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CS506

Deliverable 3 Report

INTRODUCTION –

As our city changes over time, new construction projects go up all the time. These projects have the potential to improve conditions for residents and create a more healthy and inclusive community. However, these projects also have the potential for great harm by changing the makeup of neighborhoods without the consent of those living there. In this report, we evaluate our progress over the semester in investigating construction projects in the city of Boston. We analyze these projects based on the neighborhood demographics they are proposed and built in, and we evaluate the most prominent applicants to various neighborhoods. In our results, we detail percentages of projects being built in majority white neighborhoods vs majority non-white neighborhoods. We additionally explore the amount of appeals granted by neighborhood to look at whether certain neighborhoods have a greater ability to deny undesirable projects than others.

METHODS –

To evaluate these projects, we looked at a large amount of data from various sources. These data include minutes from Zoning Board of Approvals (ZBA) meetings, approved building permits (ABP) and Boston census demographic data. In order to narrow down results to what we were looking for, we first had to sort the ZBA data to pull out what could be deemed a major construction project. For this, we defined a major project as any new erected building or excavation or foundation project. This filtering was necessary as projects such as plumbing projects were initially found in our results and were not relevant to the questions.

Our first goal was to gather data on developers who are approved for and currently building in various neighborhoods in Boston, focusing on those which are home to POC communities. For this, we used the demographic data for the city to decide which neighborhoods to focus on and the ABP data to determine what projects are currently ongoing in those neighborhoods. This data showed us the spread of projects over various neighborhoods. We were able to pull from this the most common developers in the city and which neighborhoods they were building in.

We then looked into the total list of proposed projects from the ZBA database on the same lines as the previous data, this time comparing the types of projects approved in these communities on appeals to those denied. This potentially shows a picture of the effectiveness of a neighborhood at stopping projects they did not wish to move forward. We compared this data by neighborhood and census lines to investigate which neighborhoods were most likely to attempt and most likely to succeed at preventing projects deemed undesirable by the community. We analyzed this data for the city as a whole as well as for specific neighborhoods, looking especially at Roxbury vs West Roxbury, two neighborhoods located next to each other with dramatically differing demographics.

Our work was completed using Python, more specifically Python notebooks, and a copy of all of our code is to be submitted along with this report for reproducibility.

RESULTS & DISCUSSION –

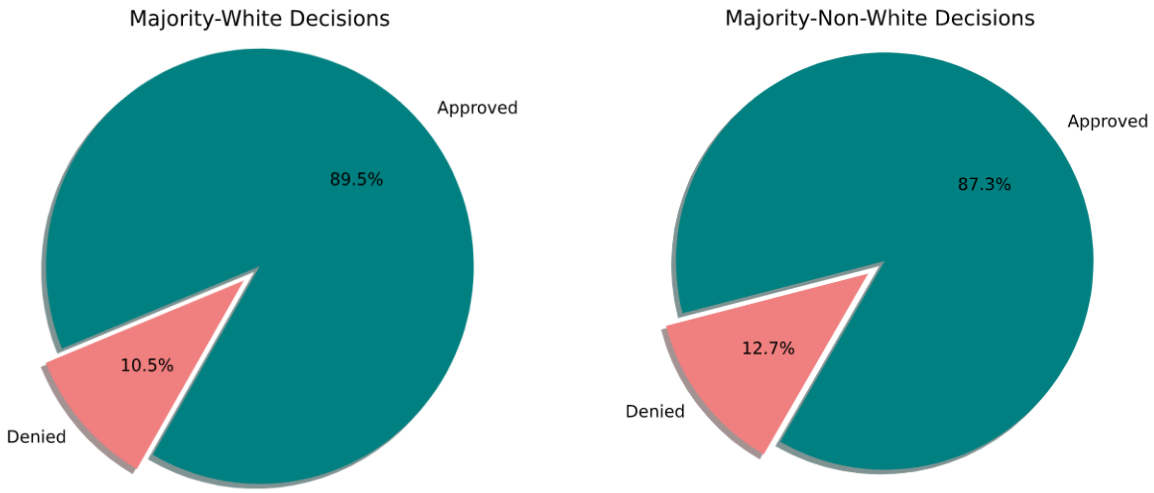

Figure 1. In Fig 1 A-B is shown the percentage of appeals regarding proposed construction in various neighborhoods approved or denied. In 1.A, the breakdown is shown for only those neighborhoods home to majority-white residents, whereas in 1.B, the same breakdown is shown for those neighborhoods home to majority-non-white residents. The percentages are similar, with slightly more denials in the non-white areas, 10.5% of appeals denied in majority-white neighborhoods and 12.7% in majority-non-white neighborhoods.

In figures 1-3, we show results for appeals brought to the ZBA across various criteria. In figure 1, we show the results from simply comparing the amount of approved/denied appeals in majority (>50%) white neighborhoods vs non-majority white neighborhoods. This did not alone reveal a large gap between majority white and majority non-white neighborhoods in effectiveness at rejecting undesirable projects. To go a step further, we broke down along census tract lines the projects brought to ZBA based on percentage of white residents of the areas in which the project was proposed. This is represented in figure 2 – where the percentage of white residents is shown in a decreasing amount left to right. On a surface level, this simply does show a slightly larger amount of appeals occurring in the leftmost half of the data, representing those neighborhoods with larger white populations, but the success of the appeals is small across as demographic lines.

In figure 3, we represent the same data but rather than along the census lines explicitly, along the lines of neighborhoods. The neighborhoods are defined by city lines, and the

percentage white residents is listed alongside their names. Of note, South Boston, East Boston, Roslindale, Dorchester, and Roxbury had the most appeals. To analyze this further, we compared directly (Fig 3.B) Roxbury vs West Roxbury. We found that West Roxbury filed significantly less appeals but was significantly more successful (18% vs 5%) at getting them denied, when compared to Roxbury.

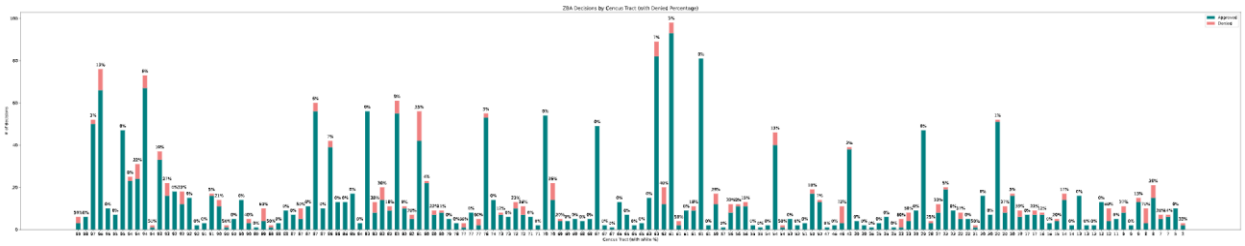

Figure 2. In Fig 2, the ZBA decisions are shown based on census tract data. The x-axis reflects percentage of white residents in an area and the y-axis show the number of ZBA appeals and their decisions. The amount of appeals is represented by the height of the bar and the amount of denials or approvals are shown as well.

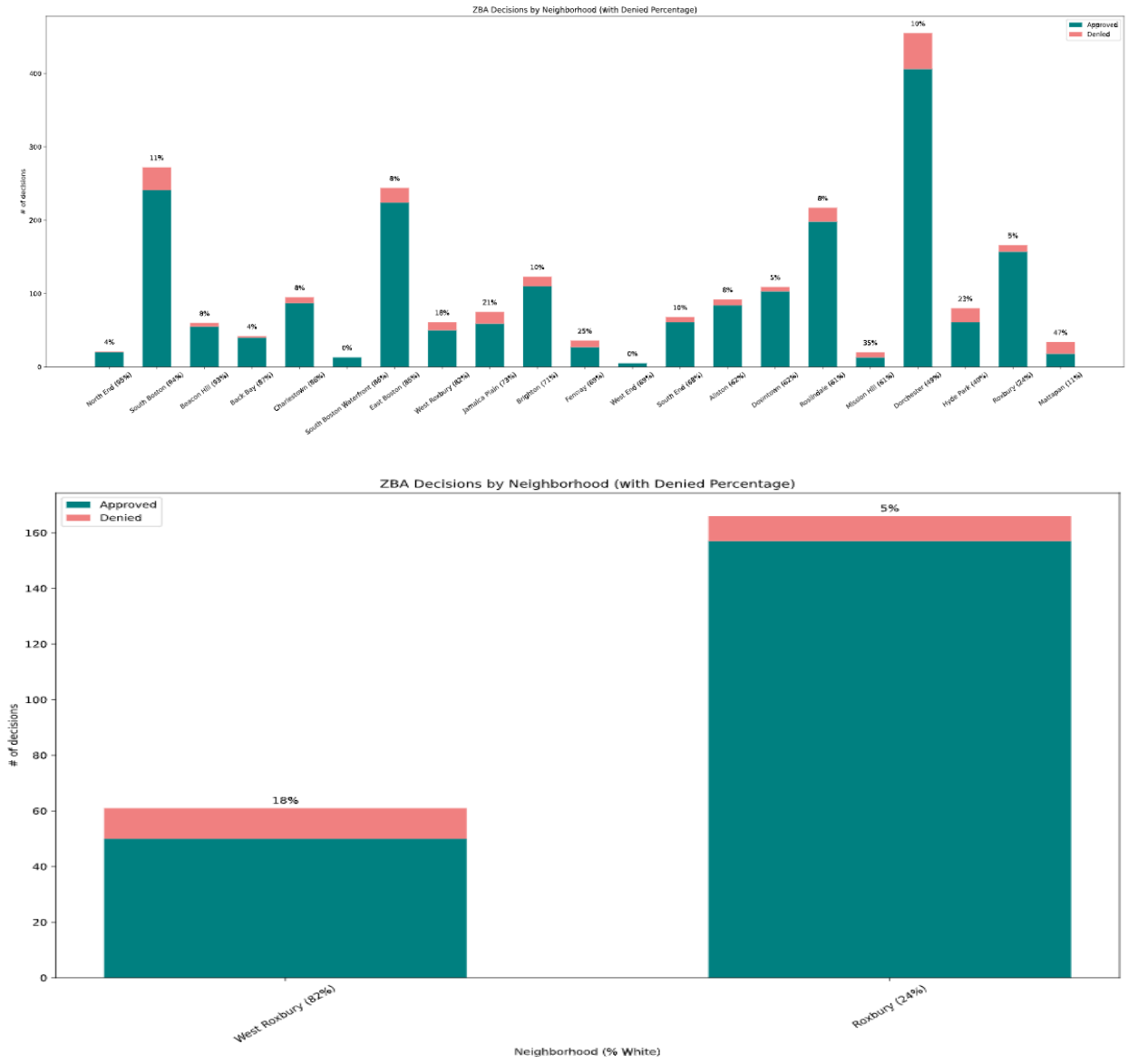

Figure 3. In Fig 3.A, ZBA decisions are shown on a breakdown by neighborhood, including number of appeals and denial percentages. The percentage of white residents is shown in () next to the neighborhood. In Fig 3.B, the decision breakdown in two specific neighborhoods, West Roxbury and Roxbury are shown. West Roxbury has an 82% white population, while Roxbury has a 24% white population. In Roxbury, significantly more appeals to the ZBA were made (over 160) when compared with West Roxbury (about 60) – and West Roxbury was more successful in getting

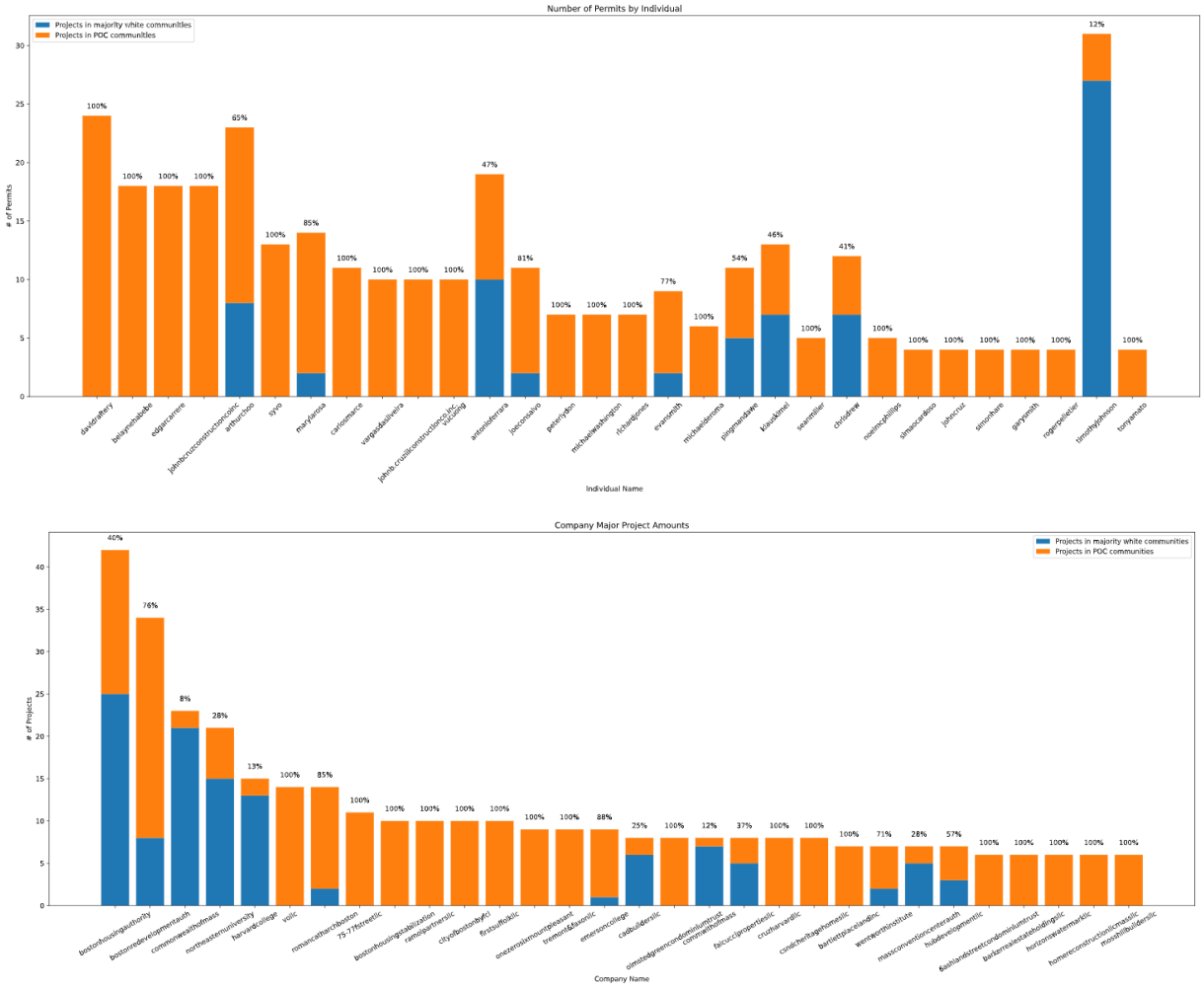

Figure 4.A-B – In figure 4.A, the top 30 individuals who applied to the zoning boards are shown, and in figure 4.B, the top 30 companies who applied are shown. For each applicant, a breakdown is shown by percentage projects proposed in majority white areas vs majority non-white areas.

In figured 4 and 5, we used the ABP data to investigate the most common and prominent developers and the neighborhoods they chose to build in. In Fig 4, we show the top 30 individuals with projects and the top 30 companies with projects. We broke down the projects by their location in either majority white or majority non-white neighborhoods. This showed that the majority of projects by the top developers were occurring in majority non-white neighborhoods. We look in figure 5 to combine the prominence of developers at ZBA meetings (attendance noted from meeting minutes) with the percentage of projects applied. We showed in the first figure the most prominent applicants and in the second the most prominent applicants with regards to majority non-white neighborhoods.

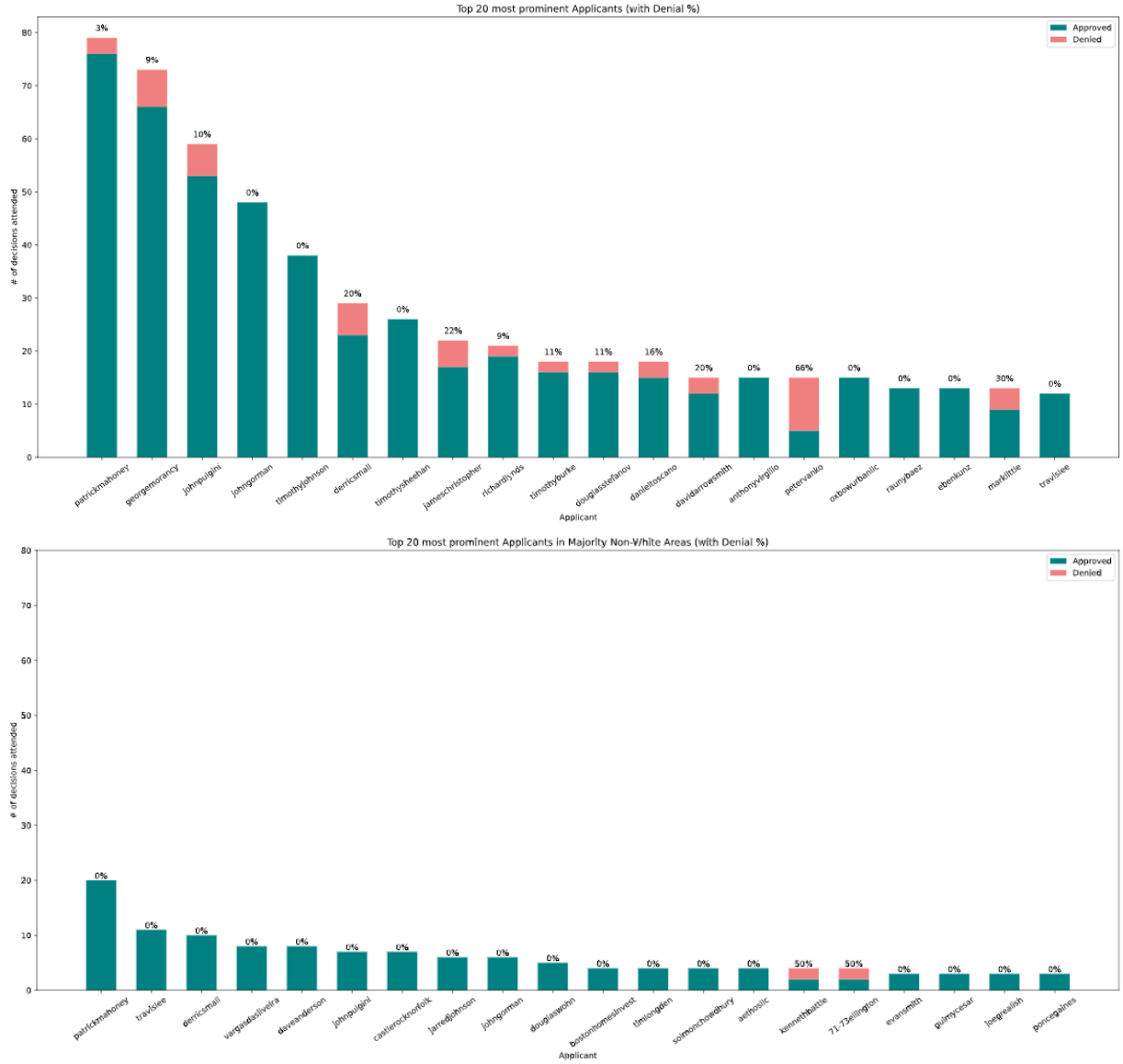

Figure 5. A-B, the top 20 most prominent (in attendance of ZBA meetings) companies and individuals are shown with the percentage of denied appeals they received. In 5.A, the top 20 applicants overall are shown, and in 5.B, the top 20 applicants in non-white areas are shown.

CONCLUSION –

Our figures explore just some of the ways to look at development in the city. The clearest picture presented is likely that of the appeals variance between Roxbury and West Roxbury, which seems to imply a better chance at getting buildings denied in the more white and wealthy neighborhood of West Roxbury, despite their proximity. Some future steps could be taken to further investigate the types of projects (affordability of housing, residential vs commercial, etc.) being proposed in various neighborhoods and to investigate the ties held by the developers with the lowest denial rates.