

Comparing Building Permits in the San Francisco Bay Area

Mid-Point Work in Progress Report
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Introduction

This project aims to analyze how the building permitting process changes based on the neighborhood characteristics of three San Francisco Bay Area cities: San Francisco, Oakland, & Berkeley. The project seeks to (1) understand the average length & approval rate when seeking a building construction permit; then, (2) spatially analyze trends of permitting compared to differing neighborhood characteristics. This project largely seeks to compare the patterns of receiving building permits with patterns of undersupplied housing, gentrification, & racial discrimination.

Questions

- 1. How long does it take to receive a Permit to Construct a Residential Building? How often are Building Permits denied?*
- 2. What are the spatial patterns of longer permitting processes or denied permits?*

Background

Building Construction Permits can be notoriously difficult to receive – with many cities having systematic methods of slowing down the process. The public hearing bodies, that are supposed to provide transparency to the process, now are points where NIMBY (Not in My Backyard) residents can publicly pressure officials to legally or illegally halt the projects. The San Francisco Bay area is known for its housing crisis and difficult permitting processes.

Because local government typically has siloed data and data illiteracy, it is difficult to get accurate measurements of the permit process. Luckily, many West Coast cities contract Accela to manage their permitting system through software and structured data. Accela is difficult to navigate but it does have a secret but public API. Because of my work with Walnut Creek, I have already created Python scripts that pull permit timelines from Accela, process each task into time measurements, then aggregate them. My personal contacts at San Francisco & Berkeley would allow me to perform a similar function with their permits as well.

Existing Research

There is existing research that analyze the overall American building permitting process and how it contributes to the housing economy. Overall, the local government's permitting process is purposely difficult to navigate as a result of public hearing bodies – specifically Berkeley, CA¹ & San Francisco²³ – and/or land use regulations⁴. Literature evaluate how public hearing bodies favor older, wealthier, and white communities.⁵⁶⁷ Some quantitative studies reinforce this claim with users surveys⁸ and meeting minutes⁹.

This study helps support the previous claims with valuable quantitative measurements of (1) how long the permit process takes and (2) if permit times based on the applicants, building type, or the area.

Datasets

1. Raw timeline of each permit process – e.g. start date, end date, public hearing
2. Processed time measurements of each permit
3. Locations of permits
4. Census Tract Demographic & Economic data

Methods

1. Find the Length of Permits with Scripts

- In short, this data is typically unavailable; however, I am currently in a rare position as a pseudo-GIS/data analyst for a medium-sized city's planning department (i.e. Walnut Creek) and have already started this project.
- For Walnut Creek, I have already created python scripts that process permit times based on raw permit data from a permitting database called Accela.
- The raw data format is a timeline of every task for a permit. My script parses the timeline's dates to count the
 - total days,
 - days it is in a city worker's hands, &

¹ Dougherty, "The Great American Single-Family Home Problem."

² McNee and Pojani, "NIMBYism as a Barrier to Housing and Social Mix in San Francisco."

³ Egan, "The Economics of San Francisco Housing."

⁴ Glaeser and Gyourko, "The Impact of Zoning on Housing Affordability."

⁵ Einstein, Glick, and Palmer, *Neighborhood Defenders*.

⁶ Schaffner, Rhodes, and Raja, *Hometown Inequality*.

⁷ Trounstein, *Segregation by Design*.

⁸ Einstein, "The Privileged Few."

⁹ Einstein, Palmer, and Glick, "Who Participates in Local Government?"

- days as a result of public hearing bodies.
- Fortunately, Accela is a widely used permit software on the West Coast & has a fairly strict data format.
- Combined with my prior experiences with the IT & planning departments of San Francisco & Berkeley, it wouldn't be a reach to have access to their raw data and then reconfigure my script to process their data.

2. Compare Permits Lengths

- Correlate different variables (e.g. cities, demographics) to measurements

Deliverables

1. Dashboard of Live Permit Processing Metrics

- Could be used for a city's operational processes or for the public's interest

2. Research Paper of Permit Process Comparisons

- Would help fill the quantitative gap in understanding the permitting process, public participation process, and potential discrimination
- Could also help me get into a new job and/or another graduate school program