

Appendix A – Bayfront Land Use Equivalency Analysis Findings Memorandum

Memorandum

Date: January 23, 2023

To: Connor Tutino and Akoni Daniels

From: Molly Sun and Eric Womeldorff, Fehr & Peers

Subject: Bayfront Land Use Equivalency Analysis Findings

SF22-1253

Introduction

The Burlingame Model was used to prepare the City of Burlingame's General Plan 2040 EIR and forecasted land use changes that would lead to approximately 700,000 additional square feet of office land uses in the Bayfront Area by 2040.¹ As of October 2022, approved projects in Burlingame would lead to approximately additional 650,000 square feet of office land uses in the Bayfront Area, leaving little room for future office development. However, there has been less commercial development in the Bayfront Area than anticipated in the General Plan 2040 such that transportation impacts associated with the present development may be within the overall impacts evaluated by the General Plan 2040 EIR.

Fehr & Peers has developed a methodology to determine whether and to what extent altering the land use mix between commercial and office land uses in the Bayfront Area would have transportation impacts under the California Environmental Quality Act. Specifically, this methodology evaluates whether a development project would have new or more severe transportation impacts than those evaluated in the General Plan 2040 EIR. The methodology identifies the change in daily and PM peak hour vehicle trips associated with altering the mix of commercial land uses and office land uses in the Burlingame Bayfront Commercial District and the related effects to intersection operations² and VMT in the Bayfront Area.

This methodology was used to analyze the transportation impacts for the proposed 484,000 square foot office project at 620 Airport Boulevard ("Project"). The analysis finds that there are no new or peculiar impacts associated with the Project that were not adequately analyzed in the

¹ As compared to existing uses at the time General Plan 2040 was developed.

² Intersections for this analysis were selected based on their inclusion in the General Plan 2040 EIR. As LOS is not considered an impact under CEQA, intersection delay is presented for informational purposes only



General Plan 2040 EIR even though the Project adds more office square footage to the Bayfront Area than the General Plan 2040 EIR originally anticipated.

Job & Vehicle Trip Equivalency Analysis

Land Use

The General Plan 2040 EIR evaluated the potential transportation impacts of the buildout of the Bayfront Area under the General Plan 2040 based on a mix of commercial and office uses, totaling 0.64 million square feet of commercial use and 1.60 million square feet of office use. Given that the Bayfront Area has approved and proposed office projects that may exceed the amount of office uses evaluated in the General Plan 2040 EIR, and given that there has been significantly less commercial use buildout in the Bayfront Area, the City has requested that Fehr and Peers evaluate whether a land use mix with more office uses – specifically, the office uses associated with the Project – could cause new or more significant impacts than the land use mix evaluated in the General Plan 2040 EIR.

Fehr and Peers established a development baseline for the Bayfront Area by documenting the land use changes that were approved in Burlingame's 2040 General Plan and Bayfront development that has already been approved, shown in **Table 1**. The Project would add 484,000 square feet of office space to the Bayfront. As shown in Table 1, this would lead to 434,000 more square feet of office development than was evaluated in the General Plan 2040 EIR for the Bayfront.

Table 1. Planned Development in Burlingame's Bayfront Area (Square Feet)

	Commercial	Office	Industrial	Hotel	Institutional	Total
2040 General Plan - Net Change in SF	340,260	694,490	-30,320	-186,840	0	817,580
(Approved Development ³)	67,300	645,080	0	-153,680	0	558,710
620 Airport Boulevard	0	484,000	0	0	0	484,000
Remaining Developable Square Feet	272,960	-434,560	-30,320	-33,160	0	-225,120

Source: Fehr & Peers, 2022

Jobs

Fehr & Peers converted the remaining developable square feet in Burlingame's Bayfront to jobs using the job conversion rates used to prepare Burlingame's 2040 General Plan, shown in **Table 2**.

³ List of Approved Projects in Appendix As



As shown in **Table 3**, accounting for the Project, there would be 1,580 more office jobs than evaluated in General Plan 2040 EIR for the Bayfront.

Table 2. Job Conversion Rates

Land Use	Square Feet per Employee
Industrial	800
Office	275
Retail	400
Institutional	875
Hotel (Gross SF per room)	882

Source: Burlingame General Plan 2040

Table 3: Jobs in Burlingame's Bayfront Area Evaluated in the General Plan 2040

	Commercial	Office	Industrial	Hotel	Institutional	Total
General Plan 2040	851	2,525	-61	-212	0	3,104
(Approved Development)	168	2,346	0	-174	0	2,340
620 Airport Boulevard	0	1,760	0	0	0	1,760
Remaining Jobs	682	-1,580	-61	-38	0	-996

Source: Fehr & Peers, 2022

Note: Some totals may not sum correctly due to rounding.

Vehicle Trips

The 11th Generation of the ITE Trip Generation Manual was used to project the number of vehicle trips that would be generated by Bayfront land uses evaluated in the General Plan 2040 daily and during the PM Peak Hour.⁴ The results of this analysis are shown in **Table 4** and were used to determine the number of daily and PM Peak vehicle trips per job shown in **Table 5**.

As shown in Table 5, one commercial job generates 21.8 trips daily while one office job generates 3 daily trips. As a result, and as shown in **Table 6**, using daily vehicle trips/job, the analysis determined that 7.3 office jobs would generate the same number of daily vehicle trips as one commercial job.

⁴ Industrial, Hotel, and Institutional land uses are not considered in this portion of the analysis as these land uses are planned to decrease in size in the Bayfront Area per the General Plan 2040 and therefore are not expected to generate new vehicle trips.



Applying the same analysis to the PM Peak period where one commercial job generates 2.6 trips and one office job generates 0.4 trips, the analysis found that 6.7 office jobs would generate the same number of PM Peak hour vehicle trips as one commercial job.

Table 4. ITE Trip Generation of 2040 Development in Burlingame's Bayfront Area

	Daily Trips		PM Peak Trips	
	Commercial ¹	Office ²	Commercial	Office
General Plan 2040 (KSF)	340	694	340	694
Vehicle Trip Rate (per KSF)	54.45	10.84	6.59	1.44
Vehicle Trips³	18,527	7,528	2,242	1,000

Source: Fehr & Peers, 2022

Notes:

1. ITE Land Use Code 822
2. ITE Land Use Code 710
3. Daily trips are presented as trips/day, PM Peak trips are represented as trips/hour

Table 5. Vehicle Trips per 2040 Jobs in Burlingame's Bayfront Area

	Daily Trips		PM Peak Trips	
	Commercial	Office	Commercial	Office
Vehicle Trips ¹	18,527	7,528	2,242	1,000
Jobs	851	2,525	851	2,525
Vehicle Trips/Job¹	21.8	3.0	2.6	0.4

Source: Fehr & Peers, 2022

1. Daily trips are presented as trips/day, PM Peak trips are represented as trips/hour

Table 6. Daily and PM Peak Job Equivalency Rates

	Daily Trips			PM Peak Trips		
	Commercial [A]	Office [B]	Office Jobs per Commercial Job [A/B]	Commercial [A]	Office [B]	Office Jobs per Commercial Job [A/B]
Vehicle Trips/Job ¹	21.8	3.0	7.3	2.6	0.4	6.7

Source: Fehr & Peers, 2022

1. Daily trips are presented as trips/day, PM Peak trips are represented as trips/hour



Land Use/Jobs Equivalency Analysis

As shown in **Table 3**, the Project is expected to lead to 1,580 more office jobs in the Bayfront area than were evaluated in the General Plan 2040 EIR. However, at present there are 682 fewer commercial jobs in the Bayfront area than were evaluated in the General Plan 2040 EIR, so the potential transportation impacts associated with the increase in office jobs may be offset by the lack of commercial jobs such that overall impacts are within those previously evaluated.

To evaluate potential impacts of the proposed Project's office uses against the mix of office and commercial uses which were evaluated in the General Plan 2040 EIR, Fehr and Peers used the following equivalency rates calculated in Table 6: 1 commercial job as equivalent to 7.3 office jobs (daily trips) and 1 commercial job as equivalent 6.7 office jobs (PM Peak trips).

As shown in **Table 7**, using daily vehicle trip rates, the 1,580, office jobs that would be generated by the Project are equivalent to 216 commercial jobs or 86,400 square feet of commercial space.⁵ This is within the limits of the commercial buildout anticipated by and evaluated in the General Plan 2040 EIR.⁶

Table 7: Commercial Job to Office Job Equivalency in Burlingame's Bayfront Area

	Excess Office Jobs [A]	Office Jobs per Commercial Job [B]	Commercial Job Equivalent [A/B]	Remaining Commercial Jobs
620 Airport Boulevard (Daily)	1,580	7.3	216	466
620 Airport Boulevard (PM Peak)	1,580	6.7	237	445

Source: Fehr & Peers, 2022

Using PM Peak vehicle trip rates, the 1,580 office jobs that would be generated by the project are equivalent to 237 commercial jobs or 94,800 square feet of commercial space,⁷ which is within the limits of the commercial buildout anticipated by and evaluated in the General Plan 2040 EIR.

Traffic Analysis

Fehr & Peers performed an intersection operations analysis to evaluate the Project's consistency with levels of service identified in the General Plan 2040.⁸ The four Project intersections included in the traffic analysis are listed below and were also analyzed in the General Plan 2040.

⁵ 216 commercial jobs * 400 square feet of commercial space per employee = 86,400 square feet

⁶ See Table 1, the General Plan 2040 EIR evaluated 340 KSF of commercial space in the Bayfront

⁷ 237 commercial jobs * 400 square feet of commercial space per employee = 94,800 square feet

⁸ As LOS is not considered an impact under CEQA, intersection delay is presented for informational purposes only



1. Airport Boulevard & Anza Boulevard
2. Broadway & Airport Boulevard & Old Bayshore Highway
3. Broadway & US-101 Southbound Ramps
4. Airport Boulevard & US-101 Northbound Ramps

Trip Distribution

To determine the effect of the change in land use mix identified in the above analysis, Fehr & Peers reviewed the difference in the distribution of inbound and outbound commercial and office vehicle trips during PM Peak using the 11th Edition of the ITE Trip Generation Manual. During PM Peak, commercial vehicle trips are evenly split between inbound and outbound vehicle trips while office trips are more heavily weighted towards outbound vehicle trips, as shown in **Table 8**.

Table 8: Trip Distribution for Office and Commercial Trips

	Jobs	PM Peak Trips/Job	Trips	% In	% Out	In	Out
Office	1,580	0.4	632	0.17	0.83	107	525
Commercial ⁹	237	6.7	632	0.50	0.50	-316	-316
Net Change in Trips (Office – Commercial)						-209	209

Source: Fehr & Peers, 2022

As the General Plan 2040 anticipated commercial development in the Bayfront Area, commercial vehicle trips are considered in the General Plan's 2040 intersection operations analysis. To analyze the effect of a different mix of commercial and office land uses than were previously evaluated in the General Plan 2040 EIR, commercial vehicle trips associated with the change in land use mix were removed from the 2040 intersection PM peak hour volumes while office vehicle trips associated with the change in land use mix were added to the 2040 PM peak hour intersection volumes. As shown in **Table 8**, 316 inbound commercial vehicle trips and 316 outbound commercial vehicle trips were removed from the 2040 intersection volumes, while 107 inbound office trips and 525 outbound office trips were added to the 2040 intersection volumes.

Trip Assignment

Since the land use mix being evaluated is within a single TAZ, it was assumed that commercial trips and office trips follow an identical trip assignment pattern. The trip assignment pattern was determined (and can be found in) as part of the 620 Airport Boulevard Transportation Impact Analysis (TIS) report.

⁹ Uses ITE Land Use Code 822: Strip Retail Plaza



LOS Analysis

Table 9: Intersection Operations Analysis

	General Plan 2040		Revised General Plan 2040		
	Delay	LOS	Added Delay	Delay	Revised LOS
1. Airport/Anza	45.5	D	4.7	50.2	D
2. Airport/Broadway/Old Bayshore	21.0	C	0.0	21.0	C
3. Broadway/US-101 SB	20.3	C	-2.7	17.6	B
4. Airport/US-101 NB	18.2	B	0.0	18.2	B

Source: Fehr & Peers, 2022

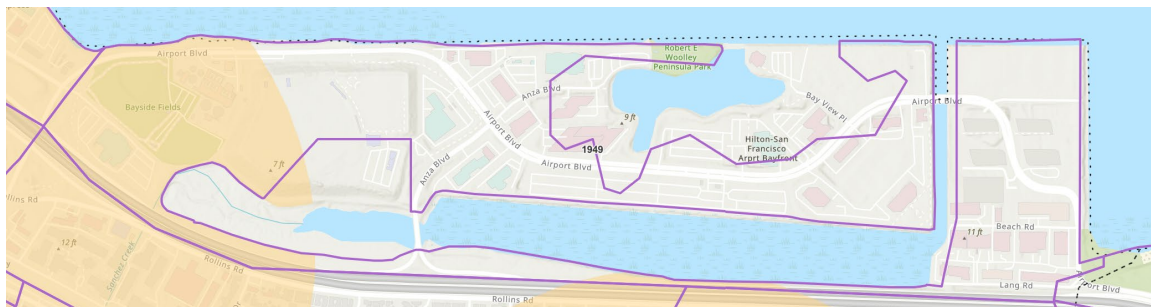
The results of the traffic analysis¹⁰ are shown in **Table 9**. They show that the proposed Project would not materially worsen level of service (LOS) at any of the four Project intersections and would lead to an improvement in LOS at the Broadway/US-101 Southbound intersection.

VMT Analysis

It is not expected that the change in land use composition from the Project would lead to a significant VMT impact.

The Project is located in TAZ 1949, which is shown in **Figure 1**. As shown in **Figure 2**, the entirety of this TAZ is served by Commute.org's Burlingame Point shuttle which runs along Airport Boulevard and operates on 15-minute service intervals during peak periods.

Figure 1: TAZ 1949



Source: C/CAG VMT Estimation Tool

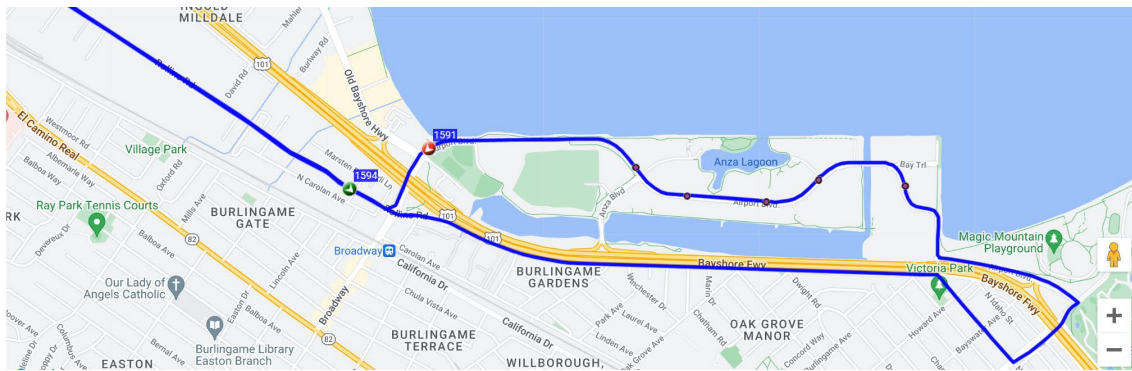
¹⁰ The intersection analysis/files developed as part of the General Plan 2040 EIR were not available to Fehr & Peers. As such, we determined the difference in intersection operations at the study intersections using traffic analysis files developed as part of the 620 Airport Boulevard TIS and then applied the difference in results to the General Plan 2040 results to make our determinations, as shown in Table 8.



Generally, projects within ½ mile of a stop along an existing “high quality transit corridor” should be presumed to cause less-than-significant VMT impact,¹¹ where a “high quality transit corridor” is defined as corridor with fixed-route bus service with service intervals no longer than 15 minutes during commute hours.

The Project site is located within a ½ mile of Commute.org’s Burlingame Point shuttle, which operates on 15-minute headways. As such, the Burlingame Point shuttle which serves projects in TAZ 1949 meets the “high-quality transit corridor” criteria and VMT impacts from the Project would be presumed to be less than significant.

Figure 2: Burlingame Point Shuttle Route



Source: Commute.org

¹¹ CEQA Guidelines Section 15064.3, subdivision (b) (1)

Appendix A: List of Approved Development in Burlingame's Bayfront Area

Project	Existing Square Feet			Proposed Square Feet			Net Square Feet		
	Office	Commercial	Other	Office	Commercial	Other	Office	Commercial	Other
Top Golf	0	0	0	0	71,020	0	0	71,020	0
1214 Donnelly Avenue	0	0	0	0	4,700	0	0	4,700	0
30 Ingold Road	65,250	0	0	0	4,060	0	-65,250	4,060	0
220 Park Road	0	0	0	139,940	12,400	0	139,940	12,400	0
567 Airport Boulevard	0	0	0	241,680	0	0	241,680	0	0
777 Airport Boulevard	0	3,720	153,680	403,400	0	0	403,400	-3,720	-153,680
Total	65,250	3,720	153,680	785,020	92,180	0	719,770	88,460	-153,680