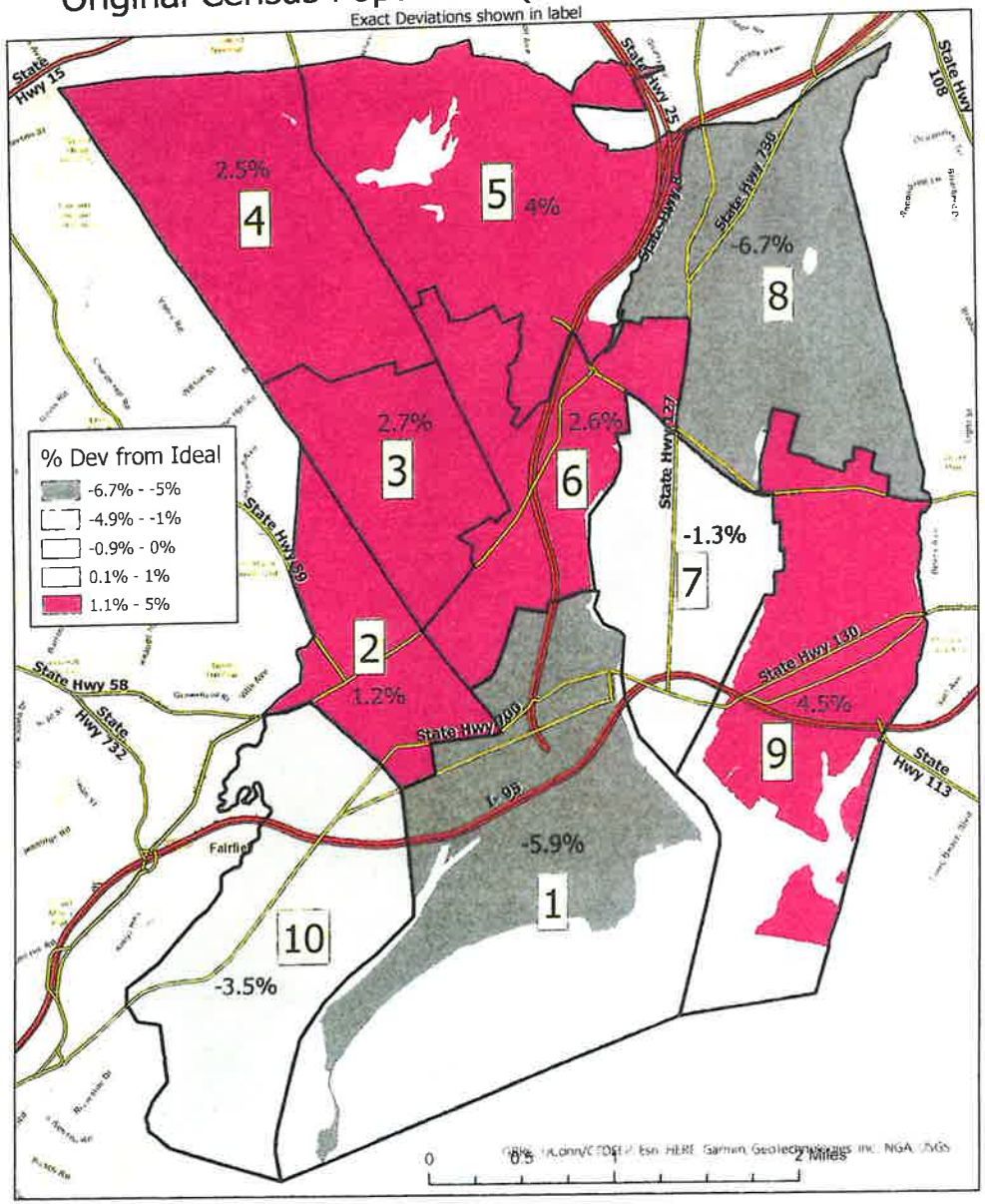
Adjusted for Allocated Inmates (Ward target of 14,936)



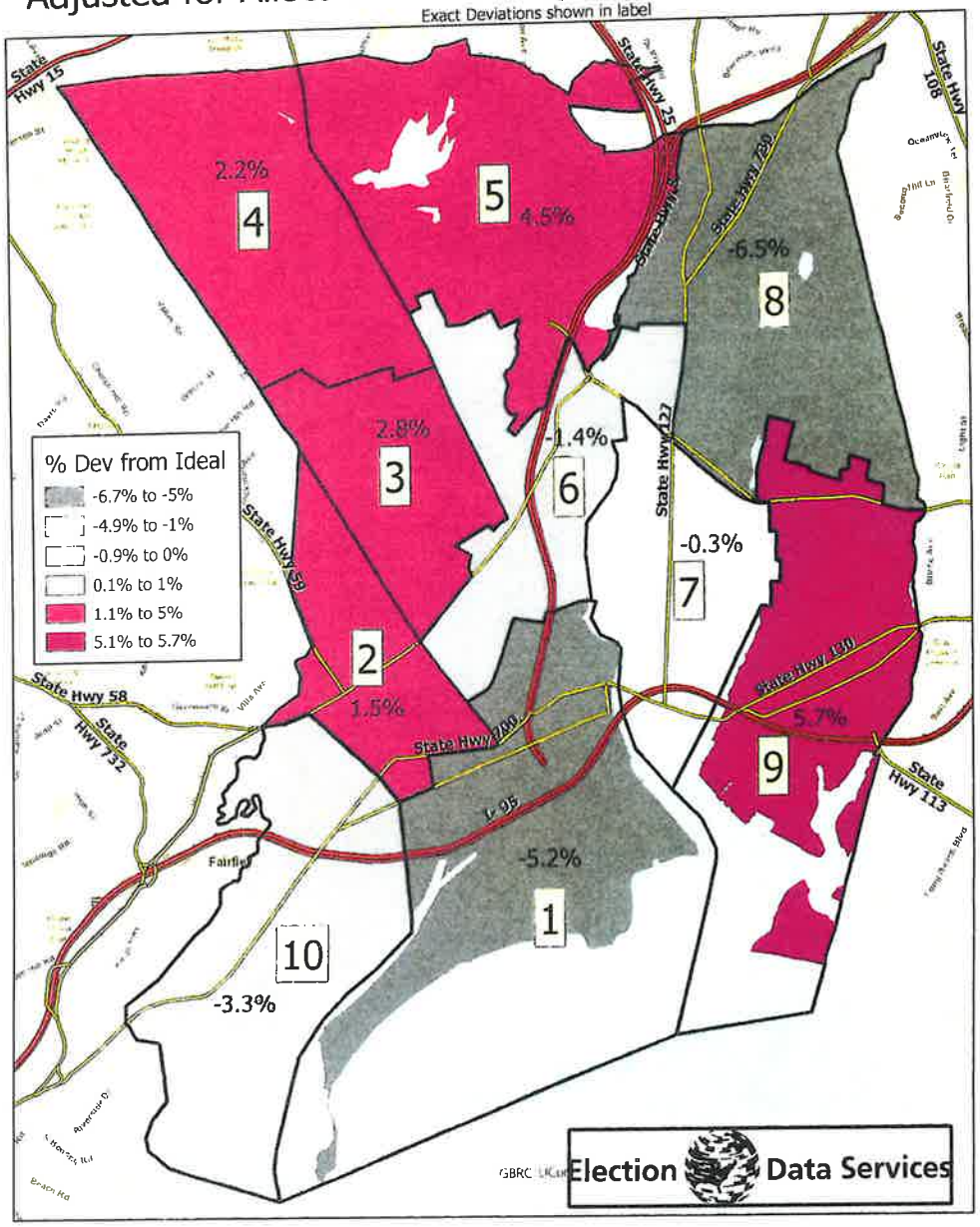
MAP 3

Bridgeport - City Ward Percent Deviation from Ideal Pop

Original Census Population (Ward target of 14,865)



Adjusted for Allocated Inmates (Ward Target of 14,936)



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