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## Did ePlans Speed Up Permit Issuance?

by

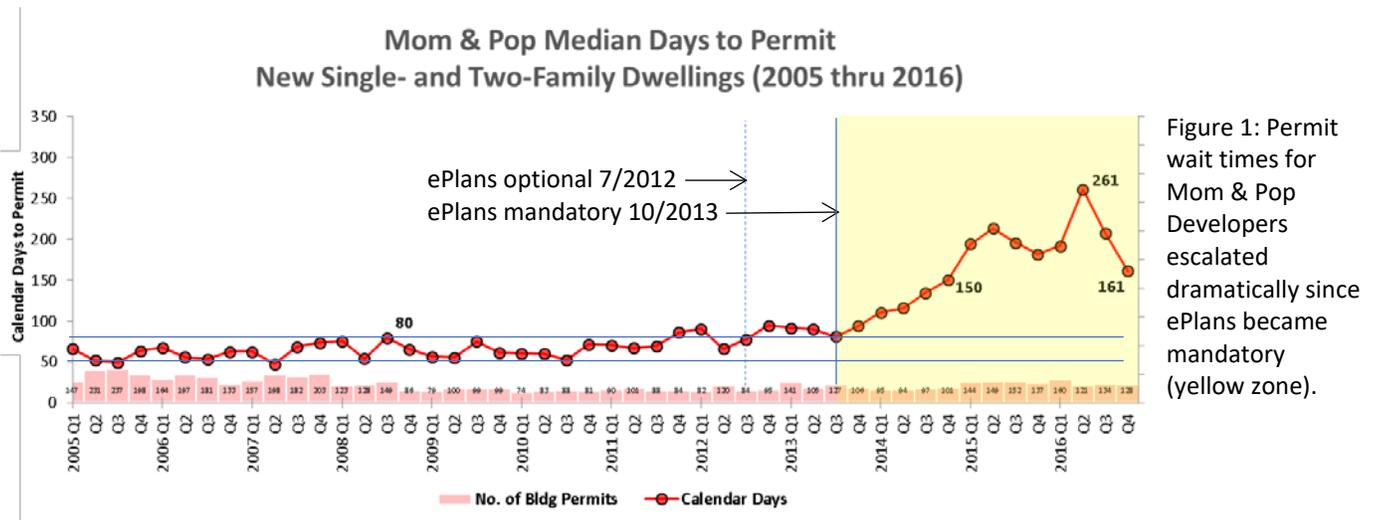
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## Did ePlans Speed Up Permit Issuance?

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To streamline building permit issuance, the Department of Planning and Permitting (DPP) adopted ePlans, an online plan submittal and review system, on July 2012. It remained optional until [October 01, 2013](#), when it became mandatory for all new commercial and residential buildings; hardcopy blueprints were no longer accepted.

Despite public [concerns](#) and news coverage that ePlans was having the opposite effect and slowing permit processing, complaints remain largely anecdotal and objective information about permit processing times remains out of reach. This working paper intends to provide an overview of building permit processing time for new single- and two-family homes (2005 thru 2016), based on City-provided open data.<sup>1</sup>



For this paper, building permit data was refined to only include new single- and two-family dwelling permits and to differentiate between large and small developers. Large developers have a different approval process – a master tract – that is not available to smaller custom home builders.<sup>2</sup> Large developers include companies like Gentry, Castle and Cooke, or D.R. Horton. Small developers include everyone else; referred to in this paper as, “Mom and Pop” developers.

### Mom & Pop (small developers)

Before ePlans (Jan 2005 to Sep 2013), permits for new single- and two-family homes by small Mom & Pop developers took a median of 64 days. For the 7 years preceding ePlans, red dots in Figure 1 remained

<sup>1</sup> Honolulu has an Open Data law: Ord 13-39’s purpose is to: “[D]rive increased government efficiency and civic engagement, leading to social and economic benefits as a result of innovative citizen interaction with government.”

<sup>2</sup> Large residential developments that feature the same home copied several times on vacant lots around the neighborhood, often use a master tract system. Permit approval includes reviewing the detailed building plans once and thereafter only a site plan for each iteration of the same home (i.e., to verify setbacks and assign addresses). Caveat: While considerable effort was taken to differentiate residential building permits that were processed under a master tract, there was not a comprehensive data field available to set as the filtering criteria. Search criteria included: single- and two-family occupancy, new buildings, private ownership, issued 2005 to 2016. The most commonly occurring plan makers and contractors that also had several concurrent permits for the same floor area, was used as the basis of establishing the list of large developer permits. Data should be vetted further with DPP.

mostly within the upper and lower bounds (horizontal black lines). In the time since ePlans became mandatory for all new buildings (Oct 2013), median permit processing time has more than doubled.

The pink bars at the bottom of Figure 1 show the volume of permits for new Mom & Pop residences was slightly higher in 2005-2007 and remained relatively steady despite fluctuations in permit approval time. Permit times in 2014-2016 have taken substantially longer, despite fewer new residential permits issued than in years past. There is no statistical correlation ( $r = 0.046$ ) between median permit issuance time and the volume of new residential permits issued, for Mom & Pop developments.

Will this trend continue? A closer look at 2016 data shows that for Mom & Pop developments, the new normal is a median permit processing time of 200 calendar days (6.6 months), Figure 2.

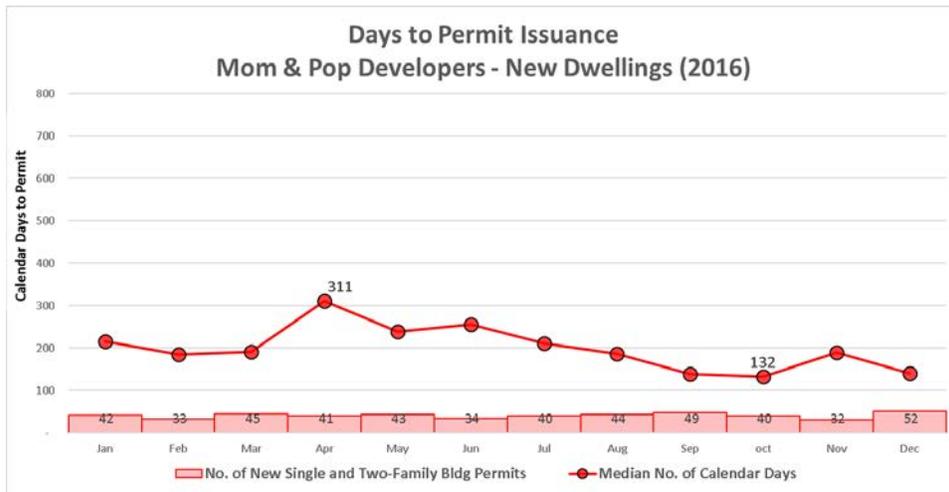


Figure 2: In 2016, median permit wait time for a new home was 200 days.

### Large developers

In contrast, permit processing times for large developers of new single- and two-family homes have remained relatively stable (Figure 3). Before ePlans, median permit processing time for Large Developers was 83 calendar days. That number rose to 92 calendar days in 2016. Large developers did see a few periods of slow permit issuance time (i.e., at the start of ePlans). It's not clear from this data why there were also slower permit issuance rates in 2014 and 2015.

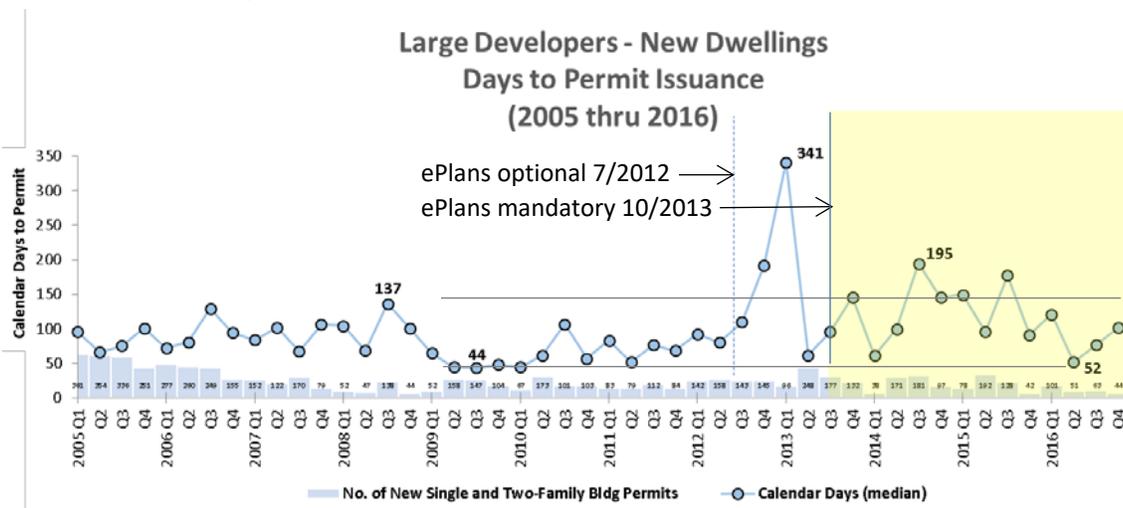


Figure 3: Large developers also experienced delays in permit approvals, starting when ePlans began (dashed vertical line).

The high volume of permits issued in 2005 and 2006 (blue bars at the bottom of Figure 2) is not associated with slower permit processing time. Also, the extremely low monthly volume of new residential permits by large developers in 2016 (Figure 4) was not correlated with faster permit processing. Statistical analysis confirms that the number of permits issued is not correlated with the length of processing time ( $r = -0.05$ ).

Permit issuance time for 2016 is shown in Figure 4. Review of the February 2016 permit data showed that the spike in permit issuance time was due to one project: 37 homes were issued building permits after a 768-day long delay. If not for that project, median permit issuance time for Feb 2016 would have been 121 days. Therefore, it appears that processing time for new residences by large developers has also stabilized. For large developers of new single- and two-family homes, the median time for permit issuance was 92 days in 2016.

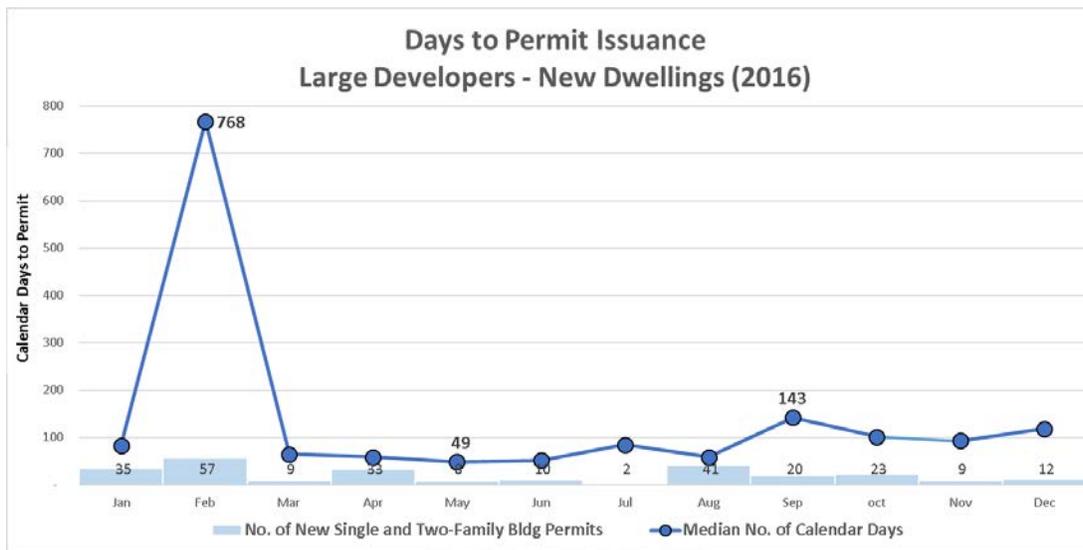


Figure 4: In 2016, median permit wait time for a new home was 92 days.

### Conclusion & Suggestions

Processing time for large developers of new single-and two-family dwellings remains largely unchanged, before and after ePlans. However, the difference for everyone else, including small (Mom & Pop) developers is an additional delay of about 4.5 months (Table 1). While this paper only reviewed permit issuance times for new residential permits, similar delays may exist for other permits as well.

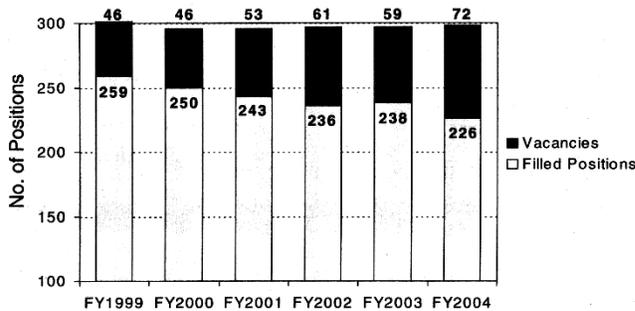
Table 1: Median Permit Issuance Time (calendar days), new Single- and Two-Family Homes

	Before ePlans Jan 2005 - Sep2013 (days)	After ePlans Oct 2013 – Dec 2016 (days)	Difference (days)
Large Developers	83	92	+9
Small Developers (Mom & Pop)	64	200	+136

Despite DPP’s claim that slower permit issuance is associated with high volumes of permits processed, this paper finds that for all new single- and two- family dwellings (by large and small developers), the quantity of home permits issued is unrelated to permit processing time. However, it’s possible that DPP staff are busy processing other types of permits.

While it may appear that the ePlans system is to blame for the delays in permit processing, other factors, such as staffing and experience, also affect permit processing time. In response to a 2004 City Auditor's report of the One-Stop Permit system,<sup>3</sup> DPP pointed out in 2004 that the number of vacant positions had grown in previous years. More recently, DPP has seen the retirement of numerous key staff and may be having trouble recruiting and retaining new staff. These challenges may substantially impair the quality and timing of building permit reviews, more so than ePlans itself. Also, if ePlans alone were to blame for permit issuance delays, one might expect a sustained level of delay, rather than spikes and dips.

**Authorized Position Count**



**Commercial Plans Check Engineers from 1994-2004**

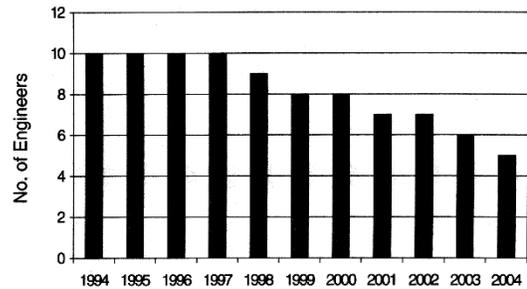


Figure 5: Charts show declining staffing at DPP.  
Source: City Auditor report (2004).

If funding to support adequate staffing levels at competitive salaries is a concern for the Department, the public may well embrace a substantial building permit fee increase, if it comes with assurances of expedited permit review. The existing situation of third party review imposes a de facto tax on developers and land owners (who must now hire a code consultant to perform a function the City used to provide), except this is a tax from which the City collects no revenue.

An added benefit of improving the efficiency of the regulatory system is that it could help make housing more affordable. Permit approval delays exacerbate construction costs in Honolulu. And as a state study pointed out, "the costs added to a home in Hawaii that can be attributed to [regulatory barriers] may be as high as [\$250,000]."<sup>4</sup> Meaning that if the regulatory system were perfectly efficient, the median home price in Honolulu would be about \$495,000.<sup>5</sup>

Other uses of building permit data:

- Considering the implementation of new TOD Special Districts and neighborhood-changing redevelopment that will occur, building permit data can provide an objective reference point from which we can understand urban growth and change over time.
- Locally provided building permit data is a dynamic, comprehensive source of information that can supplement federal census data (statistical sampling) to inform planning policy and evaluate economic impacts in real-time.

<sup>3</sup> [https://www.honolulu.gov/rep/site/oca/oca\\_docs/dpp\\_onestop\\_permit\\_centers\\_final\\_report.pdf](https://www.honolulu.gov/rep/site/oca/oca_docs/dpp_onestop_permit_centers_final_report.pdf)

<sup>4</sup> State of Hawaii, "Affordable Housing Regulatory Barriers Task Force." Legislative Report, Hawaii, 2008, [LINK](#). Original \$200,000 cost of regulation was escalated from 2007 to 2017 using RSMeans historical cost index [LINK](#) and rounded to the nearest \$50K.

<sup>5</sup> [www.hicentral.com](http://www.hicentral.com) \$755K median price of a single-family home in Honolulu in February 2017, minus \$250K.