

Assessing the Cost of Building Permit Delays in Honolulu: 2022-2023





This report was prepared by Mustafa Shirzad, Economist, under the direction of Eugene Tian, Ph.D., Economic Research Administrator, and Joseph Roos, Ph.D., Economic Research Program Manager. Paul Migliorato, Economist, provided valuable comments and contributions to this report.

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Executive Summary

During the calendar years 2023 and 2022, a total of 608 State government projects valued at \$515 million and 198 City and County of Honolulu (CCH) projects valued at \$758 million were approved by the Honolulu Department of Planning and Permitting (DPP). The average permit processing time, measured by how long it took between permit application filing and issuance, reached 632 days in 2023 and 599 days in 2022 for State government projects, and 374 days in 2023 and 441 days in 2022 for CCH projects. If 180 days is considered the standard period for receiving a building permit, an average of 93 percent of State government projects and 77 percent of the CCH projects were delayed in 2023 and 2022.

In contrast, private sector permits were processed more quickly than both the State government and CCH permits. In 2023 and 2022, DPP issued a total of 28,479 private sector permits valued at over \$4.2 billion. The average processing period was 104 days in 2023 and 97 days in 2022, with only 20 percent of these permits taking longer than 180 days.

The delay in building permits cost the State government \$30.7 million and CCH \$56.7 million for the combined years of 2022 and 2023, respectively accounting for 6 percent and 7 percent of the total State government and CCH projects value at the application day. Delays in private sector permitting resulted in \$202 million costs during 2022 and 2023, equivalent to 7 percent of the total value of private sector permits.

The cost of delay was estimated using construction inflation which was 4.9 percent in year 2023 and 4.7 percent in year 2022 .

Introduction

In general, Hawai‘i has one of the highest levels of regulations and restrictions in the U.S. The Wharton Residential Land Use Regulatory Index (WRLURI) attempts to measure and assess local regulatory environments across U.S. states and regions, with the standardized mean of zero. Hawai‘i’s state index value is 1.7, indicating Hawai‘i has the highest level of land use regulations and restrictions in the nation (Tyndall et al, 2022). Approval delay is among the main regulatory sub-indices contributing to Hawai‘i ranking among the most regulated and restricted states for land use development projects. The regulatory environment significantly impacts both commercial and residential construction, including the process of building permit consideration and issuance.

Between 2012 and 2023, more than twenty ordinances were imposed on building permit issuance in Honolulu County (CCH¹, 2023). Historical data on permit applications and permit issuance illustrates that the gap between the number of permits issued and the number of permit applications created positively correlated with the number of ordinances imposed on building permit issuance during this period.

In 2023, the Honolulu Department of Planning and Permitting received around 19,700 building permit applications, among which around 14,800 permits were issued and nearly 5,000 applications were carried over to 2024 (Jedra, 2024). The delay or carryover of building permit applications from one year to another results in losses in county revenue collection from both permit fee payments and property tax collection. Delay in building permit issuance slows the start and completion of construction and the operational timeline of building projects. This in turn causes delays in generating additional property value and the property tax revenues tied to these projects.

Administrative bottlenecks are among the major causes of delays in the issue of building permits in Honolulu. High and constant employee turnover results in workers with little experience reviewing permits, constituting a major problem at DPP (Jedra, 2024). As of June 2024, the staffing-vacancy rate at DPP hovered around 25 percent. Outdated or inefficient processing systems can further slow the building permit review and approval process resulting in excessive delays. As a result, DPP has been considering the installation of an alternative system equipped with cloud upgrades and AI-driven tools (Jedra, 2024). Updating the processing system will certainly reduce the time needed for review and approval processes, and better coordination among relevant parties can result in reducing permit issuance delays.

This report aims to analyze the costs associated with building permit delays, particularly permits for public projects being undertaken by either State of Hawai‘i or City and County of Honolulu

¹ City and County of Honolulu, Committee on Planning and the Economy.

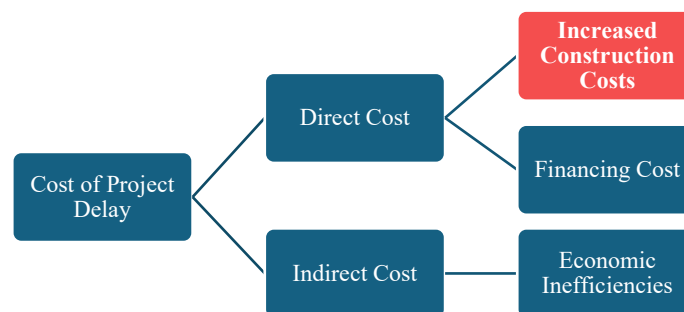
departments. Our focus is on the impact of delays in building permits in terms of increased construction costs.

Theoretical Framework and Methodology

Delays in building permit issuance extend the completion timeline of construction projects. They cause additional expenses for contractors in terms of higher construction material expenses, labor costs, and extended financing costs. Costs incurred by contractors get passed on to end users, and in the case of public projects these costs ultimately fall on taxpayers, both directly and indirectly (Beaty et al, 2016) (PWC, 2005) (AFP, 2023).

Direct costs include increased construction costs from higher labor and material costs, as well as financing costs. Indirect costs include the economic inefficiencies caused by the extended project timelines resulting in delayed tax revenue collections and access to essential city and state infrastructure.

Figure 1. Project Delay Costs; Direct and Indirect Effects



In this report we analyze the costs associated with permit delays in terms of increased construction costs for both public permits and private sector permits issued in Honolulu for the years 2022 and 2023².

Permit delay time refers to the number of days exceeding the average permit processing time. For this study, we assume an average (normal) permit processing time of two quarters (180 days) for the City and County of Honolulu. This estimate aligns with the local residential land use regulatory environments for moderately regulated states and is a proxy for national average permit processing time (Gyourko et al, 2019).

² The data presented in this report were obtained from the Honolulu County, Department of Planning and Permitting (DPP) in November 2024, covering calendar years 2022 and 2023. Minor differences may be observed if the data are accessed or downloaded at a later date.

To quantify the cost of building permit delays, we refer to the methodology employed in previous studies measuring project delay cost during the pre-construction stage (Beaty et al, 2016). We quantify the permit delay cost by measuring the differences between the future cost of a project, given an average (normal) permit processing period of two quarters (180 days) compounded using construction cost index rate³, and the project cost of the same project at the application date.

$$PC_t = PC_o(1 + r)^n$$

$$Project\ Delay\ Cost = PC_t - PC_o$$

Variable Description	
PC _t	Future cost of the project after the normal processing time of 180 days (with delay)
PC ₀	Project cost at the date permit application was filed
r	Construction inflation rate (compounded daily)
n	Number of days after two quarters (180 days) from the date of application (delay)

In reference to the above methodology, we make the following assumptions:

1. The construction costs include only labor and material costs. We exclude the land cost inflation in this study assuming the project already has land or it was purchased prior to the building permit application.
2. The project cost at the permit application date remains unchanged during the normal permit processing time of two quarters (180 days).

This methodology allows us to estimate the permit delay costs incurred for both public and private projects, capturing the cost impact of an additional day of delay at both the aggregate level across all projects and the individual project level during the years 2022 and 2023.

Data Description

DPP issued a total of 236 permits for the State of Hawai‘i and City and County of Honolulu projects in 2022 and 570 permits in 2023. On average, the permit processing time for public projects was 553 days in 2022 and 573 days in 2023. For private sector projects the average processing period was 97 days in 2022 and 104 days in 2023.

Among public projects, we can observe that permits for the City and County of Honolulu required less time than those for State projects in 2022 and 2023. On average, the permit processing time for State government permits reached around 599 days in 2022 and 632 days in

³ Construction inflation rate for Honolulu derived from Rider Levett Bucknall (RLB) Construction Cost Index rate.

2023. In addition, the maximum period of permit processing for State government project permits reached over 5 years (1,848 days) in 2022 and nearly 6 years (2,181 days) in 2023. For the City and County of Honolulu projects, the average permit processing time was 441 days in 2022 and 374 days in 2023. The longest period of permit processing time for CCH permits was 916 days in 2022 and over 3 years (1,233 days) in 2023.

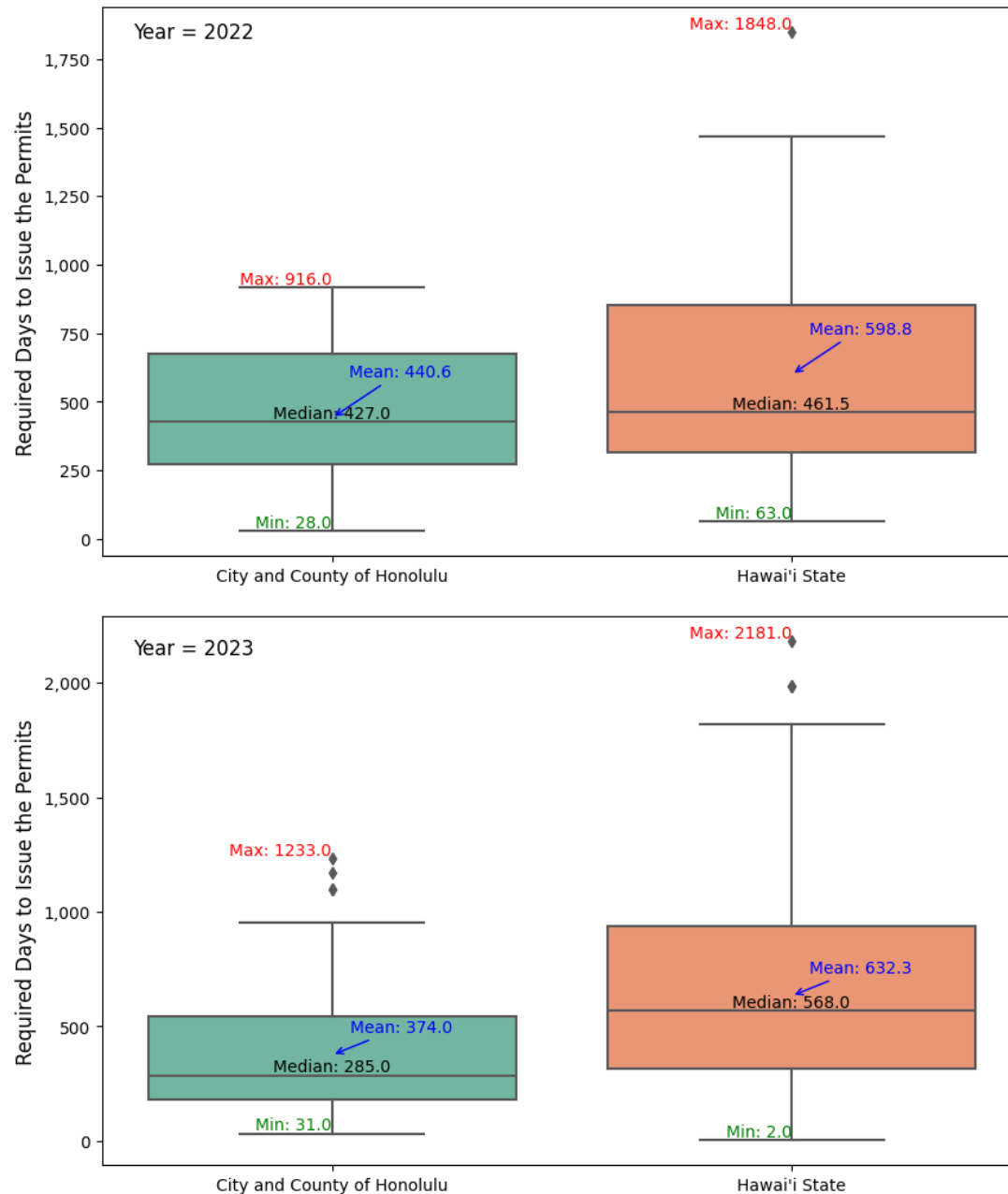
For private sector permits, the average processing time reached 97 days in 2022 and increased to 104 days in 2023, remaining lower than both State government and City and County permit processing times. Notably, private sector permits include a high volume of solar photovoltaic (PV) permits, which typically have zero-day processing times because they are approved on the same day of application.

Table 1. Descriptive Summary of Building Permits, 2022-2023

2022									
Permit category	Permits issued	Avg # of days to issue	Median # of days to issue	Min # of days to issue	Max # of days to issue	Average permit value	Min permit value	Max permit value	Total permit value
All permits issued	14,058	104	0	0	1,995	\$182,373	\$0	\$259,827,576	\$2,563,799,634
Private sector permits	13,822	97	0	0	1,995	\$155,267	\$1	\$259,827,576	\$2,146,100,474
Public sector permits	236	553	440	28	1,848	\$1,769,910	\$0	\$39,296,078	\$417,698,760
City & County of Honolulu permits	68	441	427	28	916	\$3,563,144	\$1,500	\$39,296,078	\$242,293,792
State government permits	168	599	461	63	1,848	\$1,044,078	\$0	\$22,041,300	\$175,405,104
2023									
All permits issued	15,227	122	0	0	2,561	\$192,287	\$0	\$280,000,000	\$2,927,954,149
Private sector permits	14,657	104	0	0	2,561	\$141,372	\$0	\$108,000,000	\$2,072,089,404
Public sector permits	570	573	439	2	2,181	\$1,501,505	\$500	\$280,000,000	\$855,857,850
City & County of Honolulu permits	130	374	285	31	1,233	\$3,969,774	\$500	\$280,000,000	\$516,070,620
State government permits	440	632	568	2	2,181	\$772,243	\$500	\$56,343,200	\$339,786,920

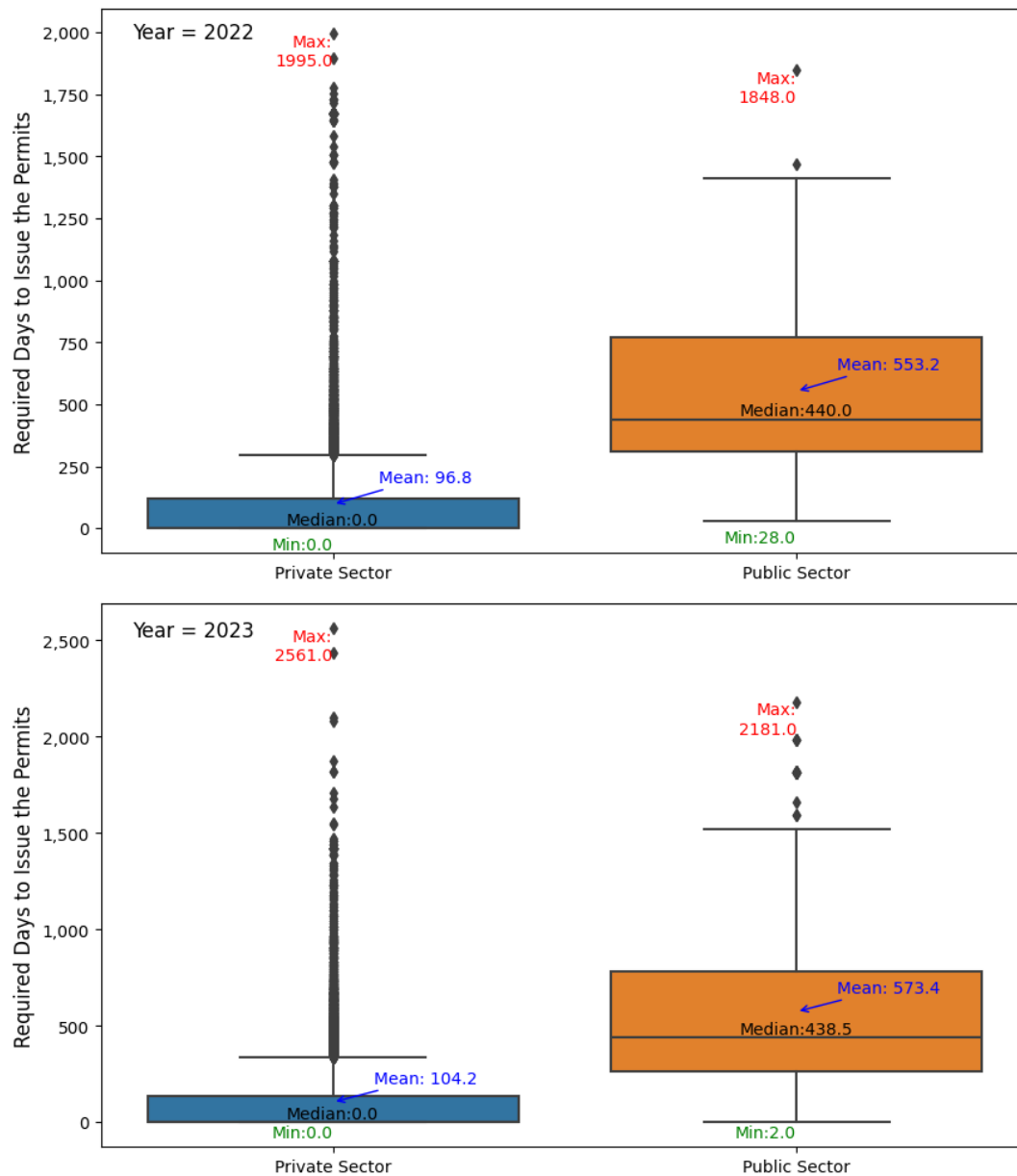
Source: Department of Planning and Permitting (DPP), City and County of Honolulu. READ estimates. Due to rounding, the sum of the sub-categories may not match the total permit value.

Figure 2. Permit Processing Time: CCH Projects versus State Government Projects, 2022-2023



Source: Department of Planning and Permitting (DPP), City and County of Honolulu. READ estimates.

Figure 3. Permit Processing Time Public Projects versus Private Projects, 2022-2023



Source: Department of Planning and Permitting (DPP), City and County of Honolulu. READ estimates.

In addition, the permit numbers by occupancy group show that for the State of Hawai‘i the highest number of permits were issued in the school category; 56 percent of permits in 2022 and 76 percent of permits in 2023 were school-related.

Table 2. Number of State Government Permits by Occupancy Group, 2022-2023

Occupancy group	2022			2023		
	Number of permits issued	Total value of permits issued	Avg # of days to issue	Number of permits issued	Total value of permits issued	Avg # of days to issue
01 - Single Family	1	\$133,000	235	0	0	0
03 - Apartment	5	\$1,373,487	1,071	53	\$64,644,324	1035
05 - Amusement, recreation	1	\$131,080	381	2	\$892,000	312
06 - Church	0	0	0	2	\$14,000	223
07 - Industrial	1	\$1,000,000	394	1	\$60,000	882
11 - Institution	7	\$70,856,309	527	5	\$61,860,200	325
12 - Office Building	10	\$28,294,321	612	4	\$6,810,168	261
13 - Public Building	8	\$8,718,900	483	7	\$4,894,300	625
15 - School	94	\$43,414,905	629	336	\$149,927,696	595
16 - Shed	1	\$10,000	861	0	0	0
18 - Store	0	0	0	1	\$260,828	676
19 - Other non-residential	20	\$37,088,534	459	8	\$14,398,797	362
20 - Structure other than building & unclassified	20	\$15,826,480	568	21	\$27,393,535	509

Source: Department of Planning and Permitting (DPP), City and County of Honolulu. READ estimates.

Table 3. Distribution of State Government Permits by Occupancy Group, 2022-2023

Occupancy group	2022		2023	
	Number of permits issued	Value of permits issued	Number of permits issued	Value of permits issued
01 - Single Family	0.6%	0.1%	0.0%	0.0%
03 - Apartment	3.0%	0.7%	12.0%	19.5%
05 - Amusement, recreation	0.6%	0.1%	0.5%	0.3%
06 - Church	0.0%	0.0%	0.5%	0.0%
07 - Industrial	0.6%	0.5%	0.2%	0.0%
11 - Institution	4.2%	34.3%	1.1%	18.7%
12 - Office Building	6.0%	13.7%	0.9%	2.1%
13 - Public Building	4.8%	4.2%	1.6%	1.5%
15 - School	56.0%	21.0%	76.4%	45.3%
16 - Shed	0.6%	0.0%	0.0%	0.0%
18 - Store	0.0%	0.0%	0.2%	0.1%
19 - Other non-residential	11.9%	17.9%	1.8%	4.3%
20 - Structure other than building & unclassified	11.9%	7.7%	4.8%	8.3%

Source: Department of Planning and Permitting (DPP), City and County of Honolulu. READ estimates.

For the City and County of Honolulu, the distribution of permits shows that the categories Public Building and Industrial accounted for the largest share of permits, with 27.9 percent of permits issued for Public Buildings and 26.5 percent of permits for Industrial groups in 2022. In 2023, 43.8 percent of permits fell in the Public Buildings category, with Industrial group accounting for 3.1 percent of total CCH permits.

Table 4. Number of City and County of Honolulu Permits by Occupancy Group, 2022-2023

Occupancy group	2022			2023		
	Number of permits issued	Total value of permits issued	Avg # of days to issue	Number of permits issued	Total value of permits issued	Avg # of Days to issue
03 - Apartment/Single Family	1	\$400,000	524	1	\$18,000	146
05 - Amusement, recreation	3	\$637,000	374	7	\$3,920,560	280
07 - Industrial	18	\$8,481,996	513	4	\$326,143,000	490
08 - Garage (public)	2	\$1,071,304	674	1	\$1,700,000	295
10 - Service Station	0	0	0	1	\$327,233	240
12 - Office Building	5	\$41,797,111	604	6	\$2,006,166	421
13 - Public Building	19	\$36,736,302	314	57	\$22,599,886	387
14 - Public Utility Building	8	\$86,942,463	503	9	\$14,089,631	456
19 - Other non-residential	10	\$54,112,483	378	29	\$24,583,170	361
20 - Structure other than building & unclassified	2	\$12,265,100	475	14	\$118,091,377	333
21 - Other: Reroofing only	0	0	0	1	\$42,000	173

Source: Department of Planning and Permitting (DPP), City and County of Honolulu. READ estimates.

Table 5. Distribution of City and County of Honolulu Permits by Occupancy Group, 2022-2023

Occupancy group	2022		2023	
	Number of permits issued	Value of permits issued	Number of permits issued	Value of permits issued
03 - Apartment	1.5%	0.2%	0.8%	0.0%
05 - Amusement, recreation	4.4%	0.3%	5.4%	0.8%
07 - Industrial	26.5%	3.5%	3.1%	63.5%
08 - Garage (public)	2.9%	0.4%	0.8%	0.3%
10 - Service Station	0.0%	0.0%	0.8%	0.1%
12 - Office Building	7.4%	17.2%	4.6%	0.4%
13 - Public Building	27.9%	15.2%	43.8%	4.4%
14 - Public Utility Building	11.8%	35.9%	6.9%	2.7%
19 - Other non-residential	14.7%	22.3%	22.3%	4.8%
20 - Structure other than building & unclassified	2.9%	5.1%	10.8%	23.0%
21 - Other: Reroofing only	0.0%	0.0%	0.8%	0.0%

Source: Department of Planning and Permitting (DPP), City and County of Honolulu. READ estimates.

In the private sector, the highest number of permits were issued for single-family dwellings. They accounted for 84% of total private permits in 2022 and 2023.

Table 6. Number of Private Sector Permits by Occupancy Group, 2022-2023

Occupancy group	2022			2023		
	Number of permits issued	Total value of permits issued	Avg # of days to Issue	Number of permits issued	Total value of permits issued	Avg # of days to Issue
01 - Single Family	11,592	\$530,990,256	62	12,414	\$550,986,015	66
02 - Two Family	258	\$45,590,202	266	313	\$38,684,241	266
03 - Apartment	595	\$883,123,922	242	401	\$602,919,002	371
04 - Hotel	37	\$45,969,360	342	43	\$45,981,026	359
05 - Amusement, recreation	23	\$10,259,546	301	30	\$24,077,950	425
06 - Church	23	\$15,595,411	475	12	\$4,386,000	510
07 - Industrial	35	\$13,247,563	276	73	\$138,309,190	407
08 - Garage (public)	3	\$18,198,230	635	2	\$250,000	662
09 - Garage (private)	7	\$2,247,795	280	7	\$69,660,000	124
10 - Service Station	10	\$943,292	395	8	\$3,405,000	266
11 - Institution	26	\$21,281,399	477	24	\$16,559,132	308
12 - Office Building	214	\$179,305,392	278	239	\$73,207,845	286
13 - Public Building	6	\$629,005	352	0	0	0
14 - Public Utility Building	1	\$590,000	1,071	0	0	0
15 - School	27	\$6,319,416	350	61	\$33,191,089	381
16 - Shed	3	\$214,000	514	8	\$2,081,117	416
17 - Stable, barn	0	0	0	3	\$1,542,999	370
18 - Store	266	\$78,213,366	269	317	\$118,120,925	236
19 - Other non-residential	169	\$90,009,889	337	224	\$389,418,940	377
20 - Structure other than building & unclassified	523	\$146,209,412	284	418	\$599,775,294	353
21 - Other: Reroofing only	4	\$2,719,048	21	60	\$5,651,702	9

Source: Department of Planning and Permitting (DPP), City and County of Honolulu. READ estimates.

Table 7. Distribution of Private Sector Permits by Occupancy Group, 2022-2023

Occupancy group	2022		2023	
	Number of permits issued	Value of permits issued	Number of permits issued	Value of permits issued
01 - Single Family	83.9%	25.4%	84.7%	20.3%
02 - Two Family	1.9%	2.2%	2.1%	1.4%
03 - Apartment	4.3%	42.2%	2.7%	22.2%
04 - Hotel	0.3%	2.2%	0.3%	1.7%
05 - Amusement, recreation	0.2%	0.5%	0.2%	0.9%
06 - Church	0.2%	0.7%	0.1%	0.2%
07 - Industrial	0.3%	0.6%	0.5%	5.1%
08 - Garage (public)	0.0%	0.9%	0.0%	0.0%
09 - Garage (private)	0.1%	0.1%	0.0%	2.6%
10 - Service Station	0.1%	0.0%	0.1%	0.1%
11 - Institution	0.2%	1.0%	0.2%	0.6%
12 - Office Building	1.5%	8.6%	1.6%	2.7%
13 - Public Building	0.0%	0.0%	0.0%	0.0%
14 - Public Utility Building	0.0%	0.0%	0.0%	0.0%
15 - School	0.2%	0.3%	0.4%	1.2%
16 - Shed	0.0%	0.0%	0.1%	0.1%
17 - Stable, barn	0.0%	0.0%	0.0%	0.1%
18 - Store	1.9%	3.7%	2.2%	4.3%
19 - Other non-residential	1.2%	4.3%	1.5%	14.3%
20 - Structure other than building & unclassified	3.8%	7.0%	2.9%	22.1%
21 - Other: Reroofing only	0.0%	0.1%	0.4%	0.2%

Source: Department of Planning and Permitting (DPP), City and County of Honolulu. READ estimates.

Data Analysis and Results

In our analysis for estimating the cost of delays we include only permits with processing times exceeding 180 days, is the level established as the normal processing period benchmark for this study. Hereafter, the number of delays refers to the total processing days, minus 180 days. This threshold ensures that our delay cost calculation focuses exclusively on delays beyond the expected timeframe and provides a clearer assessment of the impacts associated with prolonged processing periods.

Out of the total number of permits issued in 2022 and 2023, 20 percent and 24 percent of permits required more than 180 days to be processed. For 2022, 95 percent of State government permits and 85 percent of CCH permits were delayed . In 2023, these levels showed little improvement, with 93 percent of State government projects and 74 percent of CCH permits delayed. These contrast sharply with private sector permits, where 19 percent of the permits in 2022 and 22percent in 2023 were delayed.

Table 8. Total Number of Projects versus Total Number of Delayed Projects, 2022-2023

2022			
Category	Total # of Projects	# of Projects Delayed	% of Projects Delayed
All permits issued	14,058	2807	20%
Private sector permits	13,822	2589	19%
Public sector permits	236	218	92%
City & County of Honolulu permits	68	58	85%
State government permits	168	160	95%
2023			
All permits issued	15,227	3,669	24%
Private sector permits	14,657	3,163	22%
Public sector permits	570	506	89%
City & County of Honolulu permits	130	96	74%
State government permits	440	410	93%

Source: Department of Planning and Permitting (DPP), City and County of Honolulu. READ estimates.

Table 9 shows that on average State government project permits had an average delay of 439 days in 2022 and 489 days in 2023. Average project values were just over \$1 million in 2022 and \$0.8 million in 2023. In contrast, CCH projects had fewer days of delays in both years. CCH projects had average delays of 316 days in 2022 and 277 days in 2023 with average project values of over \$4 million and \$5 million, respectively. Private sector permits had average delays of 247 days in 2022 and 238 days in 2023, respectively.

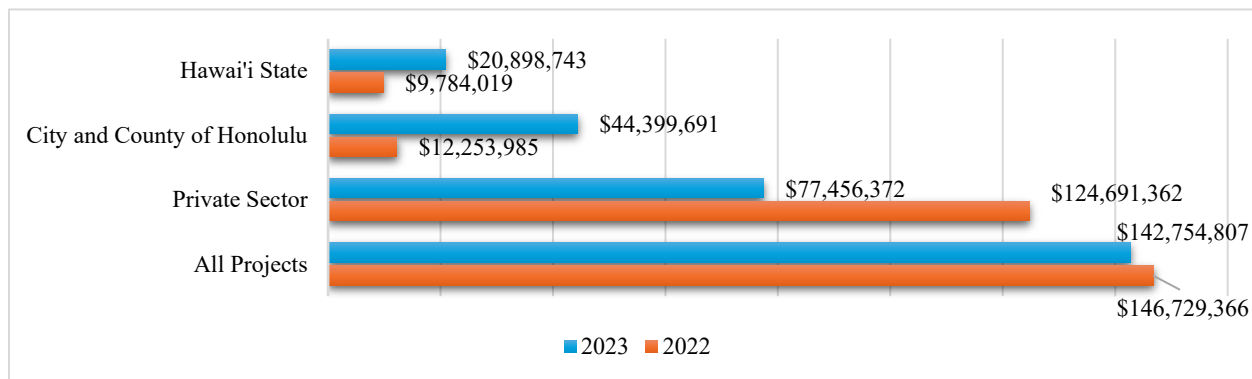
Table 9. Average Value of Project and Delay per Project, 2022–2023

Category	2022		2023	
	Avg Value of Project	Avg Delay per Project (days)	Avg Value of Project	Avg Delay per Project (days)
All projects	\$707,200	259	\$596,269	267
Private Sector	\$612,876	247	\$427,642	238
Public Sector	\$1,827,411	406	\$1,650,354	449
City and County of Honolulu	\$4,090,935	316	\$5,277,237	277
State	\$1,006,884	439	\$801,133	489

Source: Department of Planning and Permitting (DPP), City and County of Honolulu. READ estimates.

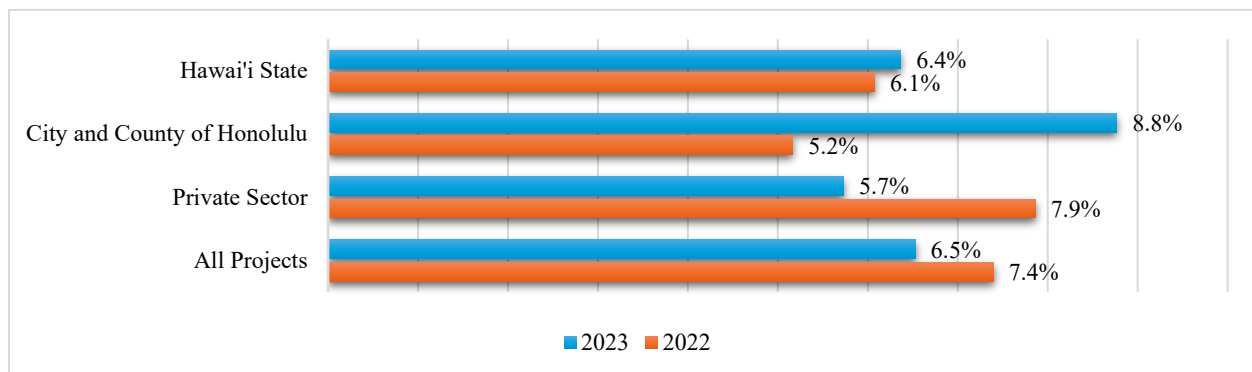
Permitting delays are costly. As illustrated in Figure 3, State government permits that required processing times exceeding two quarters resulted in costs of around \$9.8 million in 2022 and \$20.9 million in 2023. These costs constitute more than 6 percent of the total project values in the mentioned years. For the CCH projects, the total permit delay costs surpassed \$12 million in 2022 and \$44 million in 2023. These figures represent an increase in project costs of 5.2 percent and 8.8 percent in 2022 and 2023. Delay in private sector permits resulted in losses of \$124 million in 2022 and \$77 million in 2023, totaling 7percent of the combined project values for both years.

Figure 4. Total Delay Cost, 2022-2023



Source: Department of Planning and Permitting (DPP), City and County of Honolulu. READ estimates.

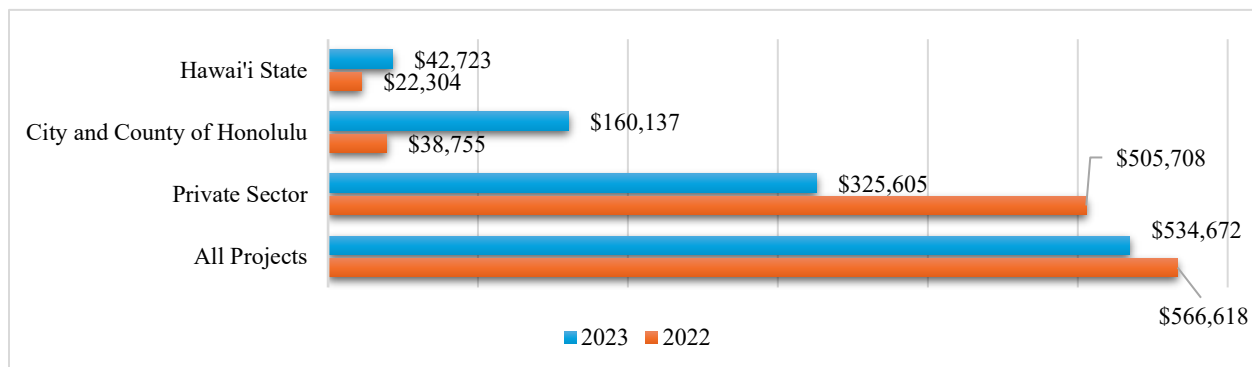
Figure 5. Total Delay Cost as percentage of Total Project Value, 2022-2023



Source: Department of Planning and Permitting (DPP), City and County of Honolulu. READ estimates.

As shown in the figure below, each additional day of delay resulted in additional costs of \$22,304 in 2022 and \$42,723 in 2023 for State government projects. For all CCH projects, each additional day of delay cost CCH projects \$38,755 and \$160,137 in the respective years. Considering the volume of the private sector permits, an additional day of delay in private sector permits incurred an additional cost of \$505,708 and \$325,605 in 2022 and 2023, respectively.

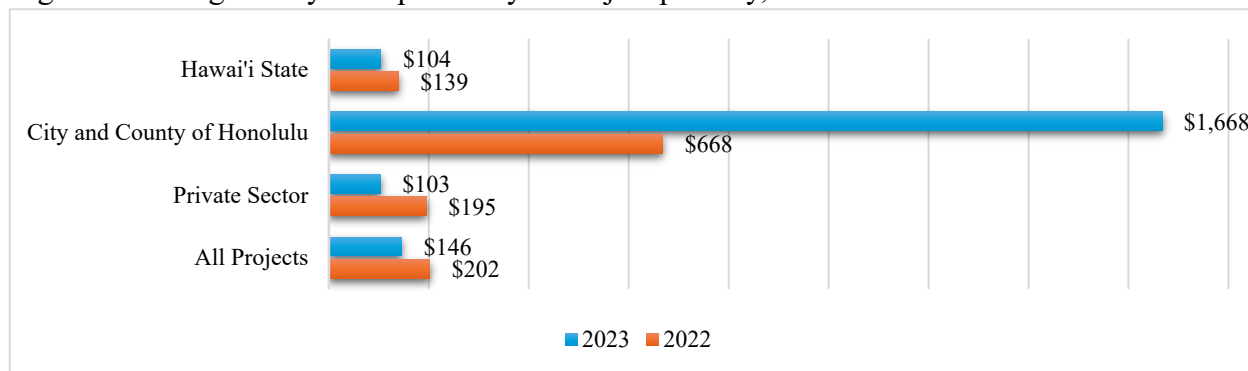
Figure 6. Total Delay Cost per Day, 2022–2023



Source: Department of Planning and Permitting (DPP), City and County of Honolulu. READ estimates.

In addition, the average delay cost per project per day for State government projects reached over \$100 in both 2022 and 2023. For CCH projects, these costs exceeded \$600 in 2022 and \$1,600 in 2023. The costs of the delays were far higher for CCH projects than for State government projects: 16 times greater in 2023 and 5 times greater in 2022. For private sector projects, the average delay cost per project per day was \$195 in 2022 and \$103 in 2023.

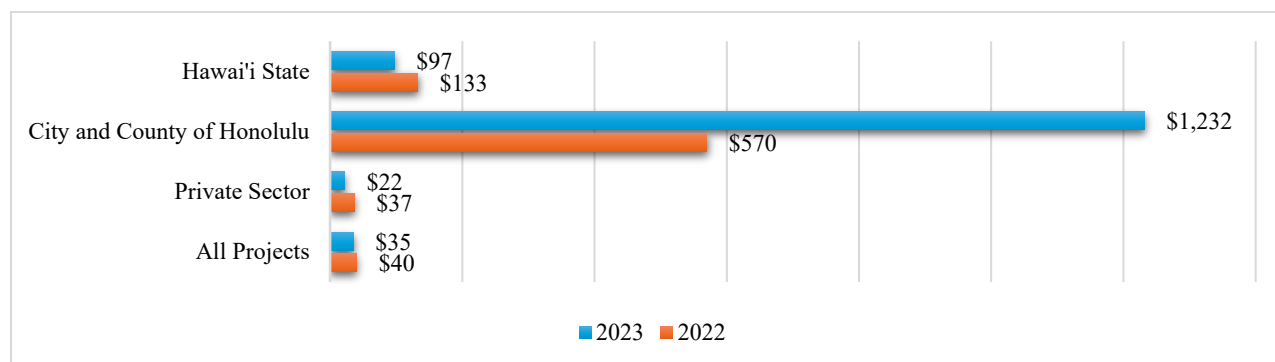
Figure 7. Average Delay Cost per Delayed Project per Day, 2022-2023



Source: Department of Planning and Permitting (DPP), City and County of Honolulu. READ estimates.

Furthermore, studying the delay cost per project per day for all projects, we observe that an additional day of delay cost each state government project \$133 and \$97 in 2022 and 2023, respectively. For the CCH projects, an additional day of delay cost each project \$570 in 2022 and \$1,232 in 2023.

Figure 8. Average Delay Cost per Project per Day (All Projects), 2022-2023



Source: Department of Planning and Permitting (DPP), City and County of Honolulu. READ estimates.

Conclusion

Delay costs are directly linked to the value of the projects seeking permits - the larger the project value, the higher the associated delay cost. This relationship strongly states that even a small delay can mean significant financial impacts for large-scale projects. In contrast, longer delays in smaller projects tend to result in comparatively lower impacts on costs.

For public projects, State government projects had lower average values compared to CCH projects but longer delays in permit issuance. As a result, CCH incurred larger per additional day costs of delays and total costs of delays in both 2022 and 2023.

For State government projects, the average delay in permitting reached 439 days in 2022; in 2023, this figure increased to 489 days. These delays collectively cost the State of Hawai‘i more than \$30 million over the two-year period. For the CCH projects, the average delay in permitting process reached 316 days in 2022 and 277 days in 2023, incurring additional estimated costs of over \$12 million and \$44 million, respectively.

For private sector permits, the average delay in the permitting process was lower compared to the State government and CCH projects, yet due to the volume of the permits, resulted in substantial additional costs. In 2022 and 2023, the average delay in private sector permitting reached 247 and 238 days, respectively. These delays cost the private sector over \$124.6 million and \$77.4 million in 2022 and 2023.

This substantial financial burden underscores the critical importance of efficient permit processing, particularly for high-value projects, where even minor delays can result in significant economic losses.

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