

Appendix 11

Variants Technical Data

Variants – Transportation Technical Data

Variant 2, Option A (event at Pier 48) – Trip Generation

Mission Rock Mixed-Use Project
PROJECT VARIANT 2 - Event Center at Pier 48

LAND USES	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
	1,047,514 gsf 1,048 units	1,361,181 gsf	122,388 gsf	85,672 gsf	36,717 gsf	2,653,472 gsf	0 gsf 0 employees	0 gsf 0 visitors	0 gsf	0 gsf	0 gsf	0 gsf	0 gsf	5.12 acres	4,000 attendees 300 employees	2,653,472 gsf w/out Event Center

INTERNAL AND EXTERNAL TRIP GENERATION RATES	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Daily Trip Rate (per d.u. / per 1,000 gsf / per attendee)	10.0	18.1	150.0	200.0	600.0	34.9			200.0	150.0	18.1		0.0	0.46	2.17	38.2
AM Peak Hour as % of daily	14.2%	8.9%	2.3%	1.5%	14.8%	8.2%			1.5%	2.3%	8.9%		0.0%	13.0%	0.0%	7.5%
AM Peak Hour Trip Rate (per du/per 1000 gsf/per attendee)	1.42	1.61	3.49	2.92	88.89	2.87			2.92	3.49	1.61		0.00	0.06	0.00	2.88
PM Peak Hour as % of daily	17.3%	8.5%	9.0%	13.5%	13.5%	11.7%			13.5%	9.0%	8.5%		0.0%	9.0%	8.0%	11.4%
PM Peak Hour Trip Rate (per du/per 1000 gsf/per attendee)	1.73	1.54	13.50	27.00	81.00	4.09			27.00	13.50	1.54		0.00	0.04	0.17	4.35
% Modal Share																
Auto	27%	37%	36%	36%	36%	35%			0%	0%	0%		0%	36%	57%	37%
Transit	42%	35%	17%	27%	27%	29%			0%	0%	0%		0%	27%	36%	29%
Walk/Other	31%	28%	47%	37%	37%	36%			0%	0%	0%		0%	37%	7%	34%
Average Vehicle Occupancy Rate																
Weekday Daily	1.11	1.97	2.38	2.31	2.31	2.03			0.00	0.00	0.00		0.00	2.31	2.60	2.09
Weekday AM Peak Hour	1.11	1.63	1.54	1.54	2.31	1.72			0.00	0.00	0.00		0.00	2.31	0.00	1.72
Weekday PM Peak Hour	1.11	1.63	2.38	2.31	2.31	1.89			0.00	0.00	0.00		0.00	2.31	2.17	1.91

INTERNAL AND EXTERNAL TRIPS BY MODE BEFORE ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday Daily																
Auto Person Trips	2,837	9,095	6,584	6,155	7,913	32,584	-	-	-	-	-	-	-	37	4,962	37,583
Transit Person Trips	4,400	8,643	3,141	4,588	5,899	26,670	-	-	-	-	-	-	-	27	3,127	29,825
Walk/Other Person Trips	3,242	6,900	8,633	6,392	8,218	33,386	-	-	-	-	-	-	-	38	571	33,995
Total Person Trips	10,480	24,637	18,358	17,134	22,030	92,640	-	-	-	-	-	-	-	102	8,660	101,403
Total Vehicle Trips	2,562	4,620	2,772	2,661	3,421	16,036	-	-	-	-	-	-	-	16	1,909	17,961
Weekday AM Peak Hour																
Auto Person Trips	404	841	166	97	1,172	2,681	-	-	-	-	-	-	-	5	-	2,686
Transit Person Trips	626	1,037	221	129	874	2,887	-	-	-	-	-	-	-	4	-	2,891
Walk/Other Person Trips	461	315	40	24	1,218	2,057	-	-	-	-	-	-	-	5	-	2,062
Total Person Trips	1,491	2,193	428	250	3,264	7,626	-	-	-	-	-	-	-	13	-	7,639
Total Vehicle Trips	365	515	108	63	507	1,557	-	-	-	-	-	-	-	2	-	1,559
Weekday PM Peak Hour																
Auto Person Trips	491	804	593	831	1,068	3,786	-	-	-	-	-	-	-	3	351	4,140
Transit Person Trips	761	990	283	619	796	3,450	-	-	-	-	-	-	-	2	293	3,745
Walk/Other Person Trips	561	301	777	863	1,109	3,611	-	-	-	-	-	-	-	3	53	3,668
Total Person Trips	1,813	2,094	1,652	2,313	2,974	10,847	-	-	-	-	-	-	-	9	697	11,553
Total Vehicle Trips	443	492	249	359	462	2,006	-	-	-	-	-	-	-	1	162	2,169

Mission Rock Mixed-Use Project
PROJECT VARIANT 2 - Event Center at Pier 48

INTERNAL AND EXTERNAL TRIPS INBOUND/OUTBOUND SPLITS	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday AM Peak Hour																
Work																
Inbound	0%	100%	100%	100%	100%		80%		100%	100%	100%			100%	100%	
Outbound	100%	0%	0%	0%	0%		20%		0%	0%	0%			0%	0%	
Non-Work																
Inbound	67%	50%	50%	50%	50%		50%	50%	50%	50%	50%			50%	100%	
Outbound	33%	50%	50%	50%	50%		50%	50%	50%	50%	50%			50%	0%	
Person Trips																
Inbound	33%	92%	100%	100%	52%	64%	0%	0%	0%	0%	0%			52%	0%	64%
Outbound	67%	9%	0%	0%	48%	36%	0%	0%	0%	0%	0%			48%	0%	36%
Inbound	497	2,006	428	250	1,697	4,878	-	-	-	-	-			7	-	4,885
Outbound	994	186	-	-	1,567	2,747	-	-	-	-	-			6	-	2,754
Total Person Trips	1,491	2,193	428	250	3,264	7,626	-	-	-	-	-			13	-	7,639
Vehicle Trips																
Inbound	33%	95%	100%	100%	53%	67%	0%	0%	0%	0%	0%			53%	0%	67%
Outbound	67%	5%	0%	0%	47%	33%	0%	0%	0%	0%	0%			47%	0%	33%
Inbound	122	487	108	63	270	1,049	-	-	-	-	-			1	-	1,050
Outbound	243	28	-	-	237	508	-	-	-	-	-			1	-	509
Total Vehicle Trips	365	515	108	63	507	1,557	-	-	-	-	-			2	-	1,559
Weekday PM Peak Hour																
Work																
Inbound	100%	0%	0%	0%	0%		20%		0%	0%	0%			0%	0%	
Outbound	0%	100%	100%	100%	100%		80%		100%	100%	100%			100%	100%	
Non-Work																
Inbound	33%	50%	50%	50%	50%		50%	50%	50%	50%	50%			50%	0%	
Outbound	67%	50%	50%	50%	50%		50%	50%	50%	50%	50%			50%	100%	
Person Trips																
Inbound	67%	9%	48%	48%	48%	43%	0%	0%	0%	0%	0%			48%	0%	41%
Outbound	33%	92%	52%	52%	52%	57%	0%	0%	0%	0%	0%			52%	100%	59%
Inbound	1,209	178	793	1,110	1,428	4,718	-	-	-	-	-			4	-	4,722
Outbound	604	1,916	859	1,203	1,547	6,129	-	-	-	-	-			5	697	6,831
Total Person Trips	1,813	2,094	1,652	2,313	2,974	10,847	-	-	-	-	-			9	697	11,553
Vehicle Trips																
Inbound	67%	5%	47%	47%	47%	41%	0%	0%	0%	0%	0%			47%	0%	38%
Outbound	33%	95%	53%	53%	53%	59%	0%	0%	0%	0%	0%			53%	100%	62%
Inbound	295	27	116	168	216	823	-	-	-	-	-			1	-	823
Outbound	148	465	133	191	246	1,183	-	-	-	-	-			1	162	1,346
Total Vehicle Trips	443	492	249	359	462	2,006	-	-	-	-	-			1	162	2,169

Mission Rock Mixed-Use Project
PROJECT VARIANT 2 - Event Center at Pier 48

INTERNAL AND LINKED PERSON TRIP ADJUSTMENT FACTORS	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday Daily																
Internal trip factor	38.0%	5.0%	10.0%	10.0%	15.5%		5.0%	0.0%	10.0%	10.0%	5.0%			10.0%	0.0%	
Internal linked trip factor	15.0%	25.0%	50.0%	50.0%	80.0%		25.0%	0.0%	80.0%	80.0%	25.0%			80.0%	0.0%	
Internal person trips	3,385	924	918	857	683	6,767	-	-	-	-	-	-	-	2	-	6,769
Total internal person trip productions																3,385
Total internal person trip attractions																3,384
Difference																(2)
% difference																0%
Internal and linked person trips (Walk)	3,982	1,232	1,836	1,713	3,415	12,178	-	-	-	-	-	-	-	10	-	12,188
Overall total trip reduction	38%	5%	10%	10%	16%	13%	0%	0%	0%	0%	0%	0%	0%	10%	0%	12%
Weekday AM Peak Hour																
Internal trip factor	20.0%	9.0%	10.0%	7.0%	10.0%		5.0%	0.0%	0.0%	0.0%	9.0%			10.0%	0.0%	
Internal linked trip factor	15.0%	20.0%	50.0%	50.0%	80.0%		25.0%	0.0%	80.0%	80.0%	20.0%			80.0%	0.0%	
Internal person trips	254	158	21	9	65	507	-	-	-	-	-	-	-	0	-	507
Total internal person trip productions																254
Total internal person trip attractions																254
Difference																0
% difference																0%
Internal and linked person trips (Walk)	298	197	43	18	326	882	-	-	-	-	-	-	-	1	-	884
Overall total trip reduction	20%	9%	10%	7%	10%	12%	0%	0%	0%	0%	0%	0%	0%	10%	0%	12%
Weekday PM Peak Hour																
Internal trip factor	45.0%	20.0%	20.0%	12.0%	16.0%		5.0%	0.0%	10.0%	10.0%	20.0%			10.0%	0.0%	
Internal linked trip factor	15.0%	30.0%	50.0%	50.0%	80.0%		25.0%	0.0%	80.0%	80.0%	30.0%			80.0%	0.0%	
Internal person trips	693	293	165	139	95	1,386	-	-	-	-	-	-	-	0	-	1,386
Total internal person trip productions																693
Total internal person trip attractions																693
Difference																(1)
% difference																0%
Internal and linked person trips (Walk)	816	419	330	278	476	2,319	-	-	-	-	-	-	-	1	-	2,320
Overall total trip reduction	45%	20%	20%	12%	16%	21%	0%	0%	0%	0%	0%	0%	0%	10%	0%	20%
TRIP SUBTRACTION CHECK																
Weekday Daily	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Weekday AM Peak Hour	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Weekday PM Peak Hour	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
PEAK HOUR CHECK																
Auto Person Trips SD1+SD3																
Daily External Trips	520	1,694	699	965	966	4,844	-	-	-	-	-	-	-	6	529	5,379
AM+PM External Trips	193	191	50	136	311	881	-	-	-	-	-	-	-	1	49	931
Average Peak Hour Factor	19%	6%	4%	7%	16%	9%	0%	0%	0%	0%	0%	0%	0%	11%	5%	9%
Transit Person Trips SD1+SD3																
Daily External Trips	988	2,188	568	1,069	1,070	5,883	-	-	-	-	-	-	-	6	576	6,466
AM+PM External Trips	366	295	61	159	344	1,226	-	-	-	-	-	-	-	1	65	1,293
Average Peak Hour Factor	19%	7%	5%	7%	16%	10%	0%	0%	0%	0%	0%	0%	0%	11%	6%	10%
Walk/Other Person Trips SD1+SD3																
Daily External Trips	1,049	3,048	1,874	2,213	2,214	10,400	-	-	-	-	-	-	-	13	316	10,729
AM+PM External Trips	389	213	91	289	713	1,695	-	-	-	-	-	-	-	3	35	1,734
Average Peak Hour Factor	19%	3%	2%	7%	16%	8%	0%	0%	0%	0%	0%	0%	0%	11%	6%	8%

Mission Rock Mixed-Use Project
PROJECT VARIANT 2 - Event Center at Pier 48

EXTERNAL PLUS INTERNAL TRIPS FOR SD1 AND SD3 BEFORE ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday Daily																
Superdistrict 1																
Auto Person Trips	738	604	619	479	616	3,056	-	-	-	-	-	-	-	3	312	3,371
Transit Person Trips	1,404	1,002	526	650	836	4,419	-	-	-	-	-	-	-	4	447	4,869
Walk/Other Person Trips	1,491	2,998	2,297	2,577	3,314	12,677	-	-	-	-	-	-	-	15	214	12,906
Total Person Trips	3,633	4,604	3,443	3,707	4,766	20,152	-	-	-	-	-	-	-	22	972	21,147
Auto %	20%	13%	18%	13%	13%	15%	0%	0%	0%	0%	0%	0%	0%	13%	32%	16%
Transit %	39%	22%	15%	18%	18%	22%	0%	0%	0%	0%	0%	0%	0%	18%	46%	23%
Walk/Other %	41%	65%	67%	70%	70%	63%	0%	0%	0%	0%	0%	0%	0%	70%	22%	61%
Total %	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%
Vehicle Trips	667	318	384	213	274	1,856	-	-	-	-	-	-	-	1	120	1,978
Average Vehicle Occupancy	1.11	1.90	1.61	2.25	2.25	1.65	-	-	-	-	-	-	-	2.25	2.59	1.70
Superdistrict 3																
Auto Person Trips	591	1,391	489	876	1,126	4,472	-	-	-	-	-	-	-	5	217	4,695
Transit Person Trips	1,123	1,575	374	850	1,093	5,015	-	-	-	-	-	-	-	5	129	5,150
Walk/Other Person Trips	1,193	592	672	529	680	3,665	-	-	-	-	-	-	-	3	102	3,771
Total Person Trips	2,907	3,558	1,535	2,255	2,899	13,153	-	-	-	-	-	-	-	13	448	13,615
Auto %	20%	39%	32%	39%	39%	34%	0%	0%	0%	0%	0%	0%	0%	39%	48%	34%
Transit %	39%	44%	24%	38%	38%	38%	0%	0%	0%	0%	0%	0%	0%	38%	29%	38%
Walk/Other %	41%	17%	44%	23%	23%	28%	0%	0%	0%	0%	0%	0%	0%	23%	23%	28%
Total %	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%
Vehicle Trips	533	794	250	383	492	2,452	-	-	-	-	-	-	-	2	98	2,553
Average Vehicle Occupancy	1.11	1.75	1.96	2.29	2.29	1.82	-	-	-	-	-	-	-	2.29	2.21	1.84
Superdistrict 1 plus Superdistrict 3																
Auto Person Trips	1,329	1,995	1,108	1,355	1,742	7,529	-	-	-	-	-	-	-	8	529	8,065
Transit Person Trips	2,527	2,576	900	1,501	1,929	9,434	-	-	-	-	-	-	-	9	576	10,019
Walk/Other Person Trips	2,684	3,590	2,969	3,106	3,994	16,343	-	-	-	-	-	-	-	19	316	16,677
Total Person Trips	6,540	8,162	4,977	5,961	7,665	33,305	-	-	-	-	-	-	-	36	1,421	34,761
% Person Trips in Superdistrict 1	56%	56%	69%	62%	62%	61%	0%	0%	0%	0%	0%	0%	0%	62%	68%	61%
% Person Trips in Superdistrict 3	44%	44%	31%	38%	38%	39%	0%	0%	0%	0%	0%	0%	0%	38%	32%	39%
Vehicle Trips	1,200	1,112	634	596	766	4,309	-	-	-	-	-	-	-	4	219	4,531

Mission Rock Mixed-Use Project
PROJECT VARIANT 2 - Event Center at Pier 48

EXTERNAL PLUS INTERNAL TRIPS FOR SD1 AND SD3 BEFORE ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday AM Peak Hour																
Superdistrict 1																
Auto Person Trips	105	43	8	4	91	251	-	-	-	-	-	-	-	0	-	251
Transit Person Trips	200	98	20	12	124	453	-	-	-	-	-	-	-	1	-	453
Walk/Other Person Trips	212	174	27	16	491	921	-	-	-	-	-	-	-	2	-	923
Total Person Trips	517	315	55	32	706	1,625	-	-	-	-	-	-	-	3	-	1,628
Auto %	20%	14%	14%	14%	13%	15%	0%	0%	0%	0%	0%	0%	0%	13%	0%	15%
Transit %	39%	31%	36%	36%	18%	28%	0%	0%	0%	0%	0%	0%	0%	18%	0%	28%
Walk/Other %	41%	55%	50%	50%	70%	57%	0%	0%	0%	0%	0%	0%	0%	70%	0%	57%
Total %	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%
Vehicle Trips	95	30	6	3	41	175	-	-	-	-	-	-	-	0	-	175
Average Vehicle Occupancy	1.11	1.44	1.28	1.28	2.25	1.44	-	-	-	-	-	-	-	2.25	-	1.44
Superdistrict 3																
Auto Person Trips	84	141	29	17	167	437	-	-	-	-	-	-	-	1	-	438
Transit Person Trips	160	186	40	23	162	571	-	-	-	-	-	-	-	1	-	571
Walk/Other Person Trips	170	31	4	3	101	308	-	-	-	-	-	-	-	0	-	309
Total Person Trips	414	358	73	43	430	1,316	-	-	-	-	-	-	-	2	-	1,318
Auto %	20%	39%	40%	40%	39%	33%	0%	0%	0%	0%	0%	0%	0%	39%	0%	33%
Transit %	39%	52%	54%	54%	38%	43%	0%	0%	0%	0%	0%	0%	0%	38%	0%	43%
Walk/Other %	41%	9%	6%	6%	23%	23%	0%	0%	0%	0%	0%	0%	0%	23%	0%	23%
Total %	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%
Vehicle Trips	76	103	22	13	73	287	-	-	-	-	-	-	-	0	-	287
Average Vehicle Occupancy	1.11	1.37	1.29	1.29	2.29	1.53	-	-	-	-	-	-	-	2.29	-	1.53
Superdistrict 1 plus Superdistrict 3																
Auto Person Trips	189	184	36	21	258	688	-	-	-	-	-	-	-	1	-	689
Transit Person Trips	360	284	59	35	286	1,023	-	-	-	-	-	-	-	1	-	1,025
Walk/Other Person Trips	382	205	32	19	592	1,229	-	-	-	-	-	-	-	2	-	1,232
Total Person Trips	931	673	127	75	1,136	2,941	-	-	-	-	-	-	-	5	-	2,946
% Person Trips in Superdistrict 1	56%	47%	43%	43%	62%	55%	0%	0%	0%	0%	0%	0%	0%	62%	0%	55%
% Person Trips in Superdistrict 3	44%	53%	57%	57%	38%	45%	0%	0%	0%	0%	0%	0%	0%	38%	0%	45%
Vehicle Trips	171	132	28	16	114	461	-	-	-	-	-	-	-	0	-	462

Mission Rock Mixed-Use Project
PROJECT VARIANT 2 - Event Center at Pier 48

EXTERNAL PLUS INTERNAL TRIPS FOR SD1 AND SD3 BEFORE ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday PM Peak Hour																
Superdistrict 1																
Auto Person Trips	128	41	56	65	83	372	-	-	-	-	-	-	-	0	20	393
Transit Person Trips	243	93	47	88	113	584	-	-	-	-	-	-	-	0	35	619
Walk/Other Person Trips	258	167	207	348	447	1,426	-	-	-	-	-	-	-	1	28	1,456
Total Person Trips	629	301	310	500	643	2,383	-	-	-	-	-	-	-	2	82	2,467
Auto %	20%	14%	18%	13%	13%	16%	0%	0%	0%	0%	0%	0%	0%	13%	25%	16%
Transit %	39%	31%	15%	18%	18%	25%	0%	0%	0%	0%	0%	0%	0%	18%	42%	25%
Walk/Other %	41%	55%	67%	70%	70%	60%	0%	0%	0%	0%	0%	0%	0%	70%	34%	59%
Total %	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%
Vehicle Trips	115	28	35	29	37	244	-	-	-	-	-	-	-	0	10	254
Average Vehicle Occupancy	1.11	1.44	1.61	2.25	2.25	1.52	-	-	-	-	-	-	-	2.25	2.10	1.55
Superdistrict 3																
Auto Person Trips	102	135	44	118	152	551	-	-	-	-	-	-	-	0	29	580
Transit Person Trips	194	178	34	115	148	668	-	-	-	-	-	-	-	0	31	699
Walk/Other Person Trips	206	29	60	71	92	459	-	-	-	-	-	-	-	0	8	467
Total Person Trips	503	342	138	304	391	1,679	-	-	-	-	-	-	-	1	67	1,747
Auto %	20%	39%	32%	39%	39%	33%	0%	0%	0%	0%	0%	0%	0%	39%	42%	33%
Transit %	39%	52%	24%	38%	38%	40%	0%	0%	0%	0%	0%	0%	0%	38%	46%	40%
Walk/Other %	41%	9%	44%	23%	23%	27%	0%	0%	0%	0%	0%	0%	0%	23%	12%	27%
Total %	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%
Vehicle Trips	92	98	22	52	66	331	-	-	-	-	-	-	-	0	19	350
Average Vehicle Occupancy	1.11	1.37	1.96	2.29	2.29	1.67	-	-	-	-	-	-	-	2.29	1.53	1.66
Superdistrict 1 plus Superdistrict 3																
Auto Person Trips	230	175	100	183	235	923	-	-	-	-	-	-	-	1	49	973
Transit Person Trips	437	271	81	203	260	1,253	-	-	-	-	-	-	-	1	65	1,319
Walk/Other Person Trips	464	196	267	419	539	1,886	-	-	-	-	-	-	-	2	35	1,923
Total Person Trips	1,131	643	448	805	1,035	4,061	-	-	-	-	-	-	-	3	150	4,214
% Person Trips in Superdistrict 1	56%	47%	69%	62%	62%	59%	0%	0%	0%	0%	0%	0%	0%	62%	55%	59%
% Person Trips in Superdistrict 3	44%	53%	31%	38%	38%	41%	0%	0%	0%	0%	0%	0%	0%	38%	45%	41%
Vehicle Trips	208	126	57	80	103	575	-	-	-	-	-	-	-	0	28	604

Mission Rock Mixed-Use Project
PROJECT VARIANT 2 - Event Center at Pier 48

EXTERNAL ONLY TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday Daily																
Superdistrict 1																
Auto Person Trips	289	513	391	341	341	1,875	-	-	-	-	-	-	-	2	312	2,189
Transit Person Trips	549	851	332	463	464	2,659	-	-	-	-	-	-	-	3	447	3,109
Walk/Other Person Trips	583	2,546	1,450	1,836	1,837	8,253	-	-	-	-	-	-	-	11	214	8,477
Total Person Trips	1,421	3,909	2,173	2,641	2,642	12,787	-	-	-	-	-	-	-	16	972	13,775
Vehicle Trips	261	270	243	152	152	1,077	-	-	-	-	-	-	-	1	120	1,198
Superdistrict 2																
Auto Person Trips	74	1,108	378	766	985	3,310	-	-	-	-	-	-	-	5	168	3,482
Transit Person Trips	140	1,613	472	871	1,120	4,216	-	-	-	-	-	-	-	5	143	4,364
Walk/Other Person Trips	149	764	490	765	983	3,151	-	-	-	-	-	-	-	5	57	3,213
Total Person Trips	363	3,485	1,339	2,402	3,088	10,677	-	-	-	-	-	-	-	14	367	11,058
Vehicle Trips	67	668	235	380	489	1,839	-	-	-	-	-	-	-	2	75	1,916
Superdistrict 3																
Auto Person Trips	231	1,181	309	624	624	2,969	-	-	-	-	-	-	-	4	217	3,190
Transit Person Trips	439	1,337	236	606	606	3,224	-	-	-	-	-	-	-	4	129	3,357
Walk/Other Person Trips	466	503	424	377	377	2,147	-	-	-	-	-	-	-	2	102	2,251
Total Person Trips	1,137	3,021	969	1,607	1,608	8,340	-	-	-	-	-	-	-	10	448	8,798
Vehicle Trips	209	675	158	273	273	1,586	-	-	-	-	-	-	-	2	98	1,686
Superdistrict 4																
Auto Person Trips	74	883	214	521	670	2,363	-	-	-	-	-	-	-	3	224	2,590
Transit Person Trips	140	902	225	418	538	2,224	-	-	-	-	-	-	-	3	94	2,320
Walk/Other Person Trips	149	311	172	288	371	1,292	-	-	-	-	-	-	-	2	19	1,313
Total Person Trips	363	2,097	611	1,228	1,579	5,879	-	-	-	-	-	-	-	7	338	6,224
Vehicle Trips	67	514	141	274	353	1,349	-	-	-	-	-	-	-	2	92	1,443
East Bay																
Auto Person Trips	376	1,605	803	918	1,180	4,883	-	-	-	-	-	-	-	5	1,497	6,386
Transit Person Trips	463	1,564	544	538	692	3,801	-	-	-	-	-	-	-	3	1,227	5,031
Walk/Other Person Trips	87	552	756	507	652	2,553	-	-	-	-	-	-	-	3	63	2,620
Total Person Trips	926	3,721	2,103	1,963	2,524	11,237	-	-	-	-	-	-	-	12	2,788	14,037
Vehicle Trips	340	573	334	371	477	2,095	-	-	-	-	-	-	-	2	550	2,648
North Bay																
Auto Person Trips	58	846	430	607	780	2,721	-	-	-	-	-	-	-	4	775	3,500
Transit Person Trips	29	321	175	98	126	749	-	-	-	-	-	-	-	1	304	1,054
Walk/Other Person Trips	-	162	321	160	205	848	-	-	-	-	-	-	-	1	1	850
Total Person Trips	87	1,329	926	864	1,111	4,318	-	-	-	-	-	-	-	5	1,080	5,403
Vehicle Trips	52	462	193	319	410	1,436	-	-	-	-	-	-	-	2	292	1,730
South Bay																
Auto Person Trips	926	1,392	1,101	742	954	5,116	-	-	-	-	-	-	-	4	1,672	6,793
Transit Person Trips	1,100	788	242	323	415	2,868	-	-	-	-	-	-	-	2	628	3,497
Walk/Other Person Trips	174	192	172	184	237	959	-	-	-	-	-	-	-	1	35	995
Total Person Trips	2,200	2,372	1,515	1,249	1,606	8,943	-	-	-	-	-	-	-	7	2,334	11,285
Vehicle Trips	836	865	416	325	417	2,860	-	-	-	-	-	-	-	2	643	3,505
Outside Bay Area																
Auto Person Trips	-	1,265	2,549	1,246	1,602	6,662	-	-	-	-	-	-	-	7	97	6,766
Transit Person Trips	-	878	584	839	1,078	3,379	-	-	-	-	-	-	-	5	155	3,539
Walk/Other Person Trips	-	1,328	3,753	1,382	1,777	8,240	-	-	-	-	-	-	-	8	80	8,329
Total Person Trips	-	3,471	6,887	3,467	4,457	18,281	-	-	-	-	-	-	-	21	332	18,634
Vehicle Trips	-	426	819	395	508	2,148	-	-	-	-	-	-	-	2	37	2,188
All Origins																
Auto Person Trips	2,028	8,794	6,175	5,765	7,137	29,900	-	-	-	-	-	-	-	34	4,962	34,896
Transit Person Trips	2,861	8,254	2,809	4,156	5,039	23,119	-	-	-	-	-	-	-	25	3,127	26,271
Walk/Other Person Trips	1,608	6,358	7,538	5,499	6,439	27,443	-	-	-	-	-	-	-	33	571	28,047
Total Person Trips	6,498	23,406	16,522	15,421	18,616	80,462	-	-	-	-	-	-	-	92	8,660	89,214
Vehicle Trips	1,831	4,452	2,538	2,490	3,080	14,391	-	-	-	-	-	-	-	15	1,909	16,314
Total Internal Person Trips	3,982	1,232	1,836	1,713	3,415	12,178	-	-	-	-	-	-	-	10	-	12,188
Person-trip reduction	38%	5%	10%	10%	16%	13%	0%	0%	0%	0%	0%	0%	0%	10%	0%	12%
Average Vehicle Occupancy	1.11	1.98	2.43	2.32	2.32	2.08	-	-	-	-	-	-	-	2.32	2.60	2.14

Mission Rock Mixed-Use Project
PROJECT VARIANT 2 - Event Center at Pier 48

EXTERNAL ONLY TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday AM Peak Hour																
Superdistrict 1																
Auto Person Trips	71	30	5	3	65	175	-	-	-	-	-	-	-	0	-	175
Transit Person Trips	136	69	13	9	88	315	-	-	-	-	-	-	-	0	-	315
Walk/Other Person Trips	144	123	18	12	350	648	-	-	-	-	-	-	-	1	-	649
Total Person Trips	351	223	36	24	503	1,138	-	-	-	-	-	-	-	2	-	1,140
Vehicle Trips	64	21	4	3	29	121	-	-	-	-	-	-	-	0	-	121
Superdistrict 2																
Auto Person Trips	11	99	19	11	146	287	-	-	-	-	-	-	-	1	-	287
Transit Person Trips	20	191	41	24	166	441	-	-	-	-	-	-	-	1	-	441
Walk/Other Person Trips	21	24	2	1	146	194	-	-	-	-	-	-	-	1	-	194
Total Person Trips	52	314	62	36	457	921	-	-	-	-	-	-	-	2	-	923
Vehicle Trips	9	75	16	9	72	182	-	-	-	-	-	-	-	0	-	183
Superdistrict 3																
Auto Person Trips	57	100	19	13	119	308	-	-	-	-	-	-	-	0	-	308
Transit Person Trips	109	132	26	18	115	400	-	-	-	-	-	-	-	0	-	400
Walk/Other Person Trips	115	22	3	2	72	214	-	-	-	-	-	-	-	0	-	214
Total Person Trips	281	253	48	33	306	921	-	-	-	-	-	-	-	1	-	922
Vehicle Trips	52	73	15	10	52	201	-	-	-	-	-	-	-	0	-	201
Superdistrict 4																
Auto Person Trips	11	96	20	12	99	238	-	-	-	-	-	-	-	0	-	238
Transit Person Trips	20	120	26	15	80	261	-	-	-	-	-	-	-	0	-	261
Walk/Other Person Trips	21	14	2	1	55	93	-	-	-	-	-	-	-	0	-	93
Total Person Trips	52	230	48	28	234	591	-	-	-	-	-	-	-	1	-	592
Vehicle Trips	9	61	13	8	52	144	-	-	-	-	-	-	-	0	-	144
East Bay																
Auto Person Trips	54	180	38	22	175	468	-	-	-	-	-	-	-	1	-	469
Transit Person Trips	66	243	55	32	102	498	-	-	-	-	-	-	-	0	-	498
Walk/Other Person Trips	12	26	3	2	97	140	-	-	-	-	-	-	-	0	-	141
Total Person Trips	132	449	96	56	374	1,106	-	-	-	-	-	-	-	2	-	1,108
Vehicle Trips	48	56	11	7	71	193	-	-	-	-	-	-	-	0	-	194
North Bay																
Auto Person Trips	8	72	14	8	116	218	-	-	-	-	-	-	-	0	-	218
Transit Person Trips	4	52	12	7	19	94	-	-	-	-	-	-	-	0	-	94
Walk/Other Person Trips	-	6	0	0	30	37	-	-	-	-	-	-	-	0	-	37
Total Person Trips	12	130	26	15	165	348	-	-	-	-	-	-	-	1	-	349
Vehicle Trips	7	41	8	5	61	122	-	-	-	-	-	-	-	0	-	123
South Bay																
Auto Person Trips	132	166	35	21	141	496	-	-	-	-	-	-	-	1	-	496
Transit Person Trips	157	112	25	15	62	370	-	-	-	-	-	-	-	0	-	370
Walk/Other Person Trips	25	8	1	0	35	69	-	-	-	-	-	-	-	0	-	69
Total Person Trips	313	286	61	36	238	934	-	-	-	-	-	-	-	1	-	935
Vehicle Trips	119	129	29	17	62	356	-	-	-	-	-	-	-	0	-	356
Outside Bay Area																
Auto Person Trips	-	44	4	2	237	287	-	-	-	-	-	-	-	1	-	288
Transit Person Trips	-	35	4	2	160	201	-	-	-	-	-	-	-	1	-	202
Walk/Other Person Trips	-	32	0	0	263	296	-	-	-	-	-	-	-	1	-	297
Total Person Trips	-	111	8	5	660	784	-	-	-	-	-	-	-	3	-	786
Vehicle Trips	-	19	2	1	75	98	-	-	-	-	-	-	-	0	-	99
All Origins																
Auto Person Trips	343	788	154	92	1,098	2,475	-	-	-	-	-	-	-	4	-	2,480
Transit Person Trips	511	953	201	121	792	2,578	-	-	-	-	-	-	-	3	-	2,581
Walk/Other Person Trips	339	254	30	19	1,048	1,690	-	-	-	-	-	-	-	4	-	1,694
Total Person Trips	1,193	1,995	385	233	2,938	6,743	-	-	-	-	-	-	-	12	-	6,755
Vehicle Trips	310	476	98	59	474	1,418	-	-	-	-	-	-	-	2	-	1,420
Total Internal Person Trips	298	197	43	18	326	882	-	-	-	-	-	-	-	1	-	884
Person-trip reduction	20%	9%	10%	7%	10%	12%	0%	0%	0%	0%	0%	0%	0%	10%	0%	12%
Average Vehicle Occupancy	1.11	1.65	1.57	1.56	2.32	1.75	-	-	-	-	-	-	-	2.32	-	1.75

Mission Rock Mixed-Use Project
PROJECT VARIANT 2 - Event Center at Pier 48

EXTERNAL ONLY TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337						PIER 48						China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48		
Weekday PM Peak Hour															
Superdistrict 1															
Auto Person Trips	36	14	15	42	45	152	-	-	-	-	-	-	0	20	172
Transit Person Trips	68	33	12	58	61	231	-	-	-	-	-	-	0	35	266
Walk/Other Person Trips	72	58	54	228	242	654	-	-	-	-	-	-	1	28	682
Total Person Trips	175	105	81	328	347	1,037	-	-	-	-	-	-	1	82	1,120
Vehicle Trips	32	10	9	19	20	90	-	-	-	-	-	-	0	10	100
Superdistrict 2															
Auto Person Trips	13	95	34	103	133	378	-	-	-	-	-	-	0	20	399
Transit Person Trips	24	182	42	118	151	518	-	-	-	-	-	-	0	32	550
Walk/Other Person Trips	26	23	44	103	133	329	-	-	-	-	-	-	0	4	333
Total Person Trips	63	300	121	324	417	1,225	-	-	-	-	-	-	1	56	1,282
Vehicle Trips	12	72	21	51	66	222	-	-	-	-	-	-	0	14	236
Superdistrict 3															
Auto Person Trips	28	47	12	77	82	246	-	-	-	-	-	-	0	29	275
Transit Person Trips	54	62	9	75	80	280	-	-	-	-	-	-	0	31	311
Walk/Other Person Trips	58	10	16	47	50	180	-	-	-	-	-	-	0	8	188
Total Person Trips	140	119	36	199	211	706	-	-	-	-	-	-	1	67	774
Vehicle Trips	26	34	6	34	36	135	-	-	-	-	-	-	0	19	154
Superdistrict 4															
Auto Person Trips	13	92	19	70	90	285	-	-	-	-	-	-	0	24	309
Transit Person Trips	24	114	20	56	73	288	-	-	-	-	-	-	0	21	309
Walk/Other Person Trips	26	14	16	39	50	144	-	-	-	-	-	-	0	2	146
Total Person Trips	63	220	55	166	213	716	-	-	-	-	-	-	1	46	764
Vehicle Trips	12	59	13	37	48	168	-	-	-	-	-	-	0	13	180
East Bay															
Auto Person Trips	65	172	72	124	159	593	-	-	-	-	-	-	0	98	691
Transit Person Trips	80	232	49	73	93	527	-	-	-	-	-	-	0	95	622
Walk/Other Person Trips	15	25	68	68	88	264	-	-	-	-	-	-	0	5	270
Total Person Trips	160	429	189	265	341	1,384	-	-	-	-	-	-	1	199	1,583
Vehicle Trips	59	54	30	50	64	257	-	-	-	-	-	-	0	35	292
North Bay															
Auto Person Trips	10	69	39	82	105	305	-	-	-	-	-	-	0	47	352
Transit Person Trips	5	50	16	13	17	101	-	-	-	-	-	-	0	23	123
Walk/Other Person Trips	-	5	29	22	28	84	-	-	-	-	-	-	0	0	84
Total Person Trips	15	124	83	117	150	489	-	-	-	-	-	-	0	70	559
Vehicle Trips	9	40	17	43	55	164	-	-	-	-	-	-	0	20	184
South Bay															
Auto Person Trips	160	159	99	100	129	647	-	-	-	-	-	-	0	105	753
Transit Person Trips	190	107	22	44	56	419	-	-	-	-	-	-	0	47	466
Walk/Other Person Trips	30	7	15	25	32	110	-	-	-	-	-	-	0	2	112
Total Person Trips	381	273	136	169	217	1,176	-	-	-	-	-	-	1	154	1,331
Vehicle Trips	145	123	37	44	56	406	-	-	-	-	-	-	0	50	456
Outside Bay Area															
Auto Person Trips	-	42	229	168	216	656	-	-	-	-	-	-	1	7	663
Transit Person Trips	-	34	53	113	146	345	-	-	-	-	-	-	0	10	356
Walk/Other Person Trips	-	31	338	187	240	795	-	-	-	-	-	-	1	4	800
Total Person Trips	-	106	620	468	602	1,796	-	-	-	-	-	-	2	21	1,819
Vehicle Trips	-	18	74	53	69	214	-	-	-	-	-	-	0	3	218
All Origins															
Auto Person Trips	325	689	519	768	960	3,261	-	-	-	-	-	-	3	351	3,615
Transit Person Trips	446	813	223	549	677	2,708	-	-	-	-	-	-	2	293	3,003
Walk/Other Person Trips	226	173	580	718	862	2,559	-	-	-	-	-	-	3	53	2,615
Total Person Trips	997	1,675	1,322	2,036	2,498	8,528	-	-	-	-	-	-	8	697	9,233
Vehicle Trips	293	409	207	331	414	1,656	-	-	-	-	-	-	1	162	1,819
Total Internal Person Trips	816	419	330	278	476	2,319	-	-	-	-	-	-	1	-	2,320
Person-trip reduction	45%	20%	20%	12%	16%	21%	0%	0%	0%	0%	0%	0%	10%	0%	20%
Average Vehicle Occupancy	1.11	1.68	2.50	2.32	2.32	1.97	-	-	-	-	-	-	2.32	2.17	1.99

Mission Rock Mixed-Use Project
PROJECT VARIANT 2 - Event Center at Pier 48

MODAL SPLIT SUMMARY FOR INTERNAL AND EXTERNAL TRIPS	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday Daily																
Internal and External before adjustment																
Auto Person Trips	27%	37%	36%	36%	36%	35%	0%	0%	0%	0%	0%	0%	0%	36%	57%	37%
Transit Person Trips	42%	35%	17%	27%	27%	29%	0%	0%	0%	0%	0%	0%	0%	36%	36%	29%
Walk/Other Person Trips	31%	28%	47%	37%	37%	36%	0%	0%	0%	0%	0%	0%	0%	37%	7%	34%
Total Person Trips	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%
Internal and External after adjustment																
Auto Person Trips	19%	36%	34%	34%	32%	32%	0%	0%	0%	0%	0%	0%	0%	34%	57%	34%
Transit Person Trips	27%	34%	15%	24%	23%	25%	0%	0%	0%	0%	0%	0%	0%	24%	36%	26%
Walk/Other Person Trips	53%	31%	51%	42%	45%	43%	0%	0%	0%	0%	0%	0%	0%	42%	7%	40%
Total Person Trips	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%
External Only Trips																
Auto Person Trips	31%	38%	37%	37%	38%	37%	0%	0%	0%	0%	0%	0%	0%	37%	57%	39%
Transit Person Trips	44%	35%	17%	27%	27%	29%	0%	0%	0%	0%	0%	0%	0%	27%	36%	29%
Walk/Other Person Trips	25%	27%	46%	36%	35%	34%	0%	0%	0%	0%	0%	0%	0%	36%	7%	31%
Total Person Trips	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%
AM Peak Hour																
Internal and External before adjustment																
Auto Person Trips	27%	38%	39%	39%	36%	35%	0%	0%	0%	0%	0%	0%	0%	36%	0%	35%
Transit Person Trips	42%	47%	52%	52%	27%	38%	0%	0%	0%	0%	0%	0%	0%	27%	0%	38%
Walk/Other Person Trips	31%	14%	9%	9%	37%	27%	0%	0%	0%	0%	0%	0%	0%	37%	0%	27%
Total Person Trips	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%
Internal and External after adjustment																
Auto Person Trips	23%	36%	36%	37%	34%	32%	0%	0%	0%	0%	0%	0%	0%	34%	0%	32%
Transit Person Trips	34%	43%	47%	48%	24%	34%	0%	0%	0%	0%	0%	0%	0%	24%	0%	34%
Walk/Other Person Trips	43%	21%	17%	15%	42%	34%	0%	0%	0%	0%	0%	0%	0%	42%	0%	34%
Total Person Trips	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%
External Only Trips																
Auto Person Trips	29%	39%	40%	40%	37%	37%	0%	0%	0%	0%	0%	0%	0%	37%	0%	37%
Transit Person Trips	43%	48%	52%	52%	27%	38%	0%	0%	0%	0%	0%	0%	0%	27%	0%	38%
Walk/Other Person Trips	28%	13%	8%	8%	36%	25%	0%	0%	0%	0%	0%	0%	0%	36%	0%	25%
Total Person Trips	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%
PM Peak Hour																
Internal and External before adjustment																
Auto Person Trips	27%	38%	36%	36%	36%	35%	0%	0%	0%	0%	0%	0%	0%	36%	50%	36%
Transit Person Trips	42%	47%	17%	27%	27%	32%	0%	0%	0%	0%	0%	0%	0%	27%	42%	32%
Walk/Other Person Trips	31%	14%	47%	37%	37%	33%	0%	0%	0%	0%	0%	0%	0%	37%	8%	32%
Total Person Trips	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%
Internal and External after adjustment																
Auto Person Trips	18%	33%	31%	33%	32%	30%	0%	0%	0%	0%	0%	0%	0%	34%	50%	31%
Transit Person Trips	25%	39%	13%	24%	23%	25%	0%	0%	0%	0%	0%	0%	0%	24%	42%	26%
Walk/Other Person Trips	57%	28%	55%	43%	45%	45%	0%	0%	0%	0%	0%	0%	0%	42%	8%	43%
Total Person Trips	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%
External Only Trips																
Auto Person Trips	33%	41%	39%	38%	38%	38%	0%	0%	0%	0%	0%	0%	0%	37%	50%	39%
Transit Person Trips	45%	49%	17%	27%	27%	32%	0%	0%	0%	0%	0%	0%	0%	27%	42%	33%
Walk/Other Person Trips	23%	10%	44%	35%	34%	30%	0%	0%	0%	0%	0%	0%	0%	36%	8%	28%
Total Person Trips	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%

Mission Rock Mixed-Use Project
PROJECT VARIANT 2 - Event Center at Pier 48

EXTERNAL ONLY TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday AM Peak Hour																
Auto Person Trips: All Origins	343	788	154	92	1,098	2,475							-	4	-	2,480
Inbound	114	721	154	92	571	1,653							-	2	-	1,655
Outbound	229	67	-	-	527	823							-	2	-	825
Transit Person Trips: All Origins	511	953	201	121	792	2,578							-	3	-	2,581
Inbound	170	872	201	121	412	1,776							-	2	-	1,778
Outbound	341	81	-	-	380	802							-	2	-	803
Walk/Other Person Trips: All Origins	339	254	30	19	1,048	1,690							-	4	-	1,694
Inbound	113	233	30	19	545	939							-	2	-	941
Outbound	226	22	-	-	503	750							-	2	-	753
Total Person Trips: All Origins	1,193	1,995	385	233	2,938	6,743							-	12	-	6,755
Inbound	398	1,826	385	233	1,528	4,368							-	6	-	4,375
Outbound	795	170	-	-	1,410	2,375							-	6	-	2,381
Total Vehicle Trips: All Origins	310	476	98	59	474	1,418							-	2	-	1,420
Inbound	103	450	98	59	252	963							-	1	-	964
Outbound	207	26	-	-	222	455							-	1	-	456
Weekday PM Peak Hour																
Auto Person Trips: All Origins	325	689	519	768	960	3,261							-	3	351	3,615
Inbound	217	59	249	369	461	1,354							-	1	-	1,355
Outbound	108	631	270	399	499	1,907							-	2	351	2,260
Transit Person Trips: All Origins	446	813	223	549	677	2,708							-	2	293	3,003
Inbound	297	69	107	264	325	1,062							-	1	-	1,063
Outbound	149	744	116	286	352	1,646							-	1	293	1,940
Walk/Other Person Trips: All Origins	226	173	580	718	862	2,559							-	3	53	2,615
Inbound	151	15	278	345	414	1,202							-	1	-	1,204
Outbound	75	158	302	374	448	1,357							-	2	53	1,412
Total Person Trips: All Origins	997	1,675	1,322	2,036	2,498	8,528							-	8	697	9,233
Inbound	665	142	634	977	1,199	3,618							-	4	-	3,622
Outbound	332	1,533	687	1,058	1,299	4,910							-	4	697	5,612
Total Vehicle Trips: All Origins	293	409	207	331	414	1,656							-	1	162	1,819
Inbound	196	33	97	156	195	676							-	1	3	680
Outbound	98	376	110	176	220	980							-	1	159	1,139

Mission Rock Mixed-Use Project
PROJECT VARIANT 2 - Event Center at Pier 48

EXTERNAL ONLY TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday Daily																
Auto Person Trips																
Superdistrict 1	289	513	391	341	341	1,875							-	2	312	2,189
Superdistrict 2	74	1,108	378	766	985	3,310							-	5	168	3,482
Superdistrict 3	231	1,181	309	624	624	2,969							-	4	217	3,190
Superdistrict 4	74	883	214	521	670	2,363							-	3	224	2,590
East Bay	376	1,605	803	918	1,180	4,883							-	5	1,497	6,386
North Bay	58	846	430	607	780	2,721							-	4	775	3,500
South Bay	926	1,392	1,101	742	954	5,116							-	4	1,672	6,793
Outside of Bay Area	-	1,265	2,549	1,246	1,602	6,662							-	7	97	6,766
All Origins	2,028	8,794	6,175	5,765	7,137	29,900							-	34	4,962	34,896
Transit Person Trips																
Superdistrict 1	549	851	332	463	464	2,659							-	3	447	3,109
Superdistrict 2	140	1,613	472	871	1,120	4,216							-	5	143	4,364
Superdistrict 3	439	1,337	236	606	606	3,224							-	4	129	3,357
Superdistrict 4	140	902	225	418	538	2,224							-	3	94	2,320
East Bay	463	1,564	544	538	692	3,801							-	3	1,227	5,031
North Bay	29	321	175	98	126	749							-	1	304	1,054
South Bay	1,100	788	242	323	415	2,868							-	2	628	3,497
Outside of Bay Area	-	878	584	839	1,078	3,379							-	5	155	3,539
All Origins	2,861	8,254	2,809	4,156	5,039	23,119							-	25	3,127	26,271
Walk/Other Person Trips																
Superdistrict 1	583	2,546	1,450	1,836	1,837	8,253							-	11	214	8,477
Superdistrict 2	149	764	490	765	983	3,151							-	5	57	3,213
Superdistrict 3	466	503	424	377	377	2,147							-	2	102	2,251
Superdistrict 4	149	311	172	288	371	1,292							-	2	19	1,313
East Bay	87	552	756	507	652	2,553							-	3	63	2,620
North Bay	-	162	321	160	205	848							-	1	1	850
South Bay	174	192	172	184	237	959							-	1	35	995
Outside of Bay Area	-	1,328	3,753	1,382	1,777	8,240							-	8	80	8,329
All Origins	1,608	6,358	7,538	5,499	6,439	27,443							-	33	571	28,047
Total Person Trips																
Superdistrict 1	1,421	3,909	2,173	2,641	2,642	12,787							-	16	972	13,775
Superdistrict 2	363	3,485	1,339	2,402	3,088	10,677							-	14	367	11,058
Superdistrict 3	1,137	3,021	969	1,607	1,608	8,340							-	10	448	8,798
Superdistrict 4	363	2,097	611	1,228	1,579	5,879							-	7	338	6,224
East Bay	926	3,721	2,103	1,963	2,524	11,237							-	12	2,788	14,037
North Bay	87	1,329	926	864	1,111	4,318							-	5	1,080	5,403
South Bay	2,200	2,372	1,515	1,249	1,606	8,943							-	7	2,334	11,285
Outside of Bay Area	-	3,471	6,887	3,467	4,457	18,281							-	21	332	18,634
All Origins	6,498	23,406	16,522	15,421	18,616	80,462							-	92	8,660	89,214
Vehicle Trips																
Superdistrict 1	261	270	243	152	152	1,077							-	1	120	1,198
Superdistrict 2	67	668	235	380	489	1,839							-	2	75	1,916
Superdistrict 3	209	675	158	273	273	1,586							-	2	98	1,686
Superdistrict 4	67	514	141	274	353	1,349							-	2	92	1,443
East Bay	340	573	334	371	477	2,095							-	2	550	2,648
North Bay	52	462	193	319	410	1,436							-	2	292	1,730
South Bay	836	865	416	325	417	2,860							-	2	643	3,505
Outside of Bay Area	-	426	819	395	508	2,148							-	2	37	2,188
All Origins	1,831	4,452	2,538	2,490	3,080	14,391							-	15	1,909	16,314

Mission Rock Mixed-Use Project
PROJECT VARIANT 2 - Event Center at Pier 48

EXTERNAL ONLY TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday AM Peak Hour																
Auto Person Trips																
Superdistrict 1	71	30	5	3	65	175							-	0	-	175
Superdistrict 2	11	99	19	11	146	287							-	1	-	287
Superdistrict 3	57	100	19	13	119	308							-	0	-	308
Superdistrict 4	11	96	20	12	99	238							-	0	-	238
East Bay	54	180	38	22	175	468							-	1	-	469
North Bay	8	72	14	8	116	218							-	0	-	218
South Bay	132	166	35	21	141	496							-	1	-	496
Outside of Bay Area	-	44	4	2	237	287							-	1	-	288
All Origins	343	788	154	92	1,098	2,475							-	4	-	2,480
Transit Person Trips																
Superdistrict 1	136	69	13	9	88	315							-	0	-	315
Superdistrict 2	20	191	41	24	166	441							-	1	-	441
Superdistrict 3	109	132	26	18	115	400							-	0	-	400
Superdistrict 4	20	120	26	15	80	261							-	0	-	261
East Bay	66	243	55	32	102	498							-	0	-	498
North Bay	4	52	12	7	19	94							-	0	-	94
South Bay	157	112	25	15	62	370							-	0	-	370
Outside of Bay Area	-	35	4	2	160	201							-	1	-	202
All Origins	511	953	201	121	792	2,578							-	3	-	2,581
Walk/Other Person Trips																
Superdistrict 1	144	123	18	12	350	648							-	1	-	649
Superdistrict 2	21	24	2	1	146	194							-	1	-	194
Superdistrict 3	115	22	3	2	72	214							-	0	-	214
Superdistrict 4	21	14	2	1	55	93							-	0	-	93
East Bay	12	26	3	2	97	140							-	0	-	141
North Bay	-	6	0	0	30	37							-	0	-	37
South Bay	25	8	1	0	35	69							-	0	-	69
Outside of Bay Area	-	32	0	0	263	296							-	1	-	297
All Origins	339	254	30	19	1,048	1,690							-	4	-	1,694
Total Person Trips																
Superdistrict 1	351	223	36	24	503	1,138							-	2	-	1,140
Superdistrict 2	52	314	62	36	457	921							-	2	-	923
Superdistrict 3	281	253	48	33	306	921							-	1	-	922
Superdistrict 4	52	230	48	28	234	591							-	1	-	592
East Bay	132	449	96	56	374	1,106							-	2	-	1,108
North Bay	12	130	26	15	165	348							-	1	-	349
South Bay	313	286	61	36	238	934							-	1	-	935
Outside of Bay Area	-	111	8	5	660	784							-	3	-	786
All Origins	1,193	1,995	385	233	2,938	6,743							-	12	-	6,755
Vehicle Trips																
Superdistrict 1	64	21	4	3	29	121							-	0	-	121
Superdistrict 2	9	75	16	9	72	182							-	0	-	183
Superdistrict 3	52	73	15	10	52	201							-	0	-	201
Superdistrict 4	9	61	13	8	52	144							-	0	-	144
East Bay	48	56	11	7	71	193							-	0	-	194
North Bay	7	41	8	5	61	122							-	0	-	123
South Bay	119	129	29	17	62	356							-	0	-	356
Outside of Bay Area	-	19	2	1	75	98							-	0	-	99
All Origins	310	476	98	59	474	1,418							-	2	-	1,420

Mission Rock Mixed-Use Project
PROJECT VARIANT 2 - Event Center at Pier 48

EXTERNAL ONLY TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday PM Peak Hour																
Auto Person Trips																
Superdistrict 1	36	14	15	42	45	152							-	0	20	172
Superdistrict 2	13	95	34	103	133	378							-	0	20	399
Superdistrict 3	28	47	12	77	82	246							-	0	29	275
Superdistrict 4	13	92	19	70	90	285							-	0	24	309
East Bay	65	172	72	124	159	593							-	0	98	691
North Bay	10	69	39	82	105	305							-	0	47	352
South Bay	160	159	99	100	129	647							-	0	105	753
Outside of Bay Area	-	42	229	168	216	656							-	1	7	663
All Origins	325	689	519	768	960	3,261							-	3	351	3,615
Transit Person Trips																
Superdistrict 1	68	33	12	58	61	231							-	0	35	266
Superdistrict 2	24	182	42	118	151	518							-	0	32	550
Superdistrict 3	54	62	9	75	80	280							-	0	31	311
Superdistrict 4	24	114	20	56	73	288							-	0	21	309
East Bay	80	232	49	73	93	527							-	0	95	622
North Bay	5	50	16	13	17	101							-	0	23	123
South Bay	190	107	22	44	56	419							-	0	47	466
Outside of Bay Area	-	34	53	113	146	345							-	0	10	356
All Origins	446	813	223	549	677	2,708							-	2	293	3,003
Walk/Other Person Trips																
Superdistrict 1	72	58	54	228	242	654							-	1	28	682
Superdistrict 2	26	23	44	103	133	329							-	0	4	333
Superdistrict 3	58	10	16	47	50	180							-	0	8	188
Superdistrict 4	26	14	16	39	50	144							-	0	2	146
East Bay	15	25	68	68	88	264							-	0	5	270
North Bay	-	5	29	22	28	84							-	0	0	84
South Bay	30	7	15	25	32	110							-	0	2	112
Outside of Bay Area	-	31	338	187	240	795							-	1	4	800
All Origins	226	173	580	718	862	2,559							-	3	53	2,615
Total Person Trips																
Superdistrict 1	175	105	81	328	347	1,037							-	1	82	1,120
Superdistrict 2	63	300	121	324	417	1,225							-	1	56	1,282
Superdistrict 3	140	119	36	199	211	706							-	1	67	774
Superdistrict 4	63	220	55	166	213	716							-	1	46	764
East Bay	160	429	189	265	341	1,384							-	1	199	1,583
North Bay	15	124	83	117	150	489							-	0	70	559
South Bay	381	273	136	169	217	1,176							-	1	154	1,331
Outside of Bay Area	-	106	620	468	602	1,796							-	2	21	1,819
All Origins	997	1,675	1,322	2,036	2,498	8,528							-	8	697	9,233
Vehicle Trips																
Superdistrict 1	32	10	9	19	20	90							-	0	10	100
Superdistrict 2	12	72	21	51	66	222							-	0	14	236
Superdistrict 3	26	34	6	34	36	135							-	0	19	154
Superdistrict 4	12	59	13	37	48	168							-	0	13	180
East Bay	59	54	30	50	64	257							-	0	35	292
North Bay	9	40	17	43	55	164							-	0	20	184
South Bay	145	123	37	44	56	406							-	0	50	456
Outside of Bay Area	-	18	74	53	69	214							-	0	3	218
All Origins	293	409	207	331	414	1,656							-	1	162	1,819

Mission Rock Mixed-Use Project
PROJECT VARIANT 2 - Event Center at Pier 48

EXTERNAL VEHICLE TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday AM Peak Hour																
Superdistrict 1																
Work Vehicle Trips	32	18	4	3	1	58							-	0	-	58
Non-work Vehicle Trips	32	3	-	-	28	63							-	0	-	63
Total	64	21	4	3	29	121							-	0	-	121
Inbound	21	19	4	3	15	63							-	0	-	63
Outbound	43	2	-	-	14	58							-	0	-	58
Total	64	21	4	3	29	121							-	0	-	121
Superdistrict 2																
Work Vehicle Trips	5	67	16	9	5	102							-	0	-	102
Non-work Vehicle Trips	5	8	-	-	68	80							-	0	-	81
Total	9	75	16	9	72	182							-	0	-	183
Inbound	3	71	16	9	39	138							-	0	-	138
Outbound	6	4	-	-	34	44							-	0	-	44
Total	9	75	16	9	72	182							-	0	-	183
Superdistrict 3																
Work Vehicle Trips	26	67	15	10	5	122							-	0	-	122
Non-work Vehicle Trips	26	6	-	-	47	78							-	0	-	79
Total	52	73	15	10	52	201							-	0	-	201
Inbound	17	70	15	10	28	140							-	0	-	140
Outbound	34	3	-	-	24	61							-	0	-	61
Total	52	73	15	10	52	201							-	0	-	402
Superdistrict 4																
Work Vehicle Trips	5	56	13	8	4	85							-	0	-	85
Non-work Vehicle Trips	5	6	-	-	48	59							-	0	-	59
Total	9	61	13	8	52	144							-	0	-	144
Inbound	3	58	13	8	28	110							-	0	-	111
Outbound	6	3	-	-	24	33							-	0	-	33
Total	9	61	13	8	52	144							-	0	-	144
East Bay																
Work Vehicle Trips	24	48	11	7	3	94							-	0	-	94
Non-work Vehicle Trips	24	8	-	-	67	99							-	0	-	100
Total	48	56	11	7	71	193							-	0	-	194
Inbound	16	52	11	7	37	123							-	0	-	124
Outbound	32	4	-	-	34	70							-	0	-	70
Total	48	56	11	7	71	193							-	0	-	194
North Bay																
Work Vehicle Trips	4	34	8	5	2	54							-	0	-	54
Non-work Vehicle Trips	4	7	-	-	58	69							-	0	-	69
Total	7	41	8	5	61	122							-	0	-	123
Inbound	2	38	8	5	32	85							-	0	-	85
Outbound	5	3	-	-	29	38							-	0	-	38
Total	7	41	8	5	61	122							-	0	-	123
South Bay																
Work Vehicle Trips	60	123	29	17	9	237							-	0	-	237
Non-work Vehicle Trips	60	6	-	-	53	119							-	0	-	119
Total	119	129	29	17	62	356							-	0	-	356
Inbound	40	126	29	17	35	247							-	0	-	247
Outbound	79	3	-	-	27	109							-	0	-	109
Total	119	129	29	17	62	356							-	0	-	356
Outside of Bay Area																
Work Vehicle Trips	-	10	2	1	1	15							-	0	-	15
Non-work Vehicle Trips	-	9	-	-	75	83							-	0	-	84
Total	-	19	2	1	75	98							-	0	-	99
Inbound	-	15	2	1	38	57							-	0	-	57
Outbound	-	4	-	-	37	42							-	0	-	42
Total	-	19	2	1	75	98							-	0	-	99

Mission Rock Mixed-Use Project
PROJECT VARIANT 2 - Event Center at Pier 48

EXTERNAL VEHICLE TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday PM Peak Hour																
Superdistrict 1																
Work Vehicle Trips	16	8	0	1	1	26							-	0	4	30
Non-work Vehicle Trips	16	2	9	18	19	64							-	0	6	69
Total	32	10	9	19	20	90							-	0	10	100
Inbound	21	1	4	9	10	45							-	0	-	45
Outbound	11	9	5	10	10	45							-	0	10	54
Total	32	10	9	19	20	90							-	0	10	100
Superdistrict 2																
Work Vehicle Trips	6	64	2	3	4	80							-	0	11	91
Non-work Vehicle Trips	6	8	19	48	62	142							-	0	3	144
Total	12	72	21	51	66	222							-	0	14	236
Inbound	8	4	9	24	31	76							-	0	-	76
Outbound	4	68	12	27	35	146							-	0	14	160
Total	12	72	21	51	66	222							-	0	14	236
Superdistrict 3																
Work Vehicle Trips	13	32	1	3	3	52							-	0	15	67
Non-work Vehicle Trips	13	3	5	31	33	84							-	0	3	87
Total	26	34	6	34	36	135							-	0	19	154
Inbound	17	1	2	15	16	53							-	0	-	53
Outbound	9	33	3	19	20	83							-	0	19	102
Total	26	34	6	34	36	135							-	0	19	154
Superdistrict 4																
Work Vehicle Trips	6	53	2	3	4	67							-	0	9	76
Non-work Vehicle Trips	6	5	11	34	44	100							-	0	4	104
Total	12	59	13	37	48	168							-	0	13	180
Inbound	8	3	5	17	22	55							-	0	-	55
Outbound	4	56	7	20	26	113							-	0	13	125
Total	12	59	13	37	48	168							-	0	13	180
East Bay																
Work Vehicle Trips	29	46	2	2	3	83							-	0	8	91
Non-work Vehicle Trips	29	8	28	48	61	174							-	0	27	201
Total	59	54	30	50	64	257							-	0	35	292
Inbound	39	4	14	24	31	112							-	0	-	112
Outbound	20	50	16	26	34	145							-	0	35	180
Total	59	54	30	50	64	257							-	0	35	292
North Bay																
Work Vehicle Trips	5	33	1	2	2	43							-	0	6	48
Non-work Vehicle Trips	5	7	16	41	53	122							-	0	14	136
Total	9	40	17	43	55	164							-	0	20	184
Inbound	6	3	8	21	27	65							-	0	-	65
Outbound	3	36	9	22	29	100							-	0	20	119
Total	9	40	17	43	55	164							-	0	20	184
South Bay																
Work Vehicle Trips	72	117	4	6	8	208							-	0	20	228
Non-work Vehicle Trips	72	6	33	38	48	197							-	0	30	227
Total	145	123	37	44	56	406							-	0	50	456
Inbound	96	3	16	19	24	159							-	0	-	159
Outbound	48	120	21	25	32	247							-	0	50	297
Total	145	123	37	44	56	406							-	0	50	456
Outside of Bay Area																
Work Vehicle Trips	-	10	0	1	1	12							-	0	2	13
Non-work Vehicle Trips	-	8	73	53	68	203							-	0	2	204
Total	-	18	74	53	69	214							-	0	3	218
Inbound	-	14	37	27	35	113							-	0	3	116
Outbound	-	4	37	26	34	101							-	0	-	101
Total	-	18	74	53	69	214							-	0	3	218

Mission Rock Mixed-Use Project
PROJECT VARIANT 2 - Event Center at Pier 48

EXTERNAL VEHICLE TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday AM Peak Hour																
Inbound																
Superdistrict 1	21	19	4	3	15	63	-	-	-	-	-	-	-	0	-	63
Superdistrict 2	3	71	16	9	39	138	-	-	-	-	-	-	-	0	-	138
Superdistrict 3	17	70	15	10	28	140	-	-	-	-	-	-	-	0	-	140
Superdistrict 4	3	58	13	8	28	110	-	-	-	-	-	-	-	0	-	111
East Bay	16	52	11	7	37	123	-	-	-	-	-	-	-	0	-	124
North Bay	2	38	8	5	32	85	-	-	-	-	-	-	-	0	-	85
South Bay	40	126	29	17	35	247	-	-	-	-	-	-	-	0	-	247
Outside of Bay Area	-	15	2	1	38	57	-	-	-	-	-	-	-	0	-	57
All Origins	103	450	98	59	252	963	-	-	-	-	-	-	-	1	-	964
Outbound																
Superdistrict 1	43	2	-	-	14	58	-	-	-	-	-	-	-	0	-	58
Superdistrict 2	6	4	-	-	34	44	-	-	-	-	-	-	-	0	-	44
Superdistrict 3	34	3	-	-	24	61	-	-	-	-	-	-	-	0	-	61
Superdistrict 4	6	3	-	-	24	33	-	-	-	-	-	-	-	0	-	33
East Bay	32	4	-	-	34	70	-	-	-	-	-	-	-	0	-	70
North Bay	5	3	-	-	29	38	-	-	-	-	-	-	-	0	-	38
South Bay	79	3	-	-	27	109	-	-	-	-	-	-	-	0	-	109
Outside of Bay Area	-	4	-	-	37	42	-	-	-	-	-	-	-	0	-	42
All Origins	207	26	-	-	222	455	-	-	-	-	-	-	-	1	-	456
Total																
Superdistrict 1	64	21	4	3	29	121	-	-	-	-	-	-	-	0	-	121
Superdistrict 2	9	75	16	9	72	182	-	-	-	-	-	-	-	0	-	183
Superdistrict 3	52	73	15	10	52	201	-	-	-	-	-	-	-	0	-	201
Superdistrict 4	9	61	13	8	52	144	-	-	-	-	-	-	-	0	-	144
East Bay	48	56	11	7	71	193	-	-	-	-	-	-	-	0	-	194
North Bay	7	41	8	5	61	122	-	-	-	-	-	-	-	0	-	123
South Bay	119	129	29	17	62	356	-	-	-	-	-	-	-	0	-	356
Outside of Bay Area	-	19	2	1	75	98	-	-	-	-	-	-	-	0	-	99
All Origins	310	476	98	59	474	1,418	-	-	-	-	-	-	-	2	-	1,420
Weekday PM Peak Hour																
Inbound																
Superdistrict 1	21	1	4	9	10	45	-	-	-	-	-	-	-	0	-	45
Superdistrict 2	8	4	9	24	31	76	-	-	-	-	-	-	-	0	-	76
Superdistrict 3	17	1	2	15	16	53	-	-	-	-	-	-	-	0	-	53
Superdistrict 4	8	3	5	17	22	55	-	-	-	-	-	-	-	0	-	55
East Bay	39	4	14	24	31	112	-	-	-	-	-	-	-	0	-	112
North Bay	6	3	8	21	27	65	-	-	-	-	-	-	-	0	-	65
South Bay	96	3	16	19	24	159	-	-	-	-	-	-	-	0	-	159
Outside of Bay Area	-	14	37	27	35	113	-	-	-	-	-	-	-	0	3	116
All Origins	196	33	97	156	195	676	-	-	-	-	-	-	-	1	3	680
Outbound																
Superdistrict 1	11	9	5	10	10	45	-	-	-	-	-	-	-	0	10	54
Superdistrict 2	4	68	12	27	35	146	-	-	-	-	-	-	-	0	14	160
Superdistrict 3	9	33	3	19	20	83	-	-	-	-	-	-	-	0	19	102
Superdistrict 4	4	56	7	20	26	113	-	-	-	-	-	-	-	0	13	125
East Bay	20	50	16	26	34	145	-	-	-	-	-	-	-	0	35	180
North Bay	3	36	9	22	29	100	-	-	-	-	-	-	-	0	20	119
South Bay	48	120	21	25	32	247	-	-	-	-	-	-	-	0	50	297
Outside of Bay Area	-	4	37	26	34	101	-	-	-	-	-	-	-	0	-	101
All Origins	98	376	110	176	220	980	-	-	-	-	-	-	-	1	159	1,139
Total																
Superdistrict 1	32	10	9	19	20	90	-	-	-	-	-	-	-	0	10	100
Superdistrict 2	12	72	21	51	66	222	-	-	-	-	-	-	-	0	14	236
Superdistrict 3	26	34	6	34	36	135	-	-	-	-	-	-	-	0	19	154
Superdistrict 4	12	59	13	37	48	168	-	-	-	-	-	-	-	0	13	180
East Bay	59	54	30	50	64	257	-	-	-	-	-	-	-	0	35	292
North Bay	9	40	17	43	55	164	-	-	-	-	-	-	-	0	20	184
South Bay	145	123	37	44	56	406	-	-	-	-	-	-	-	0	50	456
Outside of Bay Area	-	18	74	53	69	214	-	-	-	-	-	-	-	0	3	218
All Origins	293	409	207	331	414	1,656	-	-	-	-	-	-	-	1	162	1,819

Mission Rock Mixed-Use Project
PROJECT VARIANT 2 - Event Center at Pier 48

EXTERNAL PLUS INTERNAL WORK ONLY TRIPS FOR SD1 AND SD3 BEFORE ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday Daily																
Superdistrict 1																
Auto Person Trips	244	157	13	12	16	441	-	-	-	-	-	-	-	0	12	453
Transit Person Trips	463	409	34	32	41	978	-	-	-	-	-	-	-	0	30	1,009
Walk/Other Person Trips	492	570	47	44	57	1,210	-	-	-	-	-	-	-	0	42	1,252
Total Person Trips	1,199	1,135	94	88	113	2,629	-	-	-	-	-	-	-	1	84	2,714
Auto %	20%	14%	14%	14%	14%	17%	0%	0%	0%	0%	0%	0%	0%	14%	14%	17%
Transit %	39%	36%	36%	36%	36%	37%	0%	0%	0%	0%	0%	0%	0%	36%	36%	37%
Walk/Other %	41%	50%	50%	50%	50%	46%	0%	0%	0%	0%	0%	0%	0%	50%	50%	46%
Total %	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%
% Work Person Trips	33%	25%	3%	2%	2%	13%	0%	0%	0%	0%	0%	0%	0%	2%	9%	13%
% Non-Work Person Trips	67%	75%	97%	98%	98%	87%	100%	100%	100%	100%	100%	100%	100%	98%	91%	87%
Vehicle Trips	220	122	10	9	12	374	-	-	-	-	-	-	-	0	9	383
Average Vehicle Occupancy	1.11	1.28	1.28	1.28	1.28	1.18	-	-	-	-	-	-	-	1.28	1.28	1.18
% Work Vehicle Trips	33%	39%	3%	4%	4%	20%	0%	0%	0%	0%	0%	0%	0%	4%	8%	19%
% Non-Work Vehicle Trips	67%	61%	97%	96%	96%	80%	100%	100%	100%	100%	100%	100%	100%	96%	92%	81%
Superdistrict 3																
Auto Person Trips	195	596	49	46	59	945	-	-	-	-	-	-	-	0	44	990
Transit Person Trips	371	820	68	63	81	1,404	-	-	-	-	-	-	-	0	61	1,465
Walk/Other Person Trips	394	92	8	7	9	509	-	-	-	-	-	-	-	0	7	516
Total Person Trips	959	1,508	125	117	150	2,858	-	-	-	-	-	-	-	1	112	2,971
Auto %	20%	40%	40%	40%	40%	33%	0%	0%	0%	0%	0%	0%	0%	40%	40%	33%
Transit %	39%	54%	54%	54%	54%	49%	0%	0%	0%	0%	0%	0%	0%	54%	54%	49%
Walk/Other %	41%	6%	6%	6%	6%	18%	0%	0%	0%	0%	0%	0%	0%	6%	6%	17%
Total %	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%
% Work Person Trips	33%	42%	8%	5%	5%	22%	0%	0%	0%	0%	0%	0%	0%	5%	25%	22%
% Non-Work Person Trips	67%	58%	92%	95%	95%	78%	100%	100%	100%	100%	100%	100%	100%	95%	75%	78%
Vehicle Trips	176	462	38	36	46	757	-	-	-	-	-	-	-	0	34	792
Average Vehicle Occupancy	1.11	1.29	1.29	1.29	1.29	1.25	-	-	-	-	-	-	-	1.29	1.29	1.25
% Work Vehicle Trips	33%	58%	15%	9%	9%	31%	0%	0%	0%	0%	0%	0%	0%	9%	35%	31%
% Non-Work Vehicle Trips	67%	42%	85%	91%	91%	69%	100%	100%	100%	100%	100%	100%	100%	91%	65%	69%
Superdistrict 1 plus Superdistrict 3																
Auto Person Trips	439	752	62	58	75	1,386	-	-	-	-	-	-	-	0	56	1,442
Transit Person Trips	834	1,229	102	95	122	2,382	-	-	-	-	-	-	-	1	91	2,474
Walk/Other Person Trips	886	662	55	51	66	1,719	-	-	-	-	-	-	-	0	49	1,769
Total Person Trips	2,158	2,643	219	204	263	5,487	-	-	-	-	-	-	-	1	197	5,685
% Person Trips in Superdistrict 1	56%	43%	43%	43%	43%	48%	0%	0%	0%	0%	0%	0%	0%	43%	43%	48%
% Person Trips in Superdistrict 3	44%	57%	57%	57%	57%	52%	0%	0%	0%	0%	0%	0%	0%	57%	57%	52%
Vehicle Trips	396	584	48	45	58	1,132	-	-	-	-	-	-	-	0	43	1,175

Mission Rock Mixed-Use Project
PROJECT VARIANT 2 - Event Center at Pier 48

EXTERNAL WORK ONLY TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday Daily																
Superdistrict 1																
Auto Person Trips	95	139	10	10	11	264							-	0	12	276
Transit Person Trips	181	362	26	25	28	622							-	0	30	653
Walk/Other Person Trips	192	504	36	35	39	808							-	0	42	850
Total Person Trips	469	1,005	72	70	78	1,695							-	0	84	1,779
Vehicle Trips	86	108	8	8	8	218							-	0	9	227
Superdistrict 2																
Auto Person Trips	24	404	33	31	40	533							-	0	30	563
Transit Person Trips	46	840	70	65	83	1,105							-	0	63	1,168
Walk/Other Person Trips	49	33	3	3	3	91							-	0	2	94
Total Person Trips	120	1,277	106	99	127	1,728							-	1	95	1,824
Vehicle Trips	22	328	27	25	33	435							-	0	24	460
Superdistrict 3																
Auto Person Trips	76	478	16	26	19	615							-	0	44	660
Transit Person Trips	145	658	22	36	27	887							-	0	61	949
Walk/Other Person Trips	154	74	2	4	3	237							-	0	7	244
Total Person Trips	375	1,210	40	66	49	1,740							-	0	112	1,852
Vehicle Trips	69	370	12	20	15	487							-	0	34	521
Superdistrict 4																
Auto Person Trips	24	414	34	32	41	546							-	0	31	577
Transit Person Trips	46	541	45	42	54	728							-	0	40	769
Walk/Other Person Trips	49	38	3	3	4	97							-	0	3	100
Total Person Trips	120	993	82	77	99	1,371							-	0	74	1,445
Vehicle Trips	22	271	22	21	27	363							-	0	20	383
East Bay																
Auto Person Trips	124	783	65	60	78	1,110							-	0	58	1,169
Transit Person Trips	153	1,132	94	88	113	1,579							-	1	84	1,664
Walk/Other Person Trips	29	72	6	6	7	119							-	0	5	124
Total Person Trips	306	1,987	164	154	197	2,808							-	1	148	2,957
Vehicle Trips	112	235	19	18	23	408							-	0	17	426
North Bay																
Auto Person Trips	19	286	24	22	28	379							-	0	21	400
Transit Person Trips	10	245	20	19	24	318							-	0	18	337
Walk/Other Person Trips	-	10	1	1	1	13							-	0	1	14
Total Person Trips	29	541	45	42	54	710							-	0	40	751
Vehicle Trips	17	168	14	13	17	229							-	0	13	241
South Bay																
Auto Person Trips	306	736	61	57	73	1,232							-	0	55	1,287
Transit Person Trips	363	516	43	40	51	1,013							-	0	38	1,052
Walk/Other Person Trips	57	16	1	1	2	78							-	0	1	79
Total Person Trips	726	1,268	105	98	126	2,323							-	1	94	2,418
Vehicle Trips	276	598	50	46	59	1,029							-	0	45	1,074
Outside Bay Area																
Auto Person Trips	-	76	6	6	8	96							-	0	6	102
Transit Person Trips	-	80	7	6	8	101							-	0	6	107
Walk/Other Person Trips	-	4	0	0	0	4							-	0	0	5
Total Person Trips	-	160	13	12	16	201							-	0	12	213
Vehicle Trips	-	51	4	4	5	64							-	0	4	68
All Origins																
Auto Person Trips	669	3,315	249	244	298	4,776							-	1	257	5,034
Transit Person Trips	944	4,375	325	321	388	6,354							-	2	341	6,697
Walk/Other Person Trips	531	751	53	53	59	1,447							-	0	62	1,509
Total Person Trips	2,144	8,441	628	617	746	12,576							-	4	660	13,240
Vehicle Trips	604	2,130	157	155	187	3,233							-	1	166	3,401

Mission Rock Mixed-Use Project
PROJECT VARIANT 2 - Event Center at Pier 48

PARKING DEMAND	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Midday Period (Noon to 2 PM) Peak Parking Demand																
SHORT-TERM DEMAND																
Daily visitors vehicle trips		2,323	2,381	2,334	2,892	9,930								14	1,690	11,635
Turnover rate (vehicles per space)		5.5	5.5	5.5	5.5	5.5								5.5	1.0	3.3
Peak short-term demand (spaces)		212	217	213	263	905								2	846	1,753
% of peak demand during period (ULI)		100%	100%	75%	100%	94%								100%	0%	49%
Total short-term demand (spaces)		212	217	160	263	852								2	-	854
LONG-TERM DEMAND																
Residential Demand																
Peak parking demand (spaces per unit)	1.50															
Peak parking demand (spaces)	1,572					1,572										1,572
% of peak demand during period (SF Guidelines)	80%					80%										80%
Subtotal long-term demand (spaces)	1,258					1,258										1,258
Employee Demand																
Average gsf per employee		276	350	350	240									10		
Number of daytime employees		4,932	350	245	153	5,679								1	300	5,980
% of employees who drive		39%	40%	40%	40%	39%								40%	39%	39%
Number of employees who drive		1,937	139	97	61	2,234								0	117	2,350
Average employee vehicle occupancy		1.56	1.59	1.57	1.59	1.56								1.57	1.54	1.56
Peak parking demand (spaces)		1,245	88	62	39	1,434								1	76	1,511
% of peak demand during period (ULI)		100%	100%	90%	100%	100%								100%	0%	95%
Subtotal long-term demand (spaces)		1,245	88	56	39	1,428								1	-	1,429
Total long-term demand (spaces)	1,258	1,245	88	56	39	2,686								1	-	2,687
TOTAL PARKING DEMAND (spaces)	1,258	1,457	305	216	302	3,538								3	-	3,541
Evening Period (7 PM to 9 PM) Peak Parking Demand - NO SF GIANTS GAME																
SHORT-TERM DEMAND																
Daily visitors vehicle trips		2,323	2,381	2,334	2,892	9,930								14	1,690	11,635
Turnover rate (vehicles per space)		5.5	5.5	5.5	5.5	5.5								5.5	1.0	3.3
Peak short-term demand (spaces)		212	217	213	263	905								2	846	1,753
% of peak demand during period (ULI)		5%	90%	100%	80%	70%								50%	100%	84%
Total short-term demand (spaces)		11	196	213	211	631								1	846	1,478
LONG-TERM DEMAND																
Residential Demand																
Peak parking demand (spaces per unit)	1.50															
Peak parking demand (spaces)	1,572					1,572										1,572
% of peak demand during period (SF Guidelines)	100%					100%										100%
Subtotal long-term demand (spaces)	1,572					1,572										1,572
Employee Demand																
Average gsf per employee		276	350	350	240									10		
Number of daytime employees		4,932	350	245	153	5,679								1	300	5,980
% of employees who drive		39%	40%	40%	40%	39%								40%	39%	39%
Number of employees who drive		1,937	139	97	61	2,234								0	117	2,350
Average employee vehicle occupancy		1.56	1.59	1.57	1.59	1.56								1.57	1.54	1.56
Peak parking demand (spaces)		1,245	88	62	39	1,434								1	76	1,511
% of peak demand during period (ULI)		10%	100%	100%	90%	22%								100%	100%	26%
Subtotal long-term demand (spaces)		125	88	62	36	311								1	76	388
Total long-term demand (spaces)	1,572	125	88	62	36	1,883								1	76	1,960
TOTAL PARKING DEMAND (spaces)	1,572	136	284	275	247	2,514								2	922	3,438

Variant 2, Option B (event at SWL 337) – Trip Generation

Mission Rock Mixed-Use Project
PROJECT VARIANT 1 - Event Center at SWL 337

LAND USES	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
	1,047,514 gsf 1,048 units	1,286,181 gsf	107,388 gsf	78,672 gsf	33,717 gsf	2,553,472 gsf	190,500 gsf 75 employees	11,000 gsf 500 visitors	11,000 gsf	10,000 gsf	7,875 gsf	9,625 gsf	240,000 gsf	5.12 acres	4,000 attendees 300 employees	2,793,472 gsf w/out Event Center

INTERNAL AND EXTERNAL TRIP GENERATION RATES	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Daily Trip Rate (per d.u. / per 1,000 gsf / per attendee)	10.0	18.1	150.0	200.0	600.0	33.6	1.6	90.9	200.0	150.0	18.1		21.4	0.46	2.17	35.7
AM Peak Hour as % of daily	14.2%	8.9%	2.3%	1.5%	14.8%	8.3%	10.6%	0.0%	1.5%	2.3%	8.9%		2.2%	13.0%	0.0%	7.3%
AM Peak Hour Trip Rate (per du/per 1000 gsf/per attendee)	1.42	1.61	3.49	2.92	88.89	2.81	0.17	0.00	2.92	3.49	1.61		0.47	0.06	0.00	2.61
PM Peak Hour as % of daily	17.3%	8.5%	9.0%	13.5%	13.5%	11.8%	10.6%	15.0%	13.5%	9.0%	8.5%		12.2%	9.0%	8.0%	11.5%
PM Peak Hour Trip Rate (per du/per 1000 gsf/per attendee)	1.73	1.54	13.50	27.00	81.00	3.95	0.17	13.64	27.00	13.50	1.54		2.61	0.04	0.17	4.09
% Modal Share																
Auto	27%	37%	36%	36%	36%	35%	54%	36%	36%	36%	37%		37%	36%	57%	37%
Transit	42%	35%	17%	27%	27%	29%	39%	26%	17%	17%	35%		21%	27%	36%	29%
Walk/Other	31%	28%	47%	37%	37%	36%	7%	38%	47%	47%	28%		42%	37%	7%	34%
Average Vehicle Occupancy Rate																
Weekday Daily	1.11	1.97	2.38	2.31	2.31	2.02	1.23	2.37	2.38	2.38	1.97		2.19	2.31	2.60	2.09
Weekday AM Peak Hour	1.11	1.63	1.54	1.54	2.31	1.71	1.35	0.00	1.54	1.54	1.63		1.48	2.31	0.00	1.71
Weekday PM Peak Hour	1.11	1.63	2.38	2.31	2.31	1.87	1.35	2.37	2.38	2.38	1.63		2.24	2.31	2.17	1.91

INTERNAL AND EXTERNAL TRIPS BY MODE BEFORE ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday Daily																
Auto Person Trips	2,837	8,594	5,777	5,652	7,267	30,127	164	358	789	538	53		1,901	37	4,962	37,026
Transit Person Trips	4,400	8,166	2,756	4,213	5,417	24,952	116	257	376	257	50		1,057	27	3,127	29,163
Walk/Other Person Trips	3,242	6,520	7,575	5,870	7,547	30,754	21	385	1,035	705	40		2,186	38	571	33,549
Total Person Trips	10,480	23,280	16,108	15,734	20,230	85,833	301	1,000	2,200	1,500	143		5,144	102	8,660	99,739
Total Vehicle Trips	2,562	4,366	2,432	2,444	3,142	14,945	133	151	332	226	27		869	16	1,909	17,739
Weekday AM Peak Hour																
Auto Person Trips	404	795	146	89	1,077	2,511	15	-	12	14	5		46	5	-	2,561
Transit Person Trips	626	979	194	119	803	2,721	14	-	17	18	6		55	4	-	2,779
Walk/Other Person Trips	461	297	35	22	1,118	1,934	3	-	3	3	2		11	5	-	1,949
Total Person Trips	1,491	2,072	375	230	2,997	7,165	32	-	32	35	13		112	13	-	7,290
Total Vehicle Trips	365	487	95	58	465	1,469	11	-	8	9	3		31	2	-	1,502
Weekday PM Peak Hour																
Auto Person Trips	491	759	520	763	981	3,514	15	54	107	48	5		228	3	351	4,096
Transit Person Trips	761	935	248	569	731	3,245	14	39	51	23	6		133	2	293	3,673
Walk/Other Person Trips	561	284	682	792	1,019	3,338	3	58	140	63	2		265	3	53	3,660
Total Person Trips	1,813	1,979	1,450	2,124	2,731	10,097	32	150	297	135	12		626	9	697	11,429
Total Vehicle Trips	443	465	219	330	424	1,881	11	23	45	20	3		102	1	162	2,146

Mission Rock Mixed-Use Project
PROJECT VARIANT 1 - Event Center at SWL 337

INTERNAL AND EXTERNAL TRIPS INBOUND/OUTBOUND SPLITS	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday AM Peak Hour																
Work																
Inbound	0%	100%	100%	100%	100%		80%		100%	100%	100%			100%	100%	
Outbound	100%	0%	0%	0%	0%		20%		0%	0%	0%			0%	0%	
Non-Work																
Inbound	67%	50%	50%	50%	50%		50%	50%	50%	50%	50%			50%	100%	
Outbound	33%	50%	50%	50%	50%		50%	50%	50%	50%	50%			50%	0%	
Person Trips																
Inbound	33%	92%	100%	100%	52%	64%	76%	0%	100%	100%	92%		92%	52%	0%	64%
Outbound	67%	9%	0%	0%	48%	36%	24%	0%	0%	0%	9%		8%	48%	0%	36%
Inbound	497	1,896	375	230	1,559	4,556	24	-	32	35	12		103	7	-	4,666
Outbound	994	176	-	-	1,439	2,609	8	-	-	-	1		9	6	-	2,624
Total Person Trips	1,491	2,072	375	230	2,997	7,165	32	-	32	35	13		112	13	-	7,290
Vehicle Trips																
Inbound	33%	95%	100%	100%	53%	67%	69%	0%	100%	100%	95%		88%	53%	0%	67%
Outbound	67%	5%	0%	0%	47%	33%	31%	0%	0%	0%	5%		12%	47%	0%	33%
Inbound	122	460	95	58	248	982	8	-	8	9	3		27	1	-	1,010
Outbound	243	27	-	-	218	487	3	-	-	-	0		4	1	-	492
Total Vehicle Trips	365	487	95	58	465	1,469	11	-	8	9	3		31	2	-	1,502
Weekday PM Peak Hour																
Work																
Inbound	100%	0%	0%	0%	0%		20%		0%	0%	0%			0%	0%	
Outbound	0%	100%	100%	100%	100%		80%		100%	100%	100%			100%	100%	
Non-Work																
Inbound	33%	50%	50%	50%	50%		50%	50%	50%	50%	50%			50%	0%	
Outbound	67%	50%	50%	50%	50%		50%	50%	50%	50%	50%			50%	100%	
Person Trips																
Inbound	67%	9%	48%	48%	48%	44%	24%	50%	48%	48%	9%		46%	48%	0%	41%
Outbound	33%	92%	52%	52%	52%	56%	76%	50%	52%	52%	92%		54%	52%	100%	59%
Inbound	1,209	168	696	1,020	1,311	4,403	8	75	143	65	1		291	4	-	4,699
Outbound	604	1,811	754	1,105	1,420	5,694	24	75	154	70	11		335	5	697	6,730
Total Person Trips	1,813	1,979	1,450	2,124	2,731	10,097	32	150	297	135	12		626	9	697	11,429
Vehicle Trips																
Inbound	67%	5%	47%	47%	47%	41%	31%	50%	47%	47%	5%		45%	47%	0%	38%
Outbound	33%	95%	53%	53%	53%	59%	69%	50%	53%	53%	95%		55%	53%	100%	62%
Inbound	295	25	102	154	198	776	3	11	21	10	0		45	1	-	822
Outbound	148	439	117	176	226	1,105	8	11	24	11	3		56	1	162	1,324
Total Vehicle Trips	443	465	219	330	424	1,881	11	23	45	20	3		102	1	162	2,146

Mission Rock Mixed-Use Project
PROJECT VARIANT 1 - Event Center at SWL 337

INTERNAL AND LINKED PERSON TRIP ADJUSTMENT FACTORS	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday Daily																
Internal trip factor	38.0%	5.0%	10.0%	10.0%	22.0%		5.0%	0.0%	10.0%	10.0%	5.0%			10.0%	0.0%	
Internal linked trip factor	15.0%	25.0%	50.0%	50.0%	80.0%		25.0%	0.0%	80.0%	80.0%	25.0%			80.0%	0.0%	
Internal person trips	3,385	873	805	787	890	6,740	11	-	44	30	5		91	2	-	6,833
Total internal person trip productions																3,415
Total internal person trip attractions																3,418
Difference																3
% difference																0%
Internal and linked person trips (Walk)	3,982	1,164	1,611	1,573	4,451	12,781	15	-	220	150	7		392	10	-	13,184
Overall total trip reduction	38%	5%	10%	10%	22%	15%	5%	0%	10%	10%	5%		8%	10%	0%	13%
Weekday AM Peak Hour																
Internal trip factor	20.0%	9.0%	10.0%	7.0%	12.5%		5.0%	0.0%	0.0%	0.0%	9.0%			10.0%	0.0%	
Internal linked trip factor	15.0%	20.0%	50.0%	50.0%	80.0%		25.0%	0.0%	80.0%	80.0%	20.0%			80.0%	0.0%	
Internal person trips	254	149	19	8	75	504	1	-	-	-	1		2	0	-	507
Total internal person trip productions																254
Total internal person trip attractions																253
Difference																(0)
% difference																0%
Internal and linked person trips (Walk)	298	186	38	16	375	913	2	-	-	-	1		3	1	-	917
Overall total trip reduction	20%	9%	10%	7%	13%	13%	5%	0%	0%	0%	9%		2%	10%	0%	13%
Weekday PM Peak Hour																
Internal trip factor	45.0%	20.0%	20.0%	12.0%	25.0%		5.0%	0.0%	10.0%	10.0%	20.0%			10.0%	0.0%	
Internal linked trip factor	15.0%	30.0%	50.0%	50.0%	80.0%		25.0%	0.0%	80.0%	80.0%	30.0%			80.0%	0.0%	
Internal person trips	693	277	145	127	137	1,379	1	-	6	3	2		12	0	-	1,391
Total internal person trip productions																696
Total internal person trip attractions																695
Difference																(1)
% difference																0%
Internal and linked person trips (Walk)	816	396	290	255	683	2,439	2	-	30	14	2		47	1	-	2,487
Overall total trip reduction	45%	20%	20%	12%	25%	24%	5%	0%	10%	10%	20%		8%	10%	0%	22%
TRIP SUBTRACTION CHECK																
Weekday Daily	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Weekday AM Peak Hour	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Weekday PM Peak Hour	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
PEAK HOUR CHECK																
Auto Person Trips SD1+SD3																
Daily External Trips	520	1,601	614	886	588	4,208	23	79	84	57	10	-	253	6	529	4,996
AM+PM External Trips	193	180	44	125	213	755	5	12	14	8	1	-	40	1	49	845
Average Peak Hour Factor	19%	6%	4%	7%	18%	9%	10%	8%	8%	7%	6%	0%	8%	11%	5%	8%
Transit Person Trips SD1+SD3																
Daily External Trips	988	2,067	498	982	651	5,187	25	85	68	46	13	-	238	6	576	6,007
AM+PM External Trips	366	279	53	146	236	1,080	6	13	14	9	2	-	44	1	65	1,190
Average Peak Hour Factor	19%	7%	5%	7%	18%	10%	13%	8%	10%	10%	7%	0%	9%	11%	6%	10%
Walk/Other Person Trips SD1+SD3																
Daily External Trips	1,049	2,880	1,644	2,032	1,348	8,955	14	186	225	153	18	-	595	13	316	9,879
AM+PM External Trips	389	201	80	265	487	1,423	3	28	33	16	1	-	82	3	35	1,543
Average Peak Hour Factor	19%	3%	2%	7%	18%	8%	13%	8%	7%	5%	3%	0%	7%	11%	6%	8%

Mission Rock Mixed-Use Project
PROJECT VARIANT 1 - Event Center at SWL 337

EXTERNAL PLUS INTERNAL TRIPS FOR SD1 AND SD3 BEFORE ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday Daily																
Superdistrict 1																
Auto Person Trips	738	571	543	440	565	2,858	12	28	74	51	3		168	3	312	3,340
Transit Person Trips	1,404	947	462	597	768	4,178	10	38	63	43	6		160	4	447	4,788
Walk/Other Person Trips	1,491	2,833	2,016	2,367	3,043	11,749	14	154	275	188	17		649	15	214	12,627
Total Person Trips	3,633	4,351	3,021	3,404	4,376	18,784	36	220	413	281	27		977	22	972	20,756
Auto %	20%	13%	18%	13%	13%	15%	32%	13%	18%	18%	13%		17%	13%	32%	16%
Transit %	39%	22%	15%	18%	18%	22%	28%	17%	15%	15%	22%		16%	18%	46%	23%
Walk/Other %	41%	65%	67%	70%	70%	63%	40%	70%	67%	67%	65%		66%	70%	22%	61%
Total %	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		100%	100%	100%	100%
Vehicle Trips	667	300	337	196	252	1,752	11	12	46	31	2		102	1	120	1,976
Average Vehicle Occupancy	1.11	1.90	1.61	2.25	2.25	1.63	1.08	2.29	1.61	1.61	1.90		1.64	2.25	2.59	1.69
Superdistrict 3																
Auto Person Trips	591	1,314	429	804	1,034	4,172	17	50	59	40	8		174	5	217	4,569
Transit Person Trips	1,123	1,488	328	781	1,004	4,724	21	48	45	31	9		153	5	129	5,011
Walk/Other Person Trips	1,193	560	589	486	624	3,452	2	32	80	55	3		173	3	102	3,730
Total Person Trips	2,907	3,362	1,347	2,071	2,662	12,348	41	130	184	125	21		500	13	448	13,310
Auto %	20%	39%	32%	39%	39%	34%	43%	39%	32%	32%	39%		35%	39%	48%	34%
Transit %	39%	44%	24%	38%	38%	38%	51%	37%	24%	24%	44%		31%	38%	29%	38%
Walk/Other %	41%	17%	44%	23%	23%	28%	6%	24%	44%	44%	17%		35%	23%	23%	28%
Total %	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		100%	100%	100%	100%
Vehicle Trips	533	751	219	352	452	2,307	14	21	30	20	5		90	2	98	2,497
Average Vehicle Occupancy	1.11	1.75	1.96	2.29	2.29	1.81	1.24	2.39	1.96	1.96	1.75		1.94	2.29	2.21	1.83
Superdistrict 1 plus Superdistrict 3																
Auto Person Trips	1,329	1,885	972	1,244	1,599	7,030	29	79	133	91	12		343	8	529	7,909
Transit Person Trips	2,527	2,435	790	1,378	1,772	8,901	31	85	108	74	15		313	9	576	9,799
Walk/Other Person Trips	2,684	3,392	2,605	2,852	3,667	15,201	17	186	356	243	21		822	19	316	16,357
Total Person Trips	6,540	7,712	4,367	5,474	7,038	31,132	77	350	596	407	47		1,477	36	1,421	34,066
% Person Trips in Superdistrict 1	56%	56%	69%	62%	62%	60%	47%	63%	69%	69%	56%		66%	62%	68%	61%
% Person Trips in Superdistrict 3	44%	44%	31%	38%	38%	40%	53%	37%	31%	31%	44%		34%	38%	32%	39%
Vehicle Trips	1,200	1,051	556	547	704	4,058	25	33	76	52	6		192	4	219	4,473

Mission Rock Mixed-Use Project
PROJECT VARIANT 1 - Event Center at SWL 337

EXTERNAL PLUS INTERNAL TRIPS FOR SD1 AND SD3 BEFORE ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday AM Peak Hour																
Superdistrict 1																
Auto Person Trips	105	40	7	4	84	240	1	-	1	1	0		2	0	-	243
Transit Person Trips	200	92	17	11	114	434	1	-	1	2	1		5	1	-	439
Walk/Other Person Trips	212	165	24	15	451	867	2	-	2	2	1		7	2	-	876
Total Person Trips	517	298	48	29	648	1,540	4	-	4	4	2		14	3	-	1,558
Auto %	20%	14%	14%	14%	13%	16%	22%	0%	14%	14%	14%		16%	13%	0%	16%
Transit %	39%	31%	36%	36%	18%	28%	32%	0%	36%	36%	31%		34%	18%	0%	28%
Walk/Other %	41%	55%	50%	50%	70%	56%	45%	0%	50%	50%	55%		49%	70%	0%	56%
Total %	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%		100%	100%	0%	100%
Vehicle Trips	95	28	5	3	37	169	1	-	0	0	0		2	0	-	171
Average Vehicle Occupancy	1.11	1.44	1.28	1.28	2.25	1.42	1.14	-	1.28	1.28	1.44		1.23	2.25	-	1.42
Superdistrict 3																
Auto Person Trips	84	133	25	15	153	411	2	-	2	2	1		7	1	-	419
Transit Person Trips	160	176	35	21	149	540	3	-	3	3	1		10	1	-	551
Walk/Other Person Trips	170	29	4	2	93	298	0	-	0	0	0		1	0	-	299
Total Person Trips	414	338	64	39	394	1,249	5	-	5	6	2		18	2	-	1,269
Auto %	20%	39%	40%	40%	39%	33%	41%	0%	40%	40%	39%		40%	39%	0%	33%
Transit %	39%	52%	54%	54%	38%	43%	53%	0%	54%	54%	52%		54%	38%	0%	43%
Walk/Other %	41%	9%	6%	6%	23%	24%	6%	0%	6%	6%	9%		6%	23%	0%	24%
Total %	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%		100%	100%	0%	100%
Vehicle Trips	76	97	20	12	67	271	2	-	2	2	1		6	0	-	277
Average Vehicle Occupancy	1.11	1.37	1.29	1.29	2.29	1.52	1.27	-	1.29	1.29	1.37		1.29	2.29	-	1.51
Superdistrict 1 plus Superdistrict 3																
Auto Person Trips	189	174	32	19	237	651	3	-	3	3	1		10	1	-	662
Transit Person Trips	360	268	52	32	263	974	4	-	4	5	2		15	1	-	990
Walk/Other Person Trips	382	194	28	17	543	1,164	2	-	2	3	1		8	2	-	1,175
Total Person Trips	931	636	112	68	1,043	2,789	9	-	10	10	4		33	5	-	2,827
% Person Trips in Superdistrict 1	56%	47%	43%	43%	62%	55%	45%	0%	43%	43%	47%		44%	62%	0%	55%
% Person Trips in Superdistrict 3	44%	53%	57%	57%	38%	45%	55%	0%	57%	57%	53%		56%	38%	0%	45%
Vehicle Trips	171	125	25	15	104	440	2	-	2	2	1		8	0	-	448

Mission Rock Mixed-Use Project
PROJECT VARIANT 1 - Event Center at SWL 337

EXTERNAL PLUS INTERNAL TRIPS FOR SD1 AND SD3 BEFORE ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday PM Peak Hour																
Superdistrict 1																
Auto Person Trips	128	39	49	59	76	351	1	4	10	5	0		20	0	20	391
Transit Person Trips	243	88	42	81	104	557	1	6	9	4	1		20	0	35	612
Walk/Other Person Trips	258	157	181	319	411	1,327	2	23	37	17	1		80	1	28	1,436
Total Person Trips	629	284	272	459	591	2,235	4	33	56	25	2		120	2	82	2,439
Auto %	20%	14%	18%	13%	13%	16%	22%	13%	18%	18%	14%		17%	13%	25%	16%
Transit %	39%	31%	15%	18%	18%	25%	32%	17%	15%	15%	31%		17%	18%	42%	25%
Walk/Other %	41%	55%	67%	70%	70%	59%	45%	70%	67%	67%	55%		67%	70%	34%	59%
Total %	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		100%	100%	100%	100%
Vehicle Trips	115	27	30	26	34	233	1	2	6	3	0		12	0	10	255
Average Vehicle Occupancy	1.11	1.44	1.61	2.25	2.25	1.51	1.14	2.29	1.61	1.61	1.44		1.68	2.25	2.10	1.54
Superdistrict 3																
Auto Person Trips	102	127	39	109	140	516	2	8	8	4	1		22	0	29	567
Transit Person Trips	194	168	30	105	136	633	3	7	6	3	1		20	0	31	684
Walk/Other Person Trips	206	28	53	66	84	437	0	5	11	5	0		21	0	8	466
Total Person Trips	503	323	121	280	359	1,586	5	20	25	11	2		62	1	67	1,717
Auto %	20%	39%	32%	39%	39%	33%	41%	39%	32%	32%	39%		35%	39%	42%	33%
Transit %	39%	52%	24%	38%	38%	40%	53%	37%	24%	24%	52%		31%	38%	46%	40%
Walk/Other %	41%	9%	44%	23%	23%	28%	6%	24%	44%	44%	9%		34%	23%	12%	27%
Total %	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		100%	100%	100%	100%
Vehicle Trips	92	93	20	47	61	313	2	3	4	2	1		11	0	19	343
Average Vehicle Occupancy	1.11	1.37	1.96	2.29	2.29	1.65	1.27	2.39	1.96	1.96	1.37		1.95	2.29	1.53	1.65
Superdistrict 1 plus Superdistrict 3																
Auto Person Trips	230	166	88	168	216	867	3	12	18	8	1		42	1	49	958
Transit Person Trips	437	256	71	186	239	1,190	4	13	15	7	2		39	1	65	1,295
Walk/Other Person Trips	464	185	234	385	495	1,764	2	28	48	22	1		101	2	35	1,902
Total Person Trips	1,131	607	393	739	950	3,821	9	53	81	37	4		182	3	150	4,156
% Person Trips in Superdistrict 1	56%	47%	69%	62%	62%	58%	45%	63%	69%	69%	47%		66%	62%	55%	59%
% Person Trips in Superdistrict 3	44%	53%	31%	38%	38%	42%	55%	37%	31%	31%	53%		34%	38%	45%	41%
Vehicle Trips	208	119	50	74	95	546	2	5	10	5	1		23	0	28	598

Mission Rock Mixed-Use Project
PROJECT VARIANT 1 - Event Center at SWL 337

EXTERNAL ONLY TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday Daily																
Superdistrict 1																
Auto Person Trips	289	485	343	313	208	1,638	9	28	47	32	3		119	2	312	2,071
Transit Person Trips	549	804	291	426	282	2,352	8	38	40	27	5		118	3	447	2,920
Walk/Other Person Trips	583	2,405	1,272	1,686	1,119	7,066	12	154	174	118	15		473	11	214	7,763
Total Person Trips	1,421	3,694	1,906	2,425	1,609	11,056	29	220	260	178	23		710	16	972	12,754
Vehicle Trips	261	255	213	140	93	961	9	12	29	20	2		71	1	120	1,153
Superdistrict 2																
Auto Person Trips	74	1,047	331	703	904	3,059	18	45	45	31	6		145	5	168	3,377
Transit Person Trips	140	1,524	414	800	1,028	3,907	21	49	57	39	9		175	5	143	4,229
Walk/Other Person Trips	149	722	430	702	903	2,906	1	46	59	40	4		150	5	57	3,118
Total Person Trips	363	3,293	1,175	2,205	2,835	9,872	40	140	161	109	20		470	14	367	10,724
Vehicle Trips	67	631	206	349	449	1,702	16	22	28	19	4		89	2	75	1,868
Superdistrict 3																
Auto Person Trips	231	1,116	271	573	380	2,571	14	50	37	25	7		133	4	217	2,925
Transit Person Trips	439	1,263	207	556	369	2,835	17	48	28	19	8		120	4	129	3,088
Walk/Other Person Trips	466	475	372	346	230	1,889	2	32	51	35	3		122	2	102	2,115
Total Person Trips	1,137	2,854	850	1,475	979	7,295	33	130	116	79	17		375	10	448	8,128
Vehicle Trips	209	637	138	251	166	1,401	11	21	19	13	4		68	2	98	1,569
Superdistrict 4																
Auto Person Trips	74	835	188	479	616	2,191	13	30	26	17	5		91	3	224	2,509
Transit Person Trips	140	853	197	384	494	2,068	14	23	27	18	5		87	3	94	2,252
Walk/Other Person Trips	149	294	151	265	341	1,200	1	17	21	14	2		55	2	19	1,276
Total Person Trips	363	1,982	536	1,128	1,450	5,459	27	70	73	50	12		233	7	338	6,037
Vehicle Trips	67	485	124	252	324	1,252	9	15	17	12	3		56	2	92	1,402
East Bay																
Auto Person Trips	376	1,516	705	843	1,084	4,525	23	52	96	66	9		246	5	1,497	6,274
Transit Person Trips	463	1,478	477	494	635	3,548	29	27	65	44	9		175	3	1,227	4,953
Walk/Other Person Trips	87	522	663	465	598	2,336	2	30	91	62	3		188	3	63	2,590
Total Person Trips	926	3,516	1,845	1,803	2,318	10,408	53	110	252	172	22		609	12	2,788	13,816
Vehicle Trips	340	542	293	341	438	1,953	9	21	40	27	3		101	2	550	2,607
North Bay																
Auto Person Trips	58	800	377	557	716	2,508	10	36	52	35	5		137	4	775	3,425
Transit Person Trips	29	303	154	90	116	691	6	5	21	14	2		48	1	304	1,044
Walk/Other Person Trips	-	153	281	146	188	770	0	10	38	26	1		75	1	1	847
Total Person Trips	87	1,256	812	794	1,020	3,970	17	50	111	76	8		261	5	1,080	5,316
Vehicle Trips	52	436	169	293	377	1,327	7	19	23	16	3		67	2	292	1,689
South Bay																
Auto Person Trips	926	1,316	966	681	876	4,766	22	42	132	90	8		293	4	1,672	6,736
Transit Person Trips	1,100	744	212	297	382	2,735	13	17	29	20	5		84	2	628	3,448
Walk/Other Person Trips	174	181	151	169	218	893	0	11	21	14	1		47	1	35	976
Total Person Trips	2,200	2,241	1,329	1,147	1,475	8,393	35	70	182	124	14		424	7	2,334	11,160
Vehicle Trips	836	817	365	298	383	2,700	18	17	50	34	5		124	2	643	3,470
Outside Bay Area																
Auto Person Trips	-	1,195	2,237	1,144	1,471	6,048	49	75	306	208	7		646	7	97	6,797
Transit Person Trips	-	829	512	770	990	3,102	2	51	70	48	5		175	5	155	3,438
Walk/Other Person Trips	-	1,255	3,293	1,269	1,632	7,449	0	84	450	307	8		848	8	80	8,385
Total Person Trips	-	3,280	6,043	3,183	4,093	16,599	51	210	825	563	20		1,669	21	332	18,620
Vehicle Trips	-	402	719	363	467	1,951	48	24	98	67	2		240	2	37	2,230
All Origins																
Auto Person Trips	2,028	8,309	5,418	5,294	6,255	27,305	158	358	740	505	51		1,811	34	4,962	34,113
Transit Person Trips	2,861	7,799	2,465	3,817	4,296	21,238	110	257	337	229	48		981	25	3,127	25,371
Walk/Other Person Trips	1,608	6,008	6,614	5,050	5,228	24,508	18	385	903	616	37		1,959	33	571	27,071
Total Person Trips	6,498	22,116	14,497	14,161	15,780	73,051	286	1,000	1,980	1,350	135		4,751	92	8,660	86,555
Vehicle Trips	1,831	4,207	2,227	2,286	2,697	13,248	128	151	304	207	26		816	15	1,909	15,988
Total Internal Person Trips	3,982	1,164	1,611	1,573	4,451	12,781	15	-	220	150	7		392	10	-	13,184
Person-trip reduction	38%	5%	10%	10%	22%	15%	5%	0%	10%	10%	5%		8%	10%	0%	13%
Average Vehicle Occupancy	1.11	1.98	2.43	2.32	2.32	2.06	1.23	2.37	2.43	2.43	1.98		2.22	2.32	2.60	2.13

Mission Rock Mixed-Use Project

PROJECT VARIANT 1 - Event Center at SWL 337

EXTERNAL ONLY TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday AM Peak Hour																
Superdistrict 1																
Auto Person Trips	71	29	4	3	54	161	1	-	1	1	0		2	0	-	163
Transit Person Trips	136	65	11	8	73	294	1	-	1	2	0		5	0	-	299
Walk/Other Person Trips	144	116	16	11	289	577	1	-	2	2	1		6	1	-	585
Total Person Trips	351	210	32	22	415	1,031	3	-	4	4	1		13	2	-	1,047
Vehicle Trips	64	20	3	2	24	114	1	-	0	0	0		2	0	-	116
Superdistrict 2																
Auto Person Trips	11	94	17	10	134	266	2	-	1	2	1		5	1	-	272
Transit Person Trips	20	180	36	22	152	410	3	-	3	3	1		10	1	-	421
Walk/Other Person Trips	21	23	1	1	134	180	0	-	0	0	0		0	1	-	181
Total Person Trips	52	297	54	33	420	856	4	-	5	5	2		16	2	-	874
Vehicle Trips	9	71	14	8	67	170	1	-	1	1	0		4	0	-	174
Superdistrict 3																
Auto Person Trips	57	94	17	12	98	278	2	-	2	2	1		7	0	-	285
Transit Person Trips	109	124	23	16	95	368	2	-	3	3	1		9	0	-	377
Walk/Other Person Trips	115	20	3	2	59	200	0	-	0	0	0		1	0	-	201
Total Person Trips	281	239	42	30	253	845	4	-	5	6	1		17	1	-	863
Vehicle Trips	52	69	13	9	43	185	1	-	2	2	0		5	0	-	191
Superdistrict 4																
Auto Person Trips	11	91	18	11	91	221	1	-	2	2	1		5	0	-	226
Transit Person Trips	20	113	23	14	73	243	2	-	2	2	1		6	0	-	250
Walk/Other Person Trips	21	13	2	1	50	88	0	-	0	0	0		0	0	-	88
Total Person Trips	52	217	42	26	215	552	3	-	4	4	1		12	1	-	565
Vehicle Trips	9	58	11	7	48	134	1	-	1	1	0		3	0	-	137
East Bay																
Auto Person Trips	54	170	33	20	161	438	3	-	3	3	1		10	1	-	448
Transit Person Trips	66	229	48	29	94	466	4	-	4	4	1		14	0	-	480
Walk/Other Person Trips	12	25	3	2	89	130	0	-	0	0	0		1	0	-	132
Total Person Trips	132	424	84	51	343	1,035	6	-	7	8	3		24	2	-	1,060
Vehicle Trips	48	53	10	6	65	182	1	-	1	1	0		3	0	-	186
North Bay																
Auto Person Trips	8	68	12	7	106	202	1	-	1	1	0		4	0	-	206
Transit Person Trips	4	49	10	6	17	87	1	-	1	1	0		3	0	-	90
Walk/Other Person Trips	-	5	0	0	28	34	0	-	0	0	0		0	0	-	34
Total Person Trips	12	123	23	14	151	323	2	-	2	2	1		7	1	-	330
Vehicle Trips	7	39	7	4	56	114	1	-	1	1	0		2	0	-	116
South Bay																
Auto Person Trips	132	157	31	19	130	469	2	-	3	3	1		9	1	-	479
Transit Person Trips	157	106	22	13	57	354	2	-	2	2	1		6	0	-	361
Walk/Other Person Trips	25	7	1	0	32	65	0	-	0	0	0		0	0	-	66
Total Person Trips	313	271	54	33	219	889	4	-	5	5	2		15	1	-	905
Vehicle Trips	119	122	25	15	57	339	2	-	2	2	1		7	0	-	346
Outside Bay Area																
Auto Person Trips	-	41	3	2	218	265	3	-	0	0	0		4	1	-	269
Transit Person Trips	-	33	3	2	147	185	0	-	0	0	0		1	1	-	187
Walk/Other Person Trips	-	30	0	0	242	272	0	-	0	0	0		0	1	-	274
Total Person Trips	-	105	7	4	606	722	3	-	1	1	1		5	3	-	730
Vehicle Trips	-	18	2	1	69	91	3	-	0	0	0		3	0	-	94
All Origins																
Auto Person Trips	343	744	135	85	991	2,299	14	-	12	14	5		45	4	-	2,348
Transit Person Trips	511	901	176	111	708	2,408	14	-	17	18	6		54	3	-	2,465
Walk/Other Person Trips	339	240	26	18	923	1,546	2	-	3	3	1		10	4	-	1,560
Total Person Trips	1,193	1,885	338	214	2,623	6,252	30	-	32	35	12		109	12	-	6,373
Vehicle Trips	310	450	86	54	428	1,328	11	-	8	9	3		30	2	-	1,360
Total Internal Person Trips	298	186	38	16	375	913	2	-	-	-	1		3	1	-	917
Person-trip reduction	20%	9%	10%	7%	13%	13%	5%	0%	0%	0%	9%		2%	10%	0%	13%
Average Vehicle Occupancy	1.11	1.65	1.57	1.56	2.32	1.73	1.35	-	1.54	1.54	1.65		1.49	2.32	-	1.73

Mission Rock Mixed-Use Project
PROJECT VARIANT 1 - Event Center at SWL 337

EXTERNAL ONLY TRIPS AFTER ADJUSTMENT Weekday PM Peak Hour	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Superdistrict 1																
Auto Person Trips	36	13	13	39	21	122	1	4	6	3	0		14	0	20	157
Transit Person Trips	68	31	11	53	29	191	1	6	5	2	0		15	0	35	241
Walk/Other Person Trips	72	55	48	209	116	499	1	23	23	11	0		59	1	28	587
Total Person Trips	175	99	71	301	166	813	3	33	35	16	1		88	1	82	985
Vehicle Trips	32	9	8	17	10	76	1	2	4	2	0		8	0	10	94
Superdistrict 2																
Auto Person Trips	13	90	30	95	122	349	2	7	6	3	1		18	0	20	388
Transit Person Trips	24	172	37	108	139	480	3	7	8	3	1		22	0	32	535
Walk/Other Person Trips	26	22	39	95	122	303	0	7	8	4	0		19	0	4	326
Total Person Trips	63	284	106	298	383	1,133	4	21	22	10	2		59	1	56	1,249
Vehicle Trips	12	68	19	47	61	206	1	3	4	2	0		11	0	14	230
Superdistrict 3																
Auto Person Trips	28	44	10	71	39	193	2	8	5	2	0		17	0	29	239
Transit Person Trips	54	58	8	69	38	228	2	7	4	2	0		15	0	31	274
Walk/Other Person Trips	58	10	14	43	24	148	0	5	7	3	0		15	0	8	171
Total Person Trips	140	112	32	183	101	569	4	20	16	7	1		47	1	67	684
Vehicle Trips	26	32	5	31	17	111	1	3	3	1	0		8	0	19	139
Superdistrict 4																
Auto Person Trips	13	87	17	65	83	264	1	4	3	2	1		11	0	24	299
Transit Person Trips	24	108	18	52	67	269	2	3	4	2	1		11	0	21	301
Walk/Other Person Trips	26	13	14	36	46	134	0	3	3	1	0		7	0	2	143
Total Person Trips	63	207	48	152	196	667	3	11	10	4	1		29	1	46	743
Vehicle Trips	12	55	11	34	44	156	1	2	2	1	0		7	0	13	176
East Bay																
Auto Person Trips	65	162	63	114	146	551	3	8	13	6	1		30	0	98	680
Transit Person Trips	80	219	43	67	86	494	4	4	9	4	1		22	0	95	612
Walk/Other Person Trips	15	23	60	63	81	242	0	5	12	6	0		23	0	5	270
Total Person Trips	160	405	166	243	313	1,287	6	17	34	15	2		75	1	199	1,562
Vehicle Trips	59	51	26	46	59	241	1	3	5	2	0		12	0	35	288
North Bay																
Auto Person Trips	10	65	34	75	97	281	1	5	7	3	0		17	0	47	345
Transit Person Trips	5	47	14	12	16	94	1	1	3	1	0		6	0	23	122
Walk/Other Person Trips	-	5	25	20	25	76	0	1	5	2	0		9	0	0	85
Total Person Trips	15	117	73	107	138	450	2	8	15	7	1		32	0	70	553
Vehicle Trips	9	37	15	40	51	152	1	3	3	1	0		8	0	20	180
South Bay																
Auto Person Trips	160	150	87	92	118	608	2	6	18	8	1		36	0	105	749
Transit Person Trips	190	101	19	40	52	402	2	3	4	2	1		11	0	47	460
Walk/Other Person Trips	30	7	14	23	29	103	0	2	3	1	0		6	0	2	111
Total Person Trips	381	258	120	155	199	1,113	4	11	25	11	2		52	1	154	1,320
Vehicle Trips	145	116	33	40	52	386	2	3	7	3	1		15	0	50	451
Outside Bay Area																
Auto Person Trips	-	39	201	154	199	594	3	11	41	19	0		74	1	7	676
Transit Person Trips	-	32	46	104	134	316	0	8	9	4	0		22	0	10	348
Walk/Other Person Trips	-	29	296	171	220	717	0	13	61	28	0		101	1	4	823
Total Person Trips	-	100	544	430	553	1,626	3	32	111	51	1		197	2	21	1,847
Vehicle Trips	-	17	65	49	63	194	3	4	13	6	0		26	0	3	223
All Origins																
Auto Person Trips	325	651	455	705	826	2,963	14	54	100	45	4		217	3	351	3,534
Transit Person Trips	446	768	196	505	559	2,474	14	39	45	21	5		123	2	293	2,892
Walk/Other Person Trips	226	163	509	660	663	2,221	2	58	122	55	1		238	3	53	2,516
Total Person Trips	997	1,583	1,160	1,869	2,048	7,658	30	150	267	122	10		579	8	697	8,942
Vehicle Trips	293	387	182	304	356	1,523	11	23	41	19	2		95	1	162	1,781
Total Internal Person Trips	816	396	290	255	683	2,439	2	-	30	14	2		47	1	-	2,487
Person-trip reduction	45%	20%	20%	12%	25%	24%	5%	0%	10%	10%	20%		8%	10%	0%	22%
Average Vehicle Occupancy	1.11	1.68	2.50	2.32	2.32	1.95	1.35	2.37	2.43	2.43	1.68		2.28	2.32	2.17	1.98

Mission Rock Mixed-Use Project
PROJECT VARIANT 1 - Event Center at SWL 337

MODAL SPLIT SUMMARY FOR INTERNAL AND EXTERNAL TRIPS	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday Daily																
Internal and External before adjustment																
Auto Person Trips	27%	37%	36%	36%	36%	35%	54%	36%	36%	36%	37%		37%	36%	57%	37%
Transit Person Trips	42%	35%	17%	27%	27%	29%	39%	26%	17%	17%	35%		21%	27%	36%	29%
Walk/Other Person Trips	31%	28%	47%	37%	37%	36%	7%	38%	47%	47%	28%		42%	37%	7%	34%
Total Person Trips	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		100%	100%	100%	100%
Internal and External after adjustment																
Auto Person Trips	19%	36%	34%	34%	31%	32%	52%	36%	34%	34%	36%		35%	34%	57%	34%
Transit Person Trips	27%	34%	15%	24%	21%	25%	37%	26%	15%	15%	34%		19%	24%	36%	25%
Walk/Other Person Trips	53%	31%	51%	42%	48%	43%	11%	38%	51%	51%	31%		46%	42%	7%	40%
Total Person Trips	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		100%	100%	100%	100%
External Only Trips																
Auto Person Trips	31%	38%	37%	37%	40%	37%	55%	36%	37%	37%	38%		38%	37%	57%	39%
Transit Person Trips	44%	35%	17%	27%	27%	29%	39%	26%	17%	17%	35%		21%	27%	36%	29%
Walk/Other Person Trips	25%	27%	46%	36%	33%	34%	6%	38%	46%	46%	27%		41%	36%	7%	31%
Total Person Trips	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		100%	100%	100%	100%
AM Peak Hour																
Internal and External before adjustment																
Auto Person Trips	27%	38%	39%	39%	36%	35%	47%	0%	39%	39%	38%		41%	36%	0%	35%
Transit Person Trips	42%	47%	52%	52%	27%	38%	45%	0%	52%	52%	47%		49%	27%	0%	38%
Walk/Other Person Trips	31%	14%	9%	9%	37%	27%	8%	0%	9%	9%	14%		10%	37%	0%	27%
Total Person Trips	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%		100%	100%	0%	100%
Internal and External after adjustment																
Auto Person Trips	23%	36%	36%	37%	33%	32%	45%	0%	39%	39%	36%		40%	34%	0%	32%
Transit Person Trips	34%	43%	47%	48%	24%	34%	43%	0%	52%	52%	43%		48%	24%	0%	34%
Walk/Other Person Trips	43%	21%	17%	15%	43%	34%	12%	0%	9%	9%	21%		11%	42%	0%	34%
Total Person Trips	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%		100%	100%	0%	100%
External Only Trips																
Auto Person Trips	29%	39%	40%	40%	38%	37%	47%	0%	39%	39%	39%		41%	37%	0%	37%
Transit Person Trips	43%	48%	52%	52%	27%	39%	45%	0%	52%	52%	48%		49%	27%	0%	39%
Walk/Other Person Trips	28%	13%	8%	8%	35%	25%	7%	0%	9%	9%	13%		9%	36%	0%	24%
Total Person Trips	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%		100%	100%	0%	100%
PM Peak Hour																
Internal and External before adjustment																
Auto Person Trips	27%	38%	36%	36%	36%	35%	47%	36%	36%	36%	38%		36%	36%	50%	36%
Transit Person Trips	42%	47%	17%	27%	27%	32%	45%	26%	17%	17%	47%		21%	27%	42%	32%
Walk/Other Person Trips	31%	14%	47%	37%	37%	33%	8%	38%	47%	47%	14%		42%	37%	8%	32%
Total Person Trips	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		100%	100%	100%	100%
Internal and External after adjustment																
Auto Person Trips	18%	33%	31%	33%	30%	29%	45%	36%	34%	34%	33%		35%	34%	50%	31%
Transit Person Trips	25%	39%	13%	24%	20%	25%	43%	26%	15%	15%	39%		20%	24%	42%	25%
Walk/Other Person Trips	57%	28%	55%	43%	49%	46%	12%	38%	51%	51%	28%		46%	42%	8%	44%
Total Person Trips	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		100%	100%	100%	100%
External Only Trips																
Auto Person Trips	33%	41%	39%	38%	40%	39%	47%	36%	37%	37%	41%		38%	37%	50%	40%
Transit Person Trips	45%	49%	17%	27%	27%	32%	45%	26%	17%	17%	49%		21%	27%	42%	32%
Walk/Other Person Trips	23%	10%	44%	35%	32%	29%	7%	38%	46%	46%	10%		41%	36%	8%	28%
Total Person Trips	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		100%	100%	100%	100%

Mission Rock Mixed-Use Project
PROJECT VARIANT 1 - Event Center at SWL 337

EXTERNAL ONLY TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday AM Peak Hour																
Auto Person Trips: All Origins	343	744	135	85	991	2,299	14	-	12	14	5		45	4	-	2,348
Inbound	114	681	135	85	516	1,531	11	-	12	14	4		41	2	-	1,574
Outbound	229	63	-	-	476	768	3	-	-	-	0		4	2	-	774
Transit Person Trips: All Origins	511	901	176	111	708	2,408	14	-	17	18	6		54	3	-	2,465
Inbound	170	824	176	111	368	1,650	10	-	17	18	5		50	2	-	1,702
Outbound	341	77	-	-	340	757	3	-	-	-	0		4	2	-	762
Walk/Other Person Trips: All Origins	339	240	26	18	923	1,546	2	-	3	3	1		10	4	-	1,560
Inbound	113	220	26	18	480	856	2	-	3	3	1		9	2	-	868
Outbound	226	20	-	-	443	689	1	-	-	-	0		1	2	-	692
Total Person Trips: All Origins	1,193	1,885	338	214	2,623	6,252	30	-	32	35	12		109	12	-	6,373
Inbound	398	1,725	338	214	1,364	4,038	23	-	32	35	11		101	6	-	4,145
Outbound	795	160	-	-	1,259	2,214	7	-	-	-	1		8	6	-	2,228
Total Vehicle Trips: All Origins	310	450	86	54	428	1,328	11	-	8	8	3		29	2	-	1,359
Inbound	103	425	86	54	228	897	7	-	8	8	3		26	1	-	923
Outbound	207	25	-	-	200	432	3	-	-	-	0		3	1	-	436
Weekday PM Peak Hour																
Auto Person Trips: All Origins	325	651	455	705	826	2,963	14	54	100	45	4		217	3	351	3,534
Inbound	217	55	219	338	396	1,225	3	27	48	22	0		100	1	-	1,327
Outbound	108	596	237	367	429	1,737	11	27	52	24	4		117	2	351	2,207
Transit Person Trips: All Origins	446	768	196	505	559	2,474	14	39	45	21	5		123	2	293	2,892
Inbound	297	65	94	242	268	967	3	19	22	10	0		55	1	-	1,023
Outbound	149	703	102	262	291	1,507	10	19	24	11	4		68	1	293	1,869
Walk/Other Person Trips: All Origins	226	163	509	660	663	2,221	2	58	122	55	1		238	3	53	2,516
Inbound	151	14	244	317	318	1,044	1	29	59	27	0		115	1	-	1,160
Outbound	75	149	265	343	345	1,177	2	29	63	29	1		124	2	53	1,356
Total Person Trips: All Origins	997	1,583	1,160	1,869	2,048	7,658	30	150	267	122	10		579	8	697	8,942
Inbound	665	135	557	897	983	3,236	7	75	128	58	1		270	4	-	3,510
Outbound	332	1,448	603	972	1,065	4,421	23	75	139	63	9		309	4	697	5,432
Total Vehicle Trips: All Origins	293	387	182	304	356	1,523	11	23	41	19	2		95	1	162	1,781
Inbound	196	31	85	143	167	623	3	11	19	9	0		43	1	3	670
Outbound	98	356	97	161	188	900	7	11	22	10	2		52	1	159	1,112

Mission Rock Mixed-Use Project
PROJECT VARIANT 1 - Event Center at SWL 337

EXTERNAL ONLY TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday Daily																
Auto Person Trips																
Superdistrict 1	289	485	343	313	208	1,638	9	28	47	32	3		119	2	312	2,071
Superdistrict 2	74	1,047	331	703	904	3,059	18	45	45	31	6		145	5	168	3,377
Superdistrict 3	231	1,116	271	573	380	2,571	14	50	37	25	7		133	4	217	2,925
Superdistrict 4	74	835	188	479	616	2,191	13	30	26	17	5		91	3	224	2,509
East Bay	376	1,516	705	843	1,084	4,525	23	52	96	66	9		246	5	1,497	6,274
North Bay	58	800	377	557	716	2,508	10	36	52	35	5		137	4	775	3,425
South Bay	926	1,316	966	681	876	4,766	22	42	132	90	8		293	4	1,672	6,736
Outside of Bay Area	-	1,195	2,237	1,144	1,471	6,048	49	75	306	208	7		646	7	97	6,797
All Origins	2,028	8,309	5,418	5,294	6,255	27,305	158	358	740	505	51		1,811	34	4,962	34,113
Transit Person Trips																
Superdistrict 1	549	804	291	426	282	2,352	8	38	40	27	5		118	3	447	2,920
Superdistrict 2	140	1,524	414	800	1,028	3,907	21	49	57	39	9		175	5	143	4,229
Superdistrict 3	439	1,263	207	556	369	2,835	17	48	28	19	8		120	4	129	3,088
Superdistrict 4	140	853	197	384	494	2,068	14	23	27	18	5		87	3	94	2,252
East Bay	463	1,478	477	494	635	3,548	29	27	65	44	9		175	3	1,227	4,953
North Bay	29	303	154	90	116	691	6	5	21	14	2		48	1	304	1,044
South Bay	1,100	744	212	297	382	2,735	13	17	29	20	5		84	2	628	3,448
Outside of Bay Area	-	829	512	770	990	3,102	2	51	70	48	5		175	5	155	3,438
All Origins	2,861	7,799	2,465	3,817	4,296	21,238	110	257	337	229	48		981	25	3,127	25,371
Walk/Other Person Trips																
Superdistrict 1	583	2,405	1,272	1,686	1,119	7,066	12	154	174	118	15		473	11	214	7,763
Superdistrict 2	149	722	430	702	903	2,906	1	46	59	40	4		150	5	57	3,118
Superdistrict 3	466	475	372	346	230	1,889	2	32	51	35	3		122	2	102	2,115
Superdistrict 4	149	294	151	265	341	1,200	1	17	21	14	2		55	2	19	1,276
East Bay	87	522	663	465	598	2,336	2	30	91	62	3		188	3	63	2,590
North Bay	-	153	281	146	188	770	0	10	38	26	1		75	1	1	847
South Bay	174	181	151	169	218	893	0	11	21	14	1		47	1	35	976
Outside of Bay Area	-	1,255	3,293	1,269	1,632	7,449	0	84	450	307	8		848	8	80	8,385
All Origins	1,608	6,008	6,614	5,050	5,228	24,508	18	385	903	616	37		1,959	33	571	27,071
Total Person Trips																
Superdistrict 1	1,421	3,694	1,906	2,425	1,609	11,056	29	220	260	178	23		710	16	972	12,754
Superdistrict 2	363	3,293	1,175	2,205	2,835	9,872	40	140	161	109	20		470	14	367	10,724
Superdistrict 3	1,137	2,854	850	1,475	979	7,295	33	130	116	79	17		375	10	448	8,128
Superdistrict 4	363	1,982	536	1,128	1,450	5,459	27	70	73	50	12		233	7	338	6,037
East Bay	926	3,516	1,845	1,803	2,318	10,408	53	110	252	172	22		609	12	2,788	13,816
North Bay	87	1,256	812	794	1,020	3,970	17	50	111	76	8		261	5	1,080	5,316
South Bay	2,200	2,241	1,329	1,147	1,475	8,393	35	70	182	124	14		424	7	2,334	11,160
Outside of Bay Area	-	3,280	6,043	3,183	4,093	16,599	51	210	825	563	20		1,669	21	332	18,620
All Origins	6,498	22,116	14,497	14,161	15,780	73,051	286	1,000	1,980	1,350	135		4,751	92	8,660	86,555
Vehicle Trips																
Superdistrict 1	261	255	213	140	93	961	9	12	29	20	2		71	1	120	1,153
Superdistrict 2	67	631	206	349	449	1,702	16	22	28	19	4		89	2	75	1,868
Superdistrict 3	209	637	138	251	166	1,401	11	21	19	13	4		68	2	98	1,569
Superdistrict 4	67	485	124	252	324	1,252	9	15	17	12	3		56	2	92	1,402
East Bay	340	542	293	341	438	1,953	9	21	40	27	3		101	2	550	2,607
North Bay	52	436	169	293	377	1,327	7	19	23	16	3		67	2	292	1,689
South Bay	836	817	365	298	383	2,700	18	17	50	34	5		124	2	643	3,470
Outside of Bay Area	-	402	719	363	467	1,951	48	24	98	67	2		240	2	37	2,230
All Origins	1,831	4,207	2,227	2,286	2,697	13,248	128	151	304	207	26		816	15	1,909	15,988

Mission Rock Mixed-Use Project
PROJECT VARIANT 1 - Event Center at SWL 337

EXTERNAL ONLY TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday AM Peak Hour																
Auto Person Trips																
Superdistrict 1	71	29	4	3	54	161	1	-	1	1	0		2	0	-	163
Superdistrict 2	11	94	17	10	134	266	2	-	1	2	1		5	1	-	272
Superdistrict 3	57	94	17	12	98	278	2	-	2	2	1		7	0	-	285
Superdistrict 4	11	91	18	11	91	221	1	-	2	2	1		5	0	-	226
East Bay	54	170	33	20	161	438	3	-	3	3	1		10	1	-	448
North Bay	8	68	12	7	106	202	1	-	1	1	0		4	0	-	206
South Bay	132	157	31	19	130	469	2	-	3	3	1		9	1	-	479
Outside of Bay Area	-	41	3	2	218	265	3	-	0	0	0		4	1	-	269
All Origins	343	744	135	85	991	2,299	14	-	12	14	5		45	4	-	2,348
Transit Person Trips																
Superdistrict 1	136	65	11	8	73	294	1	-	1	2	0		5	0	-	299
Superdistrict 2	20	180	36	22	152	410	3	-	3	3	1		10	1	-	421
Superdistrict 3	109	124	23	16	95	368	2	-	3	3	1		9	0	-	377
Superdistrict 4	20	113	23	14	73	243	2	-	2	2	1		6	0	-	250
East Bay	66	229	48	29	94	466	4	-	4	4	1		14	0	-	480
North Bay	4	49	10	6	17	87	1	-	1	1	0		3	0	-	90
South Bay	157	106	22	13	57	354	2	-	2	2	1		6	0	-	361
Outside of Bay Area	-	33	3	2	147	185	0	-	0	0	0		1	1	-	187
All Origins	511	901	176	111	708	2,408	14	-	17	18	6		54	3	-	2,465
Walk/Other Person Trips																
Superdistrict 1	144	116	16	11	289	577	1	-	2	2	1		6	1	-	585
Superdistrict 2	21	23	1	1	134	180	0	-	0	0	0		0	1	-	181
Superdistrict 3	115	20	3	2	59	200	0	-	0	0	0		1	0	-	201
Superdistrict 4	21	13	2	1	50	88	0	-	0	0	0		0	0	-	88
East Bay	12	25	3	2	89	130	0	-	0	0	0		1	0	-	132
North Bay	-	5	0	0	28	34	0	-	0	0	0		0	0	-	34
South Bay	25	7	1	0	32	65	0	-	0	0	0		0	0	-	66
Outside of Bay Area	-	30	0	0	242	272	0	-	0	0	0		0	1	-	274
All Origins	339	240	26	18	923	1,546	2	-	3	3	1		10	4	-	1,560
Total Person Trips																
Superdistrict 1	351	210	32	22	415	1,031	3	-	4	4	1		13	2	-	1,047
Superdistrict 2	52	297	54	33	420	856	4	-	5	5	2		16	2	-	874
Superdistrict 3	281	239	42	30	253	845	4	-	5	6	1		17	1	-	863
Superdistrict 4	52	217	42	26	215	552	3	-	4	4	1		12	1	-	565
East Bay	132	424	84	51	343	1,035	6	-	7	8	3		24	2	-	1,060
North Bay	12	123	23	14	151	323	2	-	2	2	1		7	1	-	330
South Bay	313	271	54	33	219	889	4	-	5	5	2		15	1	-	905
Outside of Bay Area	-	105	7	4	606	722	3	-	1	1	1		5	3	-	730
All Origins	1,193	1,885	338	214	2,623	6,252	30	-	32	35	12		109	12	-	6,373
Vehicle Trips																
Superdistrict 1	64	20	3	2	24	114	1	-	0	0	0		2	0	-	116
Superdistrict 2	9	71	14	8	67	170	1	-	1	-	0		4	0	-	174
Superdistrict 3	52	69	13	9	43	185	1	-	2	2	0		5	0	-	191
Superdistrict 4	9	58	11	7	48	134	1	-	1	1	0		3	0	-	137
East Bay	48	53	10	6	65	182	1	-	1	1	0		3	0	-	186
North Bay	7	39	7	4	56	114	1	-	1	1	0		2	0	-	116
South Bay	119	122	25	15	57	339	2	-	2	2	1		7	0	-	346
Outside of Bay Area	-	18	2	1	69	91	3	-	0	0	0		3	0	-	94
All Origins	310	450	86	54	428	1,328	11	-	8	8	3		30	2	-	1,360

Mission Rock Mixed-Use Project

PROJECT VARIANT 1 - Event Center at SWL 337

EXTERNAL ONLY TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday PM Peak Hour																
Auto Person Trips																
Superdistrict 1	36	13	13	39	21	122	1	4	6	3	0		14	0	20	157
Superdistrict 2	13	90	30	95	122	349	2	7	6	3	1		18	0	20	388
Superdistrict 3	28	44	10	71	39	193	2	8	5	2	0		17	0	29	239
Superdistrict 4	13	87	17	65	83	264	1	4	3	2	1		11	0	24	299
East Bay	65	162	63	114	146	551	3	8	13	6	1		30	0	98	680
North Bay	10	65	34	75	97	281	1	5	7	3	0		17	0	47	345
South Bay	160	150	87	92	118	608	2	6	18	8	1		36	0	105	749
Outside of Bay Area	-	39	201	154	199	594	3	11	41	19	0		74	1	7	676
All Origins	325	651	455	705	826	2,963	14	54	100	45	4		217	3	351	3,534
Transit Person Trips																
Superdistrict 1	68	31	11	53	29	191	1	6	5	2	0		15	0	35	241
Superdistrict 2	24	172	37	108	139	480	3	7	8	3	1		22	0	32	535
Superdistrict 3	54	58	8	69	38	228	2	7	4	2	0		15	0	31	274
Superdistrict 4	24	108	18	52	67	269	2	3	4	2	1		11	0	21	301
East Bay	80	219	43	67	86	494	4	4	9	4	1		22	0	95	612
North Bay	5	47	14	12	16	94	1	1	3	1	0		6	0	23	122
South Bay	190	101	19	40	52	402	2	3	4	2	1		11	0	47	460
Outside of Bay Area	-	32	46	104	134	316	0	8	9	4	0		22	0	10	348
All Origins	446	768	196	505	559	2,474	14	39	45	21	5		123	2	293	2,892
Walk/Other Person Trips																
Superdistrict 1	72	55	48	209	116	499	1	23	23	11	0		59	1	28	587
Superdistrict 2	26	22	39	95	122	303	0	7	8	4	0		19	0	4	326
Superdistrict 3	58	10	14	43	24	148	0	5	7	3	0		15	0	8	171
Superdistrict 4	26	13	14	36	46	134	0	3	3	1	0		7	0	2	143
East Bay	15	23	60	63	81	242	0	5	12	6	0		23	0	5	270
North Bay	-	5	25	20	25	76	0	1	5	2	0		9	0	0	85
South Bay	30	7	14	23	29	103	0	2	3	1	0		6	0	2	111
Outside of Bay Area	-	29	296	171	220	717	0	13	61	28	0		101	1	4	823
All Origins	226	163	509	660	663	2,221	2	58	122	55	1		238	3	53	2,516
Total Person Trips																
Superdistrict 1	175	99	71	301	166	813	3	33	35	16	1		88	1	82	985
Superdistrict 2	63	284	106	298	383	1,133	4	21	22	10	2		59	1	56	1,249
Superdistrict 3	140	112	32	183	101	569	4	20	16	7	1		47	1	67	684
Superdistrict 4	63	207	48	152	196	667	3	11	10	4	1		29	1	46	743
East Bay	160	405	166	243	313	1,287	6	17	34	15	2		75	1	199	1,562
North Bay	15	117	73	107	138	450	2	8	15	7	1		32	0	70	553
South Bay	381	258	120	155	199	1,113	4	11	25	11	2		52	1	154	1,320
Outside of Bay Area	-	100	544	430	553	1,626	3	32	111	51	1		197	2	21	1,847
All Origins	997	1,583	1,160	1,869	2,048	7,658	30	150	267	122	10		579	8	697	8,942
Vehicle Trips																
Superdistrict 1	32	9	8	17	10	76	1	2	4	2	0		8	0	10	94
Superdistrict 2	12	68	19	47	61	206	1	3	4	2	0		11	0	14	230
Superdistrict 3	26	32	5	31	17	111	1	3	3	1	0		8	0	19	139
Superdistrict 4	12	55	11	34	44	156	1	2	2	1	0		7	0	13	176
East Bay	59	51	26	46	59	241	1	3	5	2	0		12	0	35	288
North Bay	9	37	15	40	51	152	1	3	3	1	0		8	0	20	180
South Bay	145	116	33	40	52	386	2	3	7	3	1		15	0	50	451
Outside of Bay Area	-	17	65	49	63	194	3	4	13	6	0		26	0	3	223
All Origins	293	387	182	304	356	1,523	11	23	41	19	2		95	1	162	1,781

Mission Rock Mixed-Use Project

PROJECT VARIANT 1 - Event Center at SWL 337

EXTERNAL VEHICLE TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday AM Peak Hour																
Superdistrict 1																
Work Vehicle Trips	32	17	3	2	1	56	0		0	0	0		1	0	-	57
Non-work Vehicle Trips	32	3	-	-	23	58	0		-	-	0		0	0	-	59
Total	64	20	3	2	24	114	1		0	0	0		2	0	-	116
Inbound	21	18	3	2	12	58	0		0	0	0		1	0	-	60
Outbound	43	2	-	-	11	56	0		-	-	0		0	0	-	56
Total	64	20	3	2	24	114	1		0	0	0		2	0	-	116
Superdistrict 2																
Work Vehicle Trips	5	64	14	8	4	95	1	-	1		0		3	0	-	98
Non-work Vehicle Trips	5	8	-	-	62	74	0	-	-	-	0		0	0	-	75
Total	9	71	14	8	67	170	1	-	1	-	0		3	0	-	173
Inbound	3	67	14	8	35	128	1	-	1	-	0		3	0	-	131
Outbound	6	4	-	-	31	41	0	-	-	-	0		0	0	-	42
Total	9	71	14	8	67	170	1	-	1	-	0		3	0	-	173
Superdistrict 3																
Work Vehicle Trips	26	63	13	9	4	115	1		2	2	0		5	0	-	120
Non-work Vehicle Trips	26	5	-	-	39	70	0		-	-	0		0	0	-	70
Total	52	69	13	9	43	185	1		2	2	0		5	0	-	191
Inbound	17	66	13	9	23	129	1		2	2	0		5	0	-	134
Outbound	34	3	-	-	19	56	0		-	-	0		0	0	-	57
Total	52	69	13	9	43	185	1		2	2	0		5	0	-	191
Superdistrict 4																
Work Vehicle Trips	5	52	11	7	4	79	1	-	1	1	0		3	0	-	83
Non-work Vehicle Trips	5	5	-	-	44	55	0	-	-	-	0		0	0	-	55
Total	9	58	11	7	48	134	1	-	1	1	0		3	0	-	137
Inbound	3	55	11	7	26	103	1	-	1	1	0		3	0	-	106
Outbound	6	3	-	-	22	31	0	-	-	-	0		0	0	-	32
Total	9	58	11	7	48	134	1	-	1	1	0		3	0	-	137
East Bay																
Work Vehicle Trips	24	46	10	6	3	89	1	-	1	1	0		3	0	-	92
Non-work Vehicle Trips	24	8	-	-	62	93	0	-	-	-	0		0	0	-	94
Total	48	53	10	6	65	182	1	-	1	1	0		3	0	-	186
Inbound	16	49	10	6	34	116	1	-	1	1	0		3	0	-	118
Outbound	32	4	-	-	31	67	0	-	-	-	0		0	0	-	67
Total	48	53	10	6	65	182	1	-	1	1	0		3	0	-	186
North Bay																
Work Vehicle Trips	4	33	7	4	2	50	1	-	1	1	0		2	0	-	52
Non-work Vehicle Trips	4	7	-	-	54	64	0	-	-	-	0		0	0	-	64
Total	7	39	7	4	56	114	1	-	1	1	0		2	0	-	116
Inbound	2	36	7	4	29	79	1	-	1	1	0		2	0	-	81
Outbound	5	3	-	-	27	35	0	-	-	-	0		0	0	-	35
Total	7	39	7	4	56	114	1	-	1	1	0		2	0	-	116
South Bay																
Work Vehicle Trips	60	116	25	15	8	224	2	-	2	2	1		7	0	-	231
Non-work Vehicle Trips	60	6	-	-	49	114	0	-	-	-	0		0	0	-	115
Total	119	122	25	15	57	339	2	-	2	2	1		7	0	-	346
Inbound	40	119	25	15	32	232	2	-	2	2	1		7	0	-	239
Outbound	79	3	-	-	24	107	0	-	-	-	0		0	0	-	107
Total	119	122	25	15	57	339	2	-	2	2	1		7	0	-	346
Outside of Bay Area																
Work Vehicle Trips	-	10	2	1	1	14	0	-	0	0	0		1	0	-	15
Non-work Vehicle Trips	-	8	-	-	68	77	2	-	-	-	0		3	0	-	80
Total	-	18	2	1	69	91	3	-	0	0	0		3	0	-	94
Inbound	-	14	2	1	35	52	1	-	0	0	0		2	0	-	54
Outbound	-	4	-	-	34	38	1	-	-	-	0		1	0	-	40
Total	-	18	2	1	69	91	3	-	0	0	0		3	0	-	94

Mission Rock Mixed-Use Project

PROJECT VARIANT 1 - Event Center at SWL 337

EXTERNAL VEHICLE TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday PM Peak Hour																
Superdistrict 1																
Work Vehicle Trips	16	8	0	1	0	25	0	-	0	0	0		1	0	4	30
Non-work Vehicle Trips	16	1	8	17	9	51	0	2	4	2	0		8	0	6	64
Total	32	9	8	17	10	76	1	2	4	2	0		8	0	10	94
Inbound	21	1	4	8	5	39	0	1	2	1	0		4	0	-	43
Outbound	11	9	4	9	5	37	0	1	2	1	0		4	0	10	51
Total	32	9	8	17	10	76	1	2	4	2	0		8	0	10	94
Superdistrict 2																
Work Vehicle Trips	6	61	2	3	4	76	1	-	0	0	0		2	0	11	89
Non-work Vehicle Trips	6	7	16	44	57	130	0	3	3	2	0		9	0	3	141
Total	12	68	19	47	61	206	1	3	4	2	0		11	0	14	230
Inbound	8	4	8	22	28	70	0	2	2	1	0		4	0	-	74
Outbound	4	64	10	25	32	136	1	2	2	1	0		6	0	14	156
Total	12	68	19	47	61	206	1	3	4	2	0		11	0	14	230
Superdistrict 3																
Work Vehicle Trips	13	30	1	3	2	48	1	-	0	0	0		2	0	15	65
Non-work Vehicle Trips	13	2	4	28	16	63	0	3	2	1	0		6	0	3	73
Total	26	32	5	31	17	111	1	3	3	1	0		8	0	19	139
Inbound	17	1	2	14	8	42	0	2	1	0	0		3	0	-	46
Outbound	9	31	3	17	9	69	1	2	1	1	0		5	0	19	93
Total	26	32	5	31	17	111	1	3	3	1	0		8	0	19	139
Superdistrict 4																
Work Vehicle Trips	6	50	2	3	3	64	1	-	0	0	0		2	0	9	74
Non-work Vehicle Trips	6	5	9	31	40	92	0	2	2	1	0		5	0	4	101
Total	12	55	11	34	44	156	1	2	2	1	0		7	0	13	176
Inbound	8	3	5	16	20	51	0	1	1	0	0		3	0	-	54
Outbound	4	53	6	18	24	105	1	1	1	1	0		4	0	13	122
Total	12	55	11	34	44	156	1	2	2	1	0		7	0	13	176
East Bay																
Work Vehicle Trips	29	44	2	2	3	80	1	-	0	0	0		1	0	8	89
Non-work Vehicle Trips	29	7	25	44	56	161	0	3	5	2	0		11	0	27	199
Total	59	51	26	46	59	241	1	3	5	2	0		12	0	35	288
Inbound	39	4	12	22	28	105	0	2	3	1	0		6	0	-	111
Outbound	20	47	14	24	31	136	1	2	3	1	0		7	0	35	177
Total	59	51	26	46	59	241	1	3	5	2	0		12	0	35	288
North Bay																
Work Vehicle Trips	5	31	1	2	2	40	1	-	0	0	0		1	0	6	47
Non-work Vehicle Trips	5	6	14	38	49	112	0	3	3	1	0		7	0	14	133
Total	9	37	15	40	51	152	1	3	3	1	0		8	0	20	180
Inbound	6	3	7	19	24	60	0	1	1	1	0		4	0	-	63
Outbound	3	34	8	21	26	92	1	1	2	1	0		5	0	20	117
Total	9	37	15	40	51	152	1	3	3	1	0		8	0	20	180
South Bay																
Work Vehicle Trips	72	111	4	6	7	200	2	-	1	0	1		4	0	20	224
Non-work Vehicle Trips	72	6	29	35	44	186	0	3	6	3	0		11	0	30	227
Total	145	116	33	40	52	386	2	3	7	3	1		15	0	50	451
Inbound	96	3	14	17	22	153	0	1	3	1	0		6	0	-	159
Outbound	48	114	18	23	30	233	2	1	4	2	1		9	0	50	292
Total	145	116	33	40	52	386	2	3	7	3	1		15	0	50	451
Outside of Bay Area																
Work Vehicle Trips	-	9	0	0	1	11	0	-	0	0	0		0	0	2	13
Non-work Vehicle Trips	-	8	64	48	62	183	2	4	13	6	0		25	0	2	210
Total	-	17	65	49	63	194	3	4	13	6	0		26	0	3	223
Inbound	-	13	33	25	32	102	1	2	7	3	0		13	0	3	119
Outbound	-	4	32	24	31	92	1	2	7	3	0		13	0	-	104
Total	-	17	65	49	63	194	3	4	13	6	0		26	0	3	223

Mission Rock Mixed-Use Project

PROJECT VARIANT 1 - Event Center at SWL 337

EXTERNAL VEHICLE TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday AM Peak Hour																
Inbound																
Superdistrict 1	21	18	3	2	12	58	0	-	0	0	0	-	1	0	-	60
Superdistrict 2	3	67	14	8	35	128	1	-	1	-	0	-	3	0	-	131
Superdistrict 3	17	66	13	9	23	129	1	-	2	2	0	-	5	0	-	134
Superdistrict 4	3	55	11	7	26	103	1	-	1	1	0	-	3	0	-	106
East Bay	16	49	10	6	34	116	1	-	1	1	0	-	3	0	-	118
North Bay	2	36	7	4	29	79	1	-	1	1	0	-	2	0	-	81
South Bay	40	119	25	15	32	232	2	-	2	2	1	-	7	0	-	239
Outside of Bay Area	-	14	2	1	35	52	1	-	0	0	0	-	2	0	-	54
All Origins	103	425	86	54	228	897	7	-	8	8	3	-	26	1	-	923
Outbound																
Superdistrict 1	43	2	-	-	11	56	0	-	-	-	0	-	0	0	-	56
Superdistrict 2	6	4	-	-	31	41	0	-	-	-	0	-	0	0	-	42
Superdistrict 3	34	3	-	-	19	56	0	-	-	-	0	-	0	0	-	57
Superdistrict 4	6	3	-	-	22	31	0	-	-	-	0	-	0	0	-	32
East Bay	32	4	-	-	31	67	0	-	-	-	0	-	0	0	-	67
North Bay	5	3	-	-	27	35	0	-	-	-	0	-	0	0	-	35
South Bay	79	3	-	-	24	107	0	-	-	-	0	-	0	0	-	107
Outside of Bay Area	-	4	-	-	34	38	1	-	-	-	0	-	1	0	-	40
All Origins	207	25	-	-	200	432	3	-	-	-	0	-	3	1	-	436
Total																
Superdistrict 1	64	20	3	2	24	114	1	-	0	0	0	-	2	0	-	116
Superdistrict 2	9	71	14	8	67	170	1	-	1	-	0	-	3	0	-	173
Superdistrict 3	52	69	13	9	43	185	1	-	2	2	0	-	5	0	-	191
Superdistrict 4	9	58	11	7	48	134	1	-	1	1	0	-	3	0	-	137
East Bay	48	53	10	6	65	182	1	-	1	1	0	-	3	0	-	186
North Bay	7	39	7	4	56	114	1	-	1	1	0	-	2	0	-	116
South Bay	119	122	25	15	57	339	2	-	2	2	1	-	7	0	-	346
Outside of Bay Area	-	18	2	1	69	91	3	-	0	0	0	-	3	0	-	94
All Origins	310	450	86	54	428	1,328	11	-	8	8	3	-	29	2	-	1,359
Weekday PM Peak Hour																
Inbound																
Superdistrict 1	21	1	4	8	5	39	0	1	2	1	0	-	4	0	-	43
Superdistrict 2	8	4	8	22	28	70	0	2	2	1	0	-	4	0	-	74
Superdistrict 3	17	1	2	14	8	42	0	2	1	0	0	-	3	0	-	46
Superdistrict 4	8	3	5	16	20	51	0	1	1	0	0	-	3	0	-	54
East Bay	39	4	12	22	28	105	0	2	3	1	0	-	6	0	-	111
North Bay	6	3	7	19	24	60	0	1	1	1	0	-	4	0	-	63
South Bay	96	3	14	17	22	153	0	1	3	1	0	-	6	0	-	159
Outside of Bay Area	-	13	33	25	32	102	1	2	7	3	0	-	13	0	3	119
All Origins	196	31	85	143	167	623	3	11	19	9	0	-	43	1	3	670
Outbound																
Superdistrict 1	11	9	4	9	5	37	0	1	2	1	0	-	4	0	10	51
Superdistrict 2	4	64	10	25	32	136	1	2	2	1	0	-	6	0	14	156
Superdistrict 3	9	31	3	17	9	69	1	2	1	1	0	-	5	0	19	93
Superdistrict 4	4	53	6	18	24	105	1	1	1	1	0	-	4	0	13	122
East Bay	20	47	14	24	31	136	1	2	3	1	0	-	7	0	35	177
North Bay	3	34	8	21	26	92	1	1	2	1	0	-	5	0	20	117
South Bay	48	114	18	23	30	233	2	1	4	2	1	-	9	0	50	292
Outside of Bay Area	-	4	32	24	31	92	1	2	7	3	0	-	13	0	-	104
All Origins	98	356	97	161	188	900	7	11	22	10	2	-	52	1	159	1,112
Total																
Superdistrict 1	32	9	8	17	10	76	1	2	4	2	0	-	8	0	10	94
Superdistrict 2	12	68	19	47	61	206	1	3	4	2	0	-	11	0	14	230
Superdistrict 3	26	32	5	31	17	111	1	3	3	1	0	-	8	0	19	139
Superdistrict 4	12	55	11	34	44	156	1	2	2	1	0	-	7	0	13	176
East Bay	59	51	26	46	59	241	1	3	5	2	0	-	12	0	35	288
North Bay	9	37	15	40	51	152	1	3	3	1	0	-	8	0	20	180
South Bay	145	116	33	40	52	386	2	3	7	3	1	-	15	0	50	451
Outside of Bay Area	-	17	65	49	63	194	3	4	13	6	0	-	26	0	3	223
All Origins	293	387	182	304	356	1,523	11	23	41	19	2	-	95	1	162	1,781

Mission Rock Mixed-Use Project
PROJECT VARIANT 1 - Event Center at SWL 337

EXTERNAL PLUS INTERNAL WORK ONLY TRIPS FOR SD1 AND SD3 BEFORE ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday Daily																
Superdistrict 1																
Auto Person Trips	244	148	11	11	14	428	4	-	2	1	1		7	0	12	448
Transit Person Trips	463	386	30	29	37	946	10	-	4	3	2		20	0	30	996
Walk/Other Person Trips	492	539	41	40	52	1,164	14	-	6	4	3		27	0	42	1,234
Total Person Trips	1,199	1,073	82	81	104	2,538	29	-	11	8	7		54	1	84	2,678
Auto %	20%	14%	14%	14%	14%	17%	14%	0%	14%	14%	14%	0%	14%	14%	14%	17%
Transit %	39%	36%	36%	36%	36%	37%	36%	0%	36%	36%	36%	0%	36%	36%	36%	37%
Walk/Other %	41%	50%	50%	50%	50%	46%	50%	0%	50%	50%	50%	0%	50%	50%	50%	46%
Total %	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	0%	100%	100%	100%	100%
% Work Person Trips	33%	25%	3%	2%	2%	14%	79%	0%	3%	3%	25%	0%	6%	2%	9%	13%
% Non-Work Person Trips	67%	75%	97%	98%	98%	86%	21%	100%	97%	97%	75%	100%	94%	98%	91%	87%
Vehicle Trips	220	116	9	9	11	364	3	-	1	1	1		6	0	9	379
Average Vehicle Occupancy	1.11	1.28	1.28	1.28	1.28	1.18	1.28	-	1.28	1.28	1.28		1.28	1.28	1.28	1.18
% Work Vehicle Trips	33%	39%	3%	4%	4%	21%	29%	0%	3%	3%	39%		6%	4%	8%	19%
% Non-Work Vehicle Trips	67%	61%	97%	96%	96%	79%	71%	100%	97%	97%	61%		94%	96%	92%	81%
Superdistrict 3																
Auto Person Trips	195	563	43	42	54	898	15	-	6	4	3		28	0	44	971
Transit Person Trips	371	775	60	58	75	1,338	21	-	8	6	5		39	0	61	1,439
Walk/Other Person Trips	394	87	7	7	8	502	2	-	1	1	1		4	0	7	513
Total Person Trips	959	1,425	110	107	138	2,738	38	-	15	10	9		72	1	112	2,923
Auto %	20%	40%	40%	40%	40%	33%	40%	0%	40%	40%	40%		40%	40%	40%	33%
Transit %	39%	54%	54%	54%	54%	49%	54%	0%	54%	54%	54%		54%	54%	54%	49%
Walk/Other %	41%	6%	6%	6%	6%	18%	6%	0%	6%	6%	6%		6%	6%	6%	18%
Total %	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%		100%	100%	100%	100%
% Work Person Trips	33%	42%	8%	5%	5%	22%	94%	0%	8%	8%	42%		14%	5%	25%	22%
% Non-Work Person Trips	67%	58%	92%	95%	95%	78%	6%	100%	92%	92%	58%		86%	95%	75%	78%
Vehicle Trips	176	436	34	33	42	721	12	-	5	3	3		22	0	34	777
Average Vehicle Occupancy	1.11	1.29	1.29	1.29	1.29	1.25	1.29	-	1.29	1.29	1.29		1.29	1.29	1.29	1.25
% Work Vehicle Trips	33%	58%	15%	9%	9%	31%	84%	0%	15%	15%	58%		25%	9%	35%	31%
% Non-Work Vehicle Trips	67%	42%	85%	91%	91%	69%	16%	100%	85%	85%	42%		75%	91%	65%	69%
Superdistrict 1 plus Superdistrict 3																
Auto Person Trips	439	711	55	53	69	1,326	19	-	7	5	4		36	0	56	1,418
Transit Person Trips	834	1,161	89	87	112	2,284	31	-	12	8	7		59	1	91	2,435
Walk/Other Person Trips	886	625	48	47	60	1,666	17	-	7	4	4		32	0	49	1,748
Total Person Trips	2,158	2,497	192	188	241	5,276	67	-	26	18	15		126	1	197	5,601
% Person Trips in Superdistrict 1	56%	43%	43%	43%	43%	48%	43%	0%	43%	43%	43%		43%	43%	43%	48%
% Person Trips in Superdistrict 3	44%	57%	57%	57%	57%	52%	57%	0%	57%	57%	57%		57%	57%	57%	52%
Vehicle Trips	396	552	42	41	53	1,085	15	-	6	4	3		28	0	43	1,157

Mission Rock Mixed-Use Project

PROJECT VARIANT 1 - Event Center at SWL 337

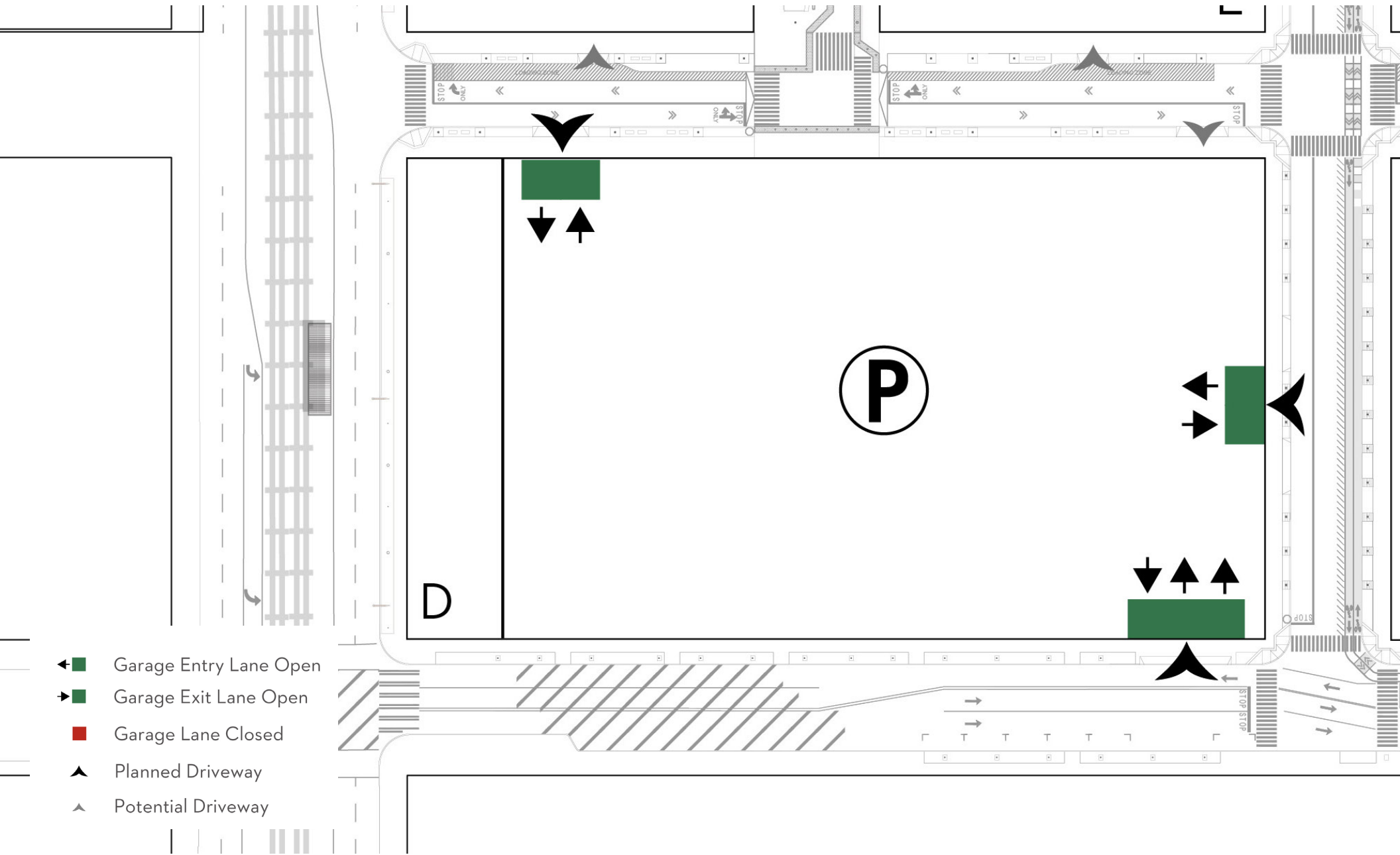
EXTERNAL WORK ONLY TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Weekday Daily																
Superdistrict 1																
Auto Person Trips	95	131	9	9	8	252	3	-	1	1	1		6	0	12	270
Transit Person Trips	181	342	23	23	21	590	9	-	3	2	2		16	0	30	637
Walk/Other Person Trips	192	477	32	32	29	763	12	-	4	3	3		22	0	42	827
Total Person Trips	469	949	64	65	58	1,605	24	-	9	6	6		44	0	84	1,734
Vehicle Trips	86	102	7	7	6	208	3	-	1	1	1		5	0	9	222
Superdistrict 2																
Auto Person Trips	24	381	29	29	37	501	10	-	4	3	2		19	0	30	550
Transit Person Trips	46	794	61	60	77	1,038	21	-	8	6	5		40	0	63	1,141
Walk/Other Person Trips	49	31	2	2	3	88	1	-	0	0	0		2	0	2	92
Total Person Trips	120	1,207	93	91	117	1,627	32	-	13	9	7		61	1	95	1,783
Vehicle Trips	22	310	24	23	30	409	8	-	3	2	2		16	0	24	449
Superdistrict 3																
Auto Person Trips	76	452	14	24	3	568	12	-	2	1	3		18	0	44	630
Transit Person Trips	145	622	19	33	3	822	16	-	3	2	4		25	0	61	908
Walk/Other Person Trips	154	70	2	4	0	230	2	-	0	0	0		3	0	7	239
Total Person Trips	375	1,143	35	61	6	1,620	30	-	5	3	7		45	0	112	1,778
Vehicle Trips	69	350	11	19	2	450	9	-	1	1	2		14	0	34	498
Superdistrict 4																
Auto Person Trips	24	391	30	29	38	513	11	-	4	3	2		20	0	31	564
Transit Person Trips	46	512	39	38	49	685	14	-	5	4	3		26	0	40	751
Walk/Other Person Trips	49	36	3	3	3	94	1	-	0	0	0		2	0	3	98
Total Person Trips	120	939	72	70	91	1,292	25	-	10	7	6		48	0	74	1,414
Vehicle Trips	22	256	20	19	25	341	7	-	3	2	2		13	0	20	375
East Bay																
Auto Person Trips	124	740	57	56	71	1,048	20	-	8	5	5		37	0	58	1,144
Transit Person Trips	153	1,070	82	80	103	1,489	29	-	11	8	7		54	1	84	1,628
Walk/Other Person Trips	29	68	5	5	7	113	2	-	1	0	0		3	0	5	122
Total Person Trips	306	1,877	144	141	181	2,650	50	-	20	13	11		95	1	148	2,893
Vehicle Trips	112	222	17	17	21	389	6	-	2	2	1		11	0	17	418
North Bay																
Auto Person Trips	19	270	21	20	26	356	7	-	3	2	2		14	0	21	391
Transit Person Trips	10	232	18	17	22	299	6	-	2	2	1		12	0	18	329
Walk/Other Person Trips	-	10	1	1	1	12	0	-	0	0	0		0	0	1	13
Total Person Trips	29	511	39	38	49	667	14	-	5	4	3		26	0	40	733
Vehicle Trips	17	159	12	12	15	215	4	-	2	1	1		8	0	13	236
South Bay																
Auto Person Trips	306	695	53	52	67	1,174	19	-	7	5	4		35	0	55	1,264
Transit Person Trips	363	488	38	37	47	972	13	-	5	3	3		25	0	38	1,035
Walk/Other Person Trips	57	16	1	1	2	77	0	-	0	0	0		1	0	1	79
Total Person Trips	726	1,198	92	90	116	2,222	32	-	13	9	7		61	1	94	2,378
Vehicle Trips	276	565	43	42	55	982	15	-	6	4	3		29	0	45	1,055
Outside Bay Area																
Auto Person Trips	-	72	6	5	7	90	2	-	1	1	0		4	0	6	99
Transit Person Trips	-	75	6	6	7	94	2	-	1	1	0		4	0	6	104
Walk/Other Person Trips	-	3	0	0	0	4	0	-	0	0	0		0	0	0	5
Total Person Trips	-	151	12	11	15	188	4	-	2	1	1		8	0	12	208
Vehicle Trips	-	48	4	4	5	60	1	-	1	0	0		2	0	4	66
All Origins																
Auto Person Trips	669	3,132	219	224	257	4,501	84	-	30	20	19		153	1	257	4,912
Transit Person Trips	944	4,134	286	294	331	5,989	110	-	39	27	25		201	2	341	6,533
Walk/Other Person Trips	531	710	47	48	45	1,381	18	-	6	4	4		33	0	62	1,476
Total Person Trips	2,144	7,976	551	567	633	11,871	212	-	75	51	49		387	4	660	12,922
Vehicle Trips	604	2,012	137	143	159	3,056	54	-	19	13	12		98	1	166	3,320

Mission Rock Mixed-Use Project
PROJECT VARIANT 1 - Event Center at SWL 337

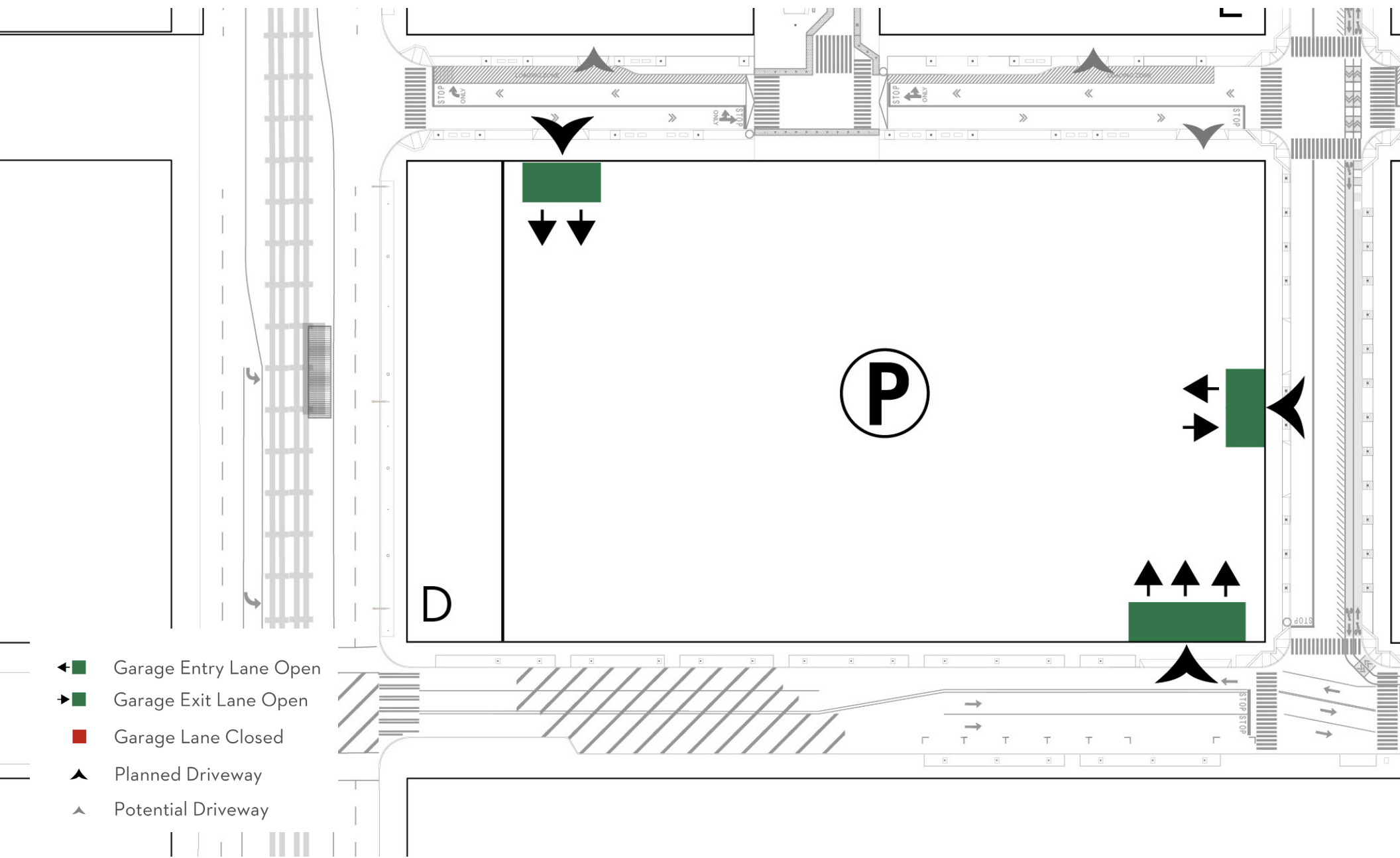
PARKING DEMAND	SEAWALL LOT 337						PIER 48							China Basin Park Open Space	Event Center	TOTAL DEVELOPMENT
	Residential	Office	General Retail	Quality Restaurant	Quick Serv Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhib	Brewery Qual Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48			
Midday Period (Noon to 2 PM) Peak Parking Demand																
SHORT-TERM DEMAND																
Daily visitors vehicle trips		2,195	2,089	2,144	2,538	8,965		151	285	195	13		645	14	1,690	11,314
Turnover rate (vehicles per space)		5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5		5.4	5.5	1.0	3.3
Peak short-term demand (spaces)		200	190	195	231	816		14	26	18	2		60	2	846	1,724
% of peak demand during period (ULI)		100%	100%	75%	100%	94%		100%	100%	100%	100%		100%	100%	0%	48%
Total short-term demand (spaces)		200	190	147	231	768		14	26	18	2		60	2	-	830
LONG-TERM DEMAND																
Residential Demand																
Peak parking demand (spaces per unit)	1.50															
Peak parking demand (spaces)	1,572					1,572							-			1,572
% of peak demand during period (SF Guidelines)	80%					80%							0%			80%
Subtotal long-term demand (spaces)	1,258					1,258							-			1,258
Employee Demand																
Average gsf per employee		276	350	350	240				350	350	276			10		
Number of daytime employees		4,660	307	225	140	5,332	75		31	29	29		164	1	300	5,796
% of employees who drive		39%	40%	40%	41%	39%	39%		40%	40%	39%		40%	40%	39%	39%
Number of employees who drive		1,830	122	89	57	2,098	30		12	11	11		65	0	117	2,279
Average employee vehicle occupancy		1.56	1.59	1.57	1.62	1.56	1.56		1.59	1.59	1.56		1.47	1.57	1.54	1.55
Peak parking demand (spaces)		1,176	77	57	36	1,346	20		8	8	8		44	1	76	1,467
% of peak demand during period (ULI)		100%	100%	90%	100%	100%	100%		90%	100%	100%		100%	100%	0%	94%
Subtotal long-term demand (spaces)		1,176	77	52	36	1,341	20		8	8	8		44	1	-	1,386
Total long-term demand (spaces)	1,258	1,176	77	52	36	2,599	20	-	8	8	8		44	1	-	2,644
TOTAL PARKING DEMAND (spaces)	1,258	1,376	267	199	267	3,367	20	14	34	26	10		104	3	-	3,474
Evening Period (7 PM to 9 PM) Peak Parking Demand - NO SF GIANTS GAME																
SHORT-TERM DEMAND																
Daily visitors vehicle trips		2,195	2,089	2,144	2,538	8,965		151	285	195	13		645	14	1,690	11,314
Turnover rate (vehicles per space)		5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5		5.4	5.5	1.0	3.3
Peak short-term demand (spaces)		200	190	195	231	816		14	26	18	2		60	2	846	1,724
% of peak demand during period (ULI)		5%	90%	100%	80%	69%		90%	100%	90%	5%		95%	50%	100%	85%
Total short-term demand (spaces)		10	171	195	185	561		13	26	17	1		57	1	846	1,465
LONG-TERM DEMAND																
Residential Demand																
Peak parking demand (spaces per unit)	1.50															
Peak parking demand (spaces)	1,572					1,572							-			1,572
% of peak demand during period (SF Guidelines)	100%					100%							0%			100%
Subtotal long-term demand (spaces)	1,572					1,572							-			1,572
Employee Demand																
Average gsf per employee		276	350	350	240				350	350	276			10		
Number of daytime employees		4,660	307	225	140	5,332	75		31	29	29		164	1	300	5,796
% of employees who drive		39%	40%	40%	41%	39%	39%		40%	40%	39%		40%	40%	39%	39%
Number of employees who drive		1,830	122	89	57	2,098	30		12	11	11		65	0	117	2,279
Average employee vehicle occupancy		1.56	1.59	1.57	1.62	1.56	1.56		1.59	1.59	1.56		1.47	1.57	1.54	1.55
Peak parking demand (spaces)		1,176	77	57	36	1,346	20		8	8	8		44	1	76	1,467
% of peak demand during period (ULI)		10%	100%	100%	90%	21%	100%		100%	100%	10%		84%	100%	100%	27%
Subtotal long-term demand (spaces)		118	77	57	33	285	20		8	8	1		37	1	76	399
Total long-term demand (spaces)	1,572	118	77	57	33	1,857	20	-	8	8	1		37	1	76	1,971
TOTAL PARKING DEMAND (spaces)	1,572	128	248	252	218	2,418	20	13	34	25	2		94	2	922	3,436

Variant 3 (reconfigured parking-single garage) – Entry-Exit Lane Configurations

One Garage: Typical Conditions



One Garage: Pregame



One Garage Postgame



Variant 4 (hotel at SWL 337) – Trip Generation

Scenario A = Maximum Commercial Scenario

Mission Rock Mixed-Use Project
HOTEL ALTERNATIVE (Based on Scenario A)

LAND USES	SEAWALL LOT 337							PIER 48							China Basin Park Open Space	TOTAL DEVELOPMENT
	Residential 847,514 gsf 848 units	Hotel 200,000 gsf 300 rooms	Office 1,361,181 gsf	General Retail 122,388 gsf	Quality Restaurant 85,672 gsf	Quick Service Restaurant 36,717 gsf	Subtotal SWL 337 2,653,472 gsf	Brewery / Distillery 190,500 gsf 75 employees	Brewery Retail Exhibition 11,000 gsf 500 visitors	Brewery Quality Restaurant 11,000 gsf	Mezzanine Retail 10,000 gsf	Mezzanine Office 7,875 gsf	Mezzanine Production 9,625 gsf	Subtotal Pier 48 240,000 gsf		

INTERNAL AND EXTERNAL TRIP GENERATION RATES	SEAWALL LOT 337							PIER 48							China Basin Park Open Space	TOTAL DEVELOPMENT
	Residential	Hotel	Office	General Retail	Quality Restaurant	Quick Service Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhibition	Brewery Quality Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48		
Daily Trip Rate (per d.u. / per room / per 1,000 gsf)	10.0	7.0	18.1	150.0	200.0	600.0	35.0	1.6	90.9	200.0	150.0	18.1		21.4	0.46	33.9
AM Peak Hour as % of daily	14.2%	8.8%	8.9%	2.3%	1.5%	14.8%	8.1%	10.6%	0.0%	1.5%	2.3%	8.9%		2.2%	13.0%	7.8%
AM Peak Hour Trip Rate (per d.u. / per room / per 1,000)	1.42	0.62	1.61	3.49	2.92	88.89	2.84	0.17	0.00	2.92	3.49	1.61		0.47	0.06	2.64
PM Peak Hour as % of daily	17.3%	10.0%	8.5%	9.0%	13.5%	13.5%	11.5%	10.6%	15.0%	13.5%	9.0%	8.5%		12.2%	9.0%	11.6%
PM Peak Hour Trip Rate (per d.u. / per room / per 1,000)	1.73	0.70	1.54	13.50	27.00	81.00	4.04	0.17	13.64	27.00	13.50	1.54		2.61	0.04	3.92
% Modal Share																
Auto	27%	36%	37%	36%	36%	36%	35%	54%	36%	36%	36%	37%		37%	36%	35%
Transit	42%	29%	35%	17%	27%	27%	29%	39%	26%	17%	17%	35%		21%	27%	28%
Walk/Other	31%	35%	28%	47%	37%	37%	36%	7%	38%	47%	47%	28%		42%	37%	36%
Average Vehicle Occupancy Rate																
Weekday Daily	1.11	2.21	1.97	2.38	2.31	2.31	2.06	1.23	2.37	2.38	2.38	1.97		2.19	2.31	2.07
Weekday AM Peak Hour	1.11	1.78	1.63	1.54	1.54	2.31	1.75	1.35	0.00	1.54	1.54	1.63		1.48	2.31	1.75
Weekday PM Peak Hour	1.11	1.78	1.63	2.38	2.31	2.31	1.92	1.35	2.37	2.38	2.38	1.63		2.24	2.31	1.94

INTERNAL AND EXTERNAL TRIPS BY MODE BEFORE ADJUSTMENT	SEAWALL LOT 337							PIER 48							China Basin Park Open Space	TOTAL DEVELOPMENT
	Residential	Hotel	Office	General Retail	Quality Restaurant	Quick Service Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhibition	Brewery Quality Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48		
Weekday Daily																
Auto Person Trips	2,296	760	9,095	6,584	6,155	7,913	32,802	164	358	789	538	53		1,901	37	34,740
Transit Person Trips	3,561	606	8,643	3,141	4,588	5,899	26,436	116	257	376	257	50		1,057	27	27,520
Walk/Other Person Trips	2,624	735	6,900	8,633	6,392	8,218	33,502	21	385	1,035	705	40		2,186	38	35,726
Total Person Trips	8,480	2,100	24,637	18,358	17,134	22,030	92,740	301	1,000	2,200	1,500	143		5,144	102	97,986
Total Vehicle Trips	2,073	343	4,620	2,772	2,661	3,421	15,890	133	151	332	226	27		869	16	16,775
Weekday AM Peak Hour																
Auto Person Trips	327	70	841	166	97	1,172	2,674	15	-	12	14	5		46	5	2,725
Transit Person Trips	507	77	1,037	221	129	874	2,844	14	-	17	18	6		55	4	2,903
Walk/Other Person Trips	373	39	315	40	24	1,218	2,008	3	-	3	3	2		11	5	2,024
Total Person Trips	1,207	186	2,193	428	250	3,264	7,526	32	-	32	35	13		112	13	7,651
Total Vehicle Trips	295	39	515	108	63	507	1,527	11	-	8	9	3		31	2	1,560
Weekday PM Peak Hour																
Auto Person Trips	397	79	804	593	831	1,068	3,772	15	54	107	48	5		228	3	4,003
Transit Person Trips	616	87	990	283	619	796	3,391	14	39	51	23	6		133	2	3,526
Walk/Other Person Trips	454	44	301	777	863	1,109	3,548	3	58	140	63	2		265	3	3,817
Total Person Trips	1,467	210	2,094	1,652	2,313	2,974	10,711	32	150	297	135	12		626	9	11,346
Total Vehicle Trips	359	44	492	249	359	462	1,965	11	23	45	20	3		102	1	2,069

Scenario A = Maximum Commercial Scenario

Mission Rock Mixed-Use Project
HOTEL ALTERNATIVE (Based on Scenario A)

INTERNAL AND EXTERNAL TRIPS INBOUND/OUTBOUND SPLITS	SEAWALL LOT 337							PIER 48							China Basin Park Open Space	TOTAL DEVELOPMENT
	Residential	Hotel	Office	General Retail	Quality Restaurant	Quick Service Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhibition	Brewery Quality Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48		
Weekday AM Peak Hour																
Work																
Inbound	0%	100%	100%	100%	100%	100%		80%		100%	100%	100%			100%	
Outbound	100%	0%	0%	0%	0%	0%		20%		0%	0%	0%			0%	
Non-Work																
Inbound	67%	50%	50%	50%	50%	50%		50%	50%	50%	50%	50%			50%	
Outbound	33%	50%	50%	50%	50%	50%		50%	50%	50%	50%	50%			50%	
Person Trips																
Inbound	33%	80%	92%	100%	100%	52%	66%	76%	0%	100%	100%	92%		92%	52%	66%
Outbound	67%	20%	9%	0%	0%	48%	34%	24%	0%	0%	0%	9%		8%	48%	34%
Inbound	402	148	2,006	428	250	1,697	4,932	24	-	32	35	12		103	7	5,042
Outbound	805	37	186	-	-	1,567	2,595	8	-	-	-	1		9	6	2,610
Total Person Trips	1,207	186	2,193	428	250	3,264	7,526	32	-	32	35	13		112	13	7,651
Vehicle Trips																
Inbound	33%	86%	95%	100%	100%	53%	69%	69%	0%	100%	100%	95%		88%	53%	70%
Outbound	67%	14%	5%	0%	0%	47%	31%	31%	0%	0%	0%	5%		12%	47%	30%
Inbound	98	34	487	108	63	270	1,059	8	-	8	9	3		27	1	1,088
Outbound	197	6	28	-	-	237	467	3	-	-	-	0		4	1	472
Total Vehicle Trips	295	39	515	108	63	507	1,527	11	-	8	9	3		31	2	1,560
Weekday PM Peak Hour																
Work																
Inbound	100%	0%	0%	0%	0%	0%		20%		0%	0%	0%			0%	
Outbound	0%	100%	100%	100%	100%	100%		80%		100%	100%	100%			100%	
Non-Work																
Inbound	33%	50%	50%	50%	50%	50%		50%	50%	50%	50%	50%			50%	
Outbound	67%	50%	50%	50%	50%	50%		50%	50%	50%	50%	50%			50%	
Person Trips																
Inbound	67%	20%	9%	48%	48%	48%	42%	24%	50%	48%	48%	9%		46%	48%	43%
Outbound	33%	80%	92%	52%	52%	52%	58%	76%	50%	52%	52%	92%		54%	52%	57%
Inbound	978	42	178	793	1,110	1,428	4,529	8	75	143	65	1		291	4	4,824
Outbound	489	168	1,916	859	1,203	1,547	6,182	24	75	154	70	11		335	5	6,522
Total Person Trips	1,467	210	2,094	1,652	2,313	2,974	10,711	32	150	297	135	12		626	9	11,346
Vehicle Trips																
Inbound	67%	14%	5%	47%	47%	47%	39%	31%	50%	47%	47%	5%		45%	47%	40%
Outbound	33%	86%	95%	53%	53%	53%	61%	69%	50%	53%	53%	95%		55%	53%	60%
Inbound	239	6	27	116	168	216	773	3	11	21	10	0		45	1	819
Outbound	120	38	465	133	191	246	1,193	8	11	24	11	3		56	1	1,250
Total Vehicle Trips	359	44	492	249	359	462	1,965	11	23	45	20	3		102	1	2,069

Scenario A = Maximum Commercial Scenario

Mission Rock Mixed-Use Project
HOTEL ALTERNATIVE (Based on Scenario A)

MODAL SPLIT SUMMARY FOR INTERNAL AND EXTERNAL TRIPS	SEAWALL LOT 337							PIER 48							China Basin Park Open Space	TOTAL DEVELOPMENT
	Residential	Hotel	Office	General Retail	Quality Restaurant	Quick Service Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhibition	Brewery Quality Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48		
Weekday Daily																
Internal and External before adjustment																
Auto Person Trips	27%	36%	37%	36%	36%	36%	35%	54%	36%	36%	36%	37%		37%	36%	35%
Transit Person Trips	42%	29%	35%	17%	27%	27%	29%	39%	26%	17%	17%	35%		21%	27%	28%
Walk/Other Person Trips	31%	35%	28%	47%	37%	37%	36%	7%	38%	47%	47%	28%		42%	37%	36%
Total Person Trips	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		100%	100%	100%
Internal and External after adjustment																
Auto Person Trips	19%	34%	36%	34%	34%	34%	33%	52%	36%	34%	34%	36%		35%	34%	33%
Transit Person Trips	27%	26%	34%	15%	25%	24%	25%	37%	26%	15%	15%	34%		19%	24%	25%
Walk/Other Person Trips	53%	40%	31%	51%	41%	42%	42%	11%	38%	51%	51%	31%		46%	42%	42%
Total Person Trips	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		100%	100%	100%
External Only Trips																
Auto Person Trips	31%	38%	38%	37%	37%	37%	37%	55%	36%	37%	37%	38%		38%	37%	37%
Transit Person Trips	44%	29%	35%	17%	27%	27%	28%	39%	26%	17%	17%	35%		21%	27%	28%
Walk/Other Person Trips	25%	33%	27%	46%	36%	36%	35%	6%	38%	46%	46%	27%		41%	36%	35%
Total Person Trips	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		100%	100%	100%
AM Peak Hour																
Internal and External before adjustment																
Auto Person Trips	27%	38%	38%	39%	39%	36%	36%	47%	0%	39%	39%	38%		41%	36%	36%
Transit Person Trips	42%	41%	47%	52%	52%	27%	38%	45%	0%	52%	52%	47%		49%	27%	38%
Walk/Other Person Trips	31%	21%	14%	9%	9%	37%	27%	8%	0%	9%	9%	14%		10%	37%	26%
Total Person Trips	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%		100%	100%	100%
Internal and External after adjustment																
Auto Person Trips	23%	35%	36%	37%	37%	35%	33%	45%	0%	39%	39%	36%		40%	34%	34%
Transit Person Trips	34%	38%	43%	48%	49%	26%	35%	43%	0%	52%	52%	43%		48%	24%	35%
Walk/Other Person Trips	43%	27%	21%	15%	13%	40%	32%	12%	0%	9%	9%	21%		11%	42%	32%
Total Person Trips	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%		100%	100%	100%
External Only Trips																
Auto Person Trips	29%	39%	39%	40%	39%	37%	37%	47%	0%	39%	39%	39%		41%	37%	37%
Transit Person Trips	43%	42%	48%	52%	52%	27%	38%	45%	0%	52%	52%	48%		49%	27%	38%
Walk/Other Person Trips	28%	19%	13%	8%	9%	37%	25%	7%	0%	9%	9%	13%		9%	36%	25%
Total Person Trips	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%		100%	100%	100%
PM Peak Hour																
Internal and External before adjustment																
Auto Person Trips	27%	38%	38%	36%	36%	36%	35%	47%	36%	36%	36%	38%		36%	36%	35%
Transit Person Trips	42%	41%	47%	17%	27%	27%	32%	45%	26%	17%	17%	47%		21%	27%	31%
Walk/Other Person Trips	31%	21%	14%	47%	37%	37%	33%	8%	38%	47%	47%	14%		42%	37%	34%
Total Person Trips	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		100%	100%	100%
Internal and External after adjustment																
Auto Person Trips	18%	35%	33%	33%	34%	33%	31%	45%	36%	34%	34%	33%		35%	34%	31%
Transit Person Trips	25%	38%	39%	15%	25%	24%	26%	43%	26%	15%	15%	39%		20%	24%	26%
Walk/Other Person Trips	57%	27%	28%	53%	41%	43%	43%	12%	38%	51%	51%	28%		46%	42%	43%
Total Person Trips	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		100%	100%	100%
External Only Trips																
Auto Person Trips	33%	39%	41%	38%	37%	38%	38%	47%	36%	37%	37%	41%		38%	37%	38%
Transit Person Trips	45%	42%	49%	17%	27%	27%	31%	45%	26%	17%	17%	49%		21%	27%	31%
Walk/Other Person Trips	23%	19%	10%	45%	36%	35%	31%	7%	38%	46%	46%	10%		41%	36%	31%
Total Person Trips	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		100%	100%	100%

Scenario A = Maximum Commercial Scenario

Mission Rock Mixed-Use Project
HOTEL ALTERNATIVE (Based on Scenario A)

EXTERNAL ONLY TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337							PIER 48							China Basin Park Open Space	TOTAL DEVELOPMENT
	Residential	Hotel	Office	General Retail	Quality Restaurant	Quick Service Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhibition	Brewery Quality Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48		
Weekday AM Peak Hour																
Auto Person Trips: All Origins	278	65	788	157	94	1,135	2,516	14	-	12	14	5		45	4	2,565
Inbound	93	52	721	157	94	590	1,706	11	-	12	14	4		41	2	1,749
Outbound	185	13	67	-	-	545	810	3	-	-	-	0		4	2	816
Transit Person Trips: All Origins	413	70	953	205	123	833	2,598	14	-	17	18	6		54	3	2,655
Inbound	138	56	872	205	123	433	1,827	10	-	17	18	5		50	2	1,879
Outbound	276	14	81	-	-	400	770	3	-	-	-	0		4	2	776
Walk/Other Person Trips: All Origins	274	32	254	32	20	1,133	1,746	2	-	3	3	1		10	4	1,760
Inbound	91	26	233	32	20	589	991	2	-	3	3	1		9	2	1,003
Outbound	183	6	22	-	-	544	755	1	-	-	-	0		1	2	757
Total Person Trips: All Origins	965	167	1,995	393	238	3,101	6,859	30	-	32	35	12		109	12	6,980
Inbound	322	134	1,826	393	238	1,612	4,524	23	-	32	35	11		101	6	4,631
Outbound	644	33	170	-	-	1,488	2,335	7	-	-	-	1		8	6	2,349
Total Vehicle Trips: All Origins	251	36	476	100	60	491	1,414	11	-	8	9	3		30	2	1,446
Inbound	84	31	450	100	60	261	986	7	-	8	9	3		27	1	1,014
Outbound	167	5	26	-	-	229	428	3	-	-	-	0		3	1	432
Weekday PM Peak Hour																
Auto Person Trips: All Origins	263	74	689	541	789	994	3,350	14	54	100	45	4		217	3	3,570
Inbound	175	15	59	260	379	477	1,364	3	27	48	22	0		100	1	1,466
Outbound	88	59	631	281	410	517	1,986	11	27	52	24	4		117	2	2,104
Transit Person Trips: All Origins	361	79	813	241	573	714	2,781	14	39	45	21	5		123	2	2,906
Inbound	241	16	69	116	275	343	1,059	3	19	22	10	0		55	1	1,114
Outbound	120	63	744	125	298	371	1,722	10	19	24	11	4		68	1	1,792
Walk/Other Person Trips: All Origins	183	36	173	639	766	939	2,737	2	58	122	55	1		238	3	2,978
Inbound	122	7	15	307	368	451	1,269	1	29	59	27	0		115	1	1,385
Outbound	61	29	158	332	399	488	1,467	2	29	63	29	1		124	2	1,593
Total Person Trips: All Origins	807	189	1,675	1,421	2,128	2,647	8,867	30	150	267	122	10		579	8	9,454
Inbound	538	38	142	682	1,021	1,271	3,692	7	75	128	58	1		270	4	3,966
Outbound	269	151	1,533	739	1,107	1,376	5,175	23	75	139	63	9		309	4	5,488
Total Vehicle Trips: All Origins	237	41	409	220	341	429	1,678	11	23	41	19	2		95	1	1,775
Inbound	158	6	22	103	159	201	649	3	11	19	9	0		43	1	692
Outbound	79	35	387	117	181	229	1,029	7	11	22	10	2		53	1	1,082

Scenario A = Maximum Commercial Scenario

Mission Rock Mixed-Use Project
HOTEL ALTERNATIVE (Based on Scenario A)

EXTERNAL ONLY TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337							PIER 48							China Basin Park Open Space	TOTAL DEVELOPMENT
	Residential	Hotel	Office	General Retail	Quality Restaurant	Quick Service Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhibition	Brewery Quality Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48		
Weekday Daily																
Auto Person Trips																
Superdistrict 1	234	40	513	414	376	439	2,015	9	28	47	32	3		119	2	2,136
Superdistrict 2	60	94	1,108	378	766	985	3,390	18	45	45	31	6		145	5	3,539
Superdistrict 3	187	78	1,181	327	687	802	3,262	14	50	37	25	7		133	4	3,399
Superdistrict 4	60	67	883	214	521	670	2,416	13	30	26	17	5		91	3	2,509
East Bay	305	119	1,605	803	918	1,180	4,930	23	52	96	66	9		246	5	5,182
North Bay	47	74	846	430	607	780	2,784	10	36	52	35	5		137	4	2,925
South Bay	750	98	1,392	1,101	742	954	5,037	22	42	132	90	8		293	4	5,335
Outside of Bay Area	-	141	1,265	2,549	1,246	1,602	6,804	49	75	306	208	7		646	7	7,457
All Origins	1,641	711	8,794	6,216	5,863	7,413	30,637	158	358	740	505	51		1,811	34	32,483
Transit Person Trips																
Superdistrict 1	444	58	851	351	510	596	2,810	8	38	40	27	5		118	3	2,931
Superdistrict 2	114	114	1,613	472	871	1,120	4,304	21	49	57	39	9		175	5	4,484
Superdistrict 3	355	79	1,337	250	667	779	3,467	17	48	28	19	8		120	4	3,591
Superdistrict 4	114	58	902	225	418	538	2,254	14	23	27	18	5		87	3	2,344
East Bay	375	83	1,564	544	538	692	3,795	29	27	65	44	9		175	3	3,973
North Bay	23	16	321	175	98	126	759	6	5	21	14	2		48	1	808
South Bay	890	46	788	242	323	415	2,705	13	17	29	20	5		84	2	2,790
Outside of Bay Area	-	96	878	584	839	1,078	3,475	2	51	70	48	5		175	5	3,655
All Origins	2,315	550	8,254	2,842	4,264	5,344	23,569	110	257	337	229	48		981	25	24,575
Walk/Other Person Trips																
Superdistrict 1	472	213	2,546	1,535	2,022	2,361	9,148	12	154	174	118	15		473	11	9,632
Superdistrict 2	121	87	764	490	765	983	3,209	1	46	59	40	4		150	5	3,364
Superdistrict 3	377	43	503	449	415	485	2,272	2	32	51	35	3		122	2	2,396
Superdistrict 4	121	33	311	172	288	371	1,297	1	17	21	14	2		55	2	1,354
East Bay	70	58	552	756	507	652	2,595	2	30	91	62	3		188	3	2,786
North Bay	-	18	162	321	160	205	866	0	10	38	26	1		75	1	942
South Bay	141	21	192	172	184	237	947	0	11	21	14	1		47	1	995
Outside of Bay Area	-	155	1,328	3,753	1,382	1,777	8,395	0	84	450	307	8		848	8	9,252
All Origins	1,301	629	6,358	7,648	5,722	7,070	28,729	18	385	903	616	37		1,959	33	30,721
Total Person Trips																
Superdistrict 1	1,150	311	3,909	2,300	2,908	3,396	13,973	29	220	260	178	23		710	16	14,699
Superdistrict 2	294	295	3,485	1,339	2,402	3,088	10,902	40	140	161	109	20		470	14	11,387
Superdistrict 3	920	201	3,021	1,025	1,769	2,066	9,001	33	130	116	79	17		375	10	9,386
Superdistrict 4	294	158	2,097	611	1,228	1,579	5,967	27	70	73	50	12		233	7	6,207
East Bay	750	260	3,721	2,103	1,963	2,524	11,320	53	110	252	172	22		609	12	11,941
North Bay	70	108	1,329	926	864	1,111	4,409	17	50	111	76	8		261	5	4,675
South Bay	1,780	165	2,372	1,515	1,249	1,606	8,689	35	70	182	124	14		424	7	9,120
Outside of Bay Area	-	393	3,471	6,887	3,467	4,457	18,674	51	210	825	563	20		1,669	21	20,364
All Origins	5,258	1,890	23,406	16,706	15,849	19,827	82,936	286	1,000	1,980	1,350	135		4,751	92	87,779
Vehicle Trips																
Superdistrict 1	211	19	270	257	167	195	1,119	9	12	29	20	2		71	1	1,191
Superdistrict 2	54	49	668	235	380	489	1,875	16	22	28	19	4		89	2	1,966
Superdistrict 3	169	37	675	167	300	351	1,698	11	21	19	13	4		68	2	1,768
Superdistrict 4	54	36	514	141	274	353	1,373	9	15	17	12	3		56	2	1,430
East Bay	275	46	573	334	371	477	2,077	9	21	40	27	3		101	2	2,180
North Bay	42	39	462	193	319	410	1,465	7	19	23	16	3		67	2	1,535
South Bay	677	48	865	416	325	417	2,748	18	17	50	34	5		124	2	2,874
Outside of Bay Area	-	45	426	819	395	508	2,194	48	24	98	67	2		240	2	2,436
All Origins	1,482	320	4,452	2,561	2,532	3,201	14,549	128	151	304	207	26		816	15	15,380

Scenario A = Maximum Commercial Scenario

Mission Rock Mixed-Use Project
HOTEL ALTERNATIVE (Based on Scenario A)

EXTERNAL ONLY TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337							PIER 48							China Basin Park Open Space	TOTAL DEVELOPMENT
	Residential	Hotel	Office	General Retail	Quality Restaurant	Quick Service Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhibition	Brewery Quality Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48		
Weekday AM Peak Hour																
Auto Person Trips																
Superdistrict 1	58	3	30	6	4	78	178	1	-	1	1	0		2	0	180
Superdistrict 2	9	8	99	19	11	146	293	2	-	1	2	1		5	1	299
Superdistrict 3	46	8	100	21	14	143	331	2	-	2	2	1		7	0	339
Superdistrict 4	9	7	96	20	12	99	243	1	-	2	2	1		5	0	248
East Bay	43	14	180	38	22	175	472	3	-	3	3	1		10	1	482
North Bay	7	6	72	14	8	116	222	1	-	1	1	0		4	0	226
South Bay	107	12	166	35	21	141	483	2	-	3	3	1		9	1	493
Outside of Bay Area	-	7	44	4	2	237	293	3	-	0	0	0		4	1	298
All Origins	278	65	788	157	94	1,135	2,516	14	-	12	14	5		45	4	2,565
Transit Person Trips																
Superdistrict 1	110	5	69	14	10	106	315	1	-	1	2	0		5	0	319
Superdistrict 2	16	14	191	41	24	166	451	3	-	3	3	1		10	1	462
Superdistrict 3	88	10	132	29	19	139	416	2	-	3	3	1		9	0	425
Superdistrict 4	16	8	120	26	15	80	265	2	-	2	2	1		6	0	272
East Bay	53	16	243	55	32	102	501	4	-	4	4	1		14	0	515
North Bay	3	3	52	12	7	19	96	1	-	1	1	0		3	0	99
South Bay	127	8	112	25	15	62	348	2	-	2	2	1		6	0	354
Outside of Bay Area	-	5	35	4	2	160	206	0	-	0	0	0		1	1	208
All Origins	413	70	953	205	123	833	2,598	14	-	17	18	6		54	3	2,655
Walk/Other Person Trips																
Superdistrict 1	117	13	123	20	13	420	706	1	-	2	2	1		6	1	714
Superdistrict 2	17	4	24	2	1	146	193	0	-	0	0	0		0	1	194
Superdistrict 3	93	2	22	3	2	86	209	0	-	0	0	0		1	0	210
Superdistrict 4	17	2	14	2	1	55	91	0	-	0	0	0		0	0	92
East Bay	10	3	26	3	2	97	141	0	-	0	0	0		1	0	142
North Bay	-	1	6	0	0	30	38	0	-	0	0	0		0	0	38
South Bay	20	1	8	1	0	35	65	0	-	0	0	0		0	0	65
Outside of Bay Area	-	6	32	0	0	263	302	0	-	0	0	0		0	1	303
All Origins	274	32	254	32	20	1,133	1,746	2	-	3	3	1		10	4	1,760
Total Person Trips																
Superdistrict 1	284	21	223	40	27	605	1,199	3	-	4	4	1		13	2	1,214
Superdistrict 2	42	26	314	62	36	457	938	4	-	5	5	2		16	2	955
Superdistrict 3	227	20	253	53	35	368	956	4	-	5	6	1		17	1	974
Superdistrict 4	42	18	230	48	28	234	599	3	-	4	4	1		12	1	612
East Bay	107	33	449	96	56	374	1,114	6	-	7	8	3		24	2	1,140
North Bay	10	10	130	26	15	165	356	2	-	2	2	1		7	1	363
South Bay	253	21	286	61	36	238	896	4	-	5	5	2		15	1	912
Outside of Bay Area	-	18	111	8	5	660	801	3	-	1	1	1		5	3	809
All Origins	965	167	1,995	393	238	3,101	6,859	30	-	32	35	12		109	12	6,980
Vehicle Trips																
Superdistrict 1	52	2	21	4	3	35	117	1	-	0	0	0		2	0	119
Superdistrict 2	8	6	75	16	9	72	186	1	-	1	1	0		4	0	191
Superdistrict 3	42	5	73	16	11	62	209	1	-	2	2	0		5	0	214
Superdistrict 4	8	5	61	13	8	52	146	1	-	1	1	0		3	0	150
East Bay	39	5	56	11	7	71	189	1	-	1	1	0		3	0	192
North Bay	6	3	41	8	5	61	125	1	-	1	1	0		2	0	127
South Bay	96	9	129	29	17	62	342	2	-	2	2	1		7	0	349
Outside of Bay Area	-	2	19	2	1	75	101	3	-	0	0	0		3	0	104
All Origins	251	36	476	100	60	491	1,414	11	-	8	9	3		30	2	1,446

Scenario A = Maximum Commercial Scenario

Mission Rock Mixed-Use Project
HOTEL ALTERNATIVE (Based on Scenario A)

EXTERNAL ONLY TRIPS AFTER ADJUSTMENT	SEAWALL LOT 337							PIER 48							China Basin Park Open Space	TOTAL DEVELOPMENT
	Residential	Hotel	Office	General Retail	Quality Restaurant	Quick Service Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhibition	Brewery Quality Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48		
Weekday PM Peak Hour																
Auto Person Trips																
Superdistrict 1	29	3	14	27	50	57	180	1	4	6	3	0		14	0	194
Superdistrict 2	10	9	95	34	103	133	385	2	7	6	3	1		18	0	403
Superdistrict 3	23	9	47	21	91	104	295	2	8	5	2	0		17	0	312
Superdistrict 4	10	8	92	19	70	90	291	1	4	3	2	1		11	0	302
East Bay	53	16	172	72	124	159	596	3	8	13	6	1		30	0	627
North Bay	8	7	69	39	82	105	310	1	5	7	3	0		17	0	327
South Bay	130	14	159	99	100	129	631	2	6	18	8	1		36	0	667
Outside of Bay Area	-	7	42	229	168	216	663	3	11	41	19	0		74	1	738
All Origins	263	74	689	541	789	994	3,350	14	54	100	45	4		217	3	3,570
Transit Person Trips																
Superdistrict 1	55	6	33	23	68	77	261	1	6	5	2	0		15	0	276
Superdistrict 2	20	16	182	42	118	151	529	3	7	8	3	1		22	0	552
Superdistrict 3	44	11	62	16	88	101	322	2	7	4	2	0		15	0	338
Superdistrict 4	20	10	114	20	56	73	293	2	3	4	2	1		11	0	304
East Bay	65	18	232	49	73	93	530	4	4	9	4	1		22	0	552
North Bay	4	4	50	16	13	17	104	1	1	3	1	0		6	0	110
South Bay	154	9	107	22	44	56	392	2	3	4	2	1		11	0	402
Outside of Bay Area	-	5	34	53	113	146	350	0	8	9	4	0		22	0	373
All Origins	361	79	813	241	573	714	2,781	14	39	45	21	5		123	2	2,906
Walk/Other Person Trips																
Superdistrict 1	58	14	58	100	268	306	804	1	23	23	11	0		59	1	864
Superdistrict 2	21	4	23	44	103	133	328	0	7	8	4	0		19	0	347
Superdistrict 3	47	3	10	29	55	63	206	0	5	7	3	0		15	0	222
Superdistrict 4	21	2	14	16	39	50	141	0	3	3	1	0		7	0	148
East Bay	12	4	25	68	68	88	265	0	5	12	6	0		23	0	288
North Bay	-	1	5	29	22	28	84	0	1	5	2	0		9	0	94
South Bay	24	1	7	15	25	32	105	0	2	3	1	0		6	0	111
Outside of Bay Area	-	7	31	338	187	240	802	0	13	61	28	0		101	1	904
All Origins	183	36	173	639	766	939	2,737	2	58	122	55	1		238	3	2,978
Total Person Trips																
Superdistrict 1	142	24	105	150	385	440	1,245	3	33	35	16	1		88	1	1,335
Superdistrict 2	51	30	300	121	324	417	1,243	4	21	22	10	2		59	1	1,302
Superdistrict 3	113	22	119	67	234	268	824	4	20	16	7	1		47	1	871
Superdistrict 4	51	20	220	55	166	213	724	3	11	10	4	1		29	1	754
East Bay	130	37	429	189	265	341	1,391	6	17	34	15	2		75	1	1,467
North Bay	12	12	124	83	117	150	498	2	8	15	7	1		32	0	530
South Bay	308	24	273	136	169	217	1,127	4	11	25	11	2		52	1	1,180
Outside of Bay Area	-	20	106	620	468	602	1,815	3	32	111	51	1		197	2	2,014
All Origins	807	189	1,675	1,421	2,128	2,647	8,867	30	150	267	122	10		579	8	9,454
Vehicle Trips																
Superdistrict 1	26	2	10	17	22	25	102	1	2	4	2	0		8	0	110
Superdistrict 2	9	6	72	21	51	66	226	1	3	4	2	0		11	0	237
Superdistrict 3	21	6	34	11	40	45	157	1	3	3	1	0		8	0	165
Superdistrict 4	9	5	59	13	37	48	170	1	2	2	1	0		7	0	178
East Bay	48	5	54	30	50	64	251	1	3	5	2	0		12	0	263
North Bay	7	4	40	17	43	55	167	1	3	3	1	0		8	0	175
South Bay	117	10	123	37	44	56	388	2	3	7	3	1		15	0	403
Outside of Bay Area	-	3	18	74	53	69	217	3	4	13	6	0		26	0	243
All Origins	237	41	409	220	341	429	1,678	11	23	41	19	2		95	1	1,775

Scenario A = Maximum Commercial Scenario

Mission Rock Mixed-Use Project
HOTEL ALTERNATIVE (Based on Scenario A)

PARKING DEMAND	SEAWALL LOT 337							PIER 48							China Basin Park Open Space	TOTAL DEVELOPMENT
	Residential	Hotel	Office	General Retail	Quality Restaurant	Quick Service Restaurant	Subtotal SWL 337	Brewery / Distillery	Brewery Retail Exhibition	Brewery Quality Restaurant	Mezzanine Retail	Mezzanine Office	Mezzanine Production	Subtotal Pier 48		
Midday Period (Noon to 2 PM) Peak Parking Demand																
SHORT-TERM DEMAND																
Daily visitors vehicle trips			2,323	2,402	2,373	3,001	10,098		151	285	195	13		645	14	10,757
Turnover rate (vehicles per space)			5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5		5.4	5.5	5.5
Peak short-term demand (spaces)			212	219	216	273	920		14	26	18	2		60	2	982
% of peak demand during period (ULI)			100%	100%	75%	100%	94%		100%	100%	100%	100%		100%	100%	95%
Total short-term demand (spaces)			212	219	162	273	866		14	26	18	2		60	2	928
LONG-TERM DEMAND																
Residential Demand																
Peak parking demand (spaces per unit)	1.50															
Peak parking demand (spaces)	1,272						1,272							-		1,272
% of peak demand during period (SF Guidelines)	80%						80%							0%		80%
Subtotal long-term demand (spaces)	1,018						1,018							-		1,018
Hotel Guests Demand																
Peak parking demand (spaces per room)		0.50														
Peak parking demand (spaces)		150					150							-		150
% of peak demand during period (ULI)		60%					60%							0%		60%
Subtotal long-term demand (spaces)		90					90							-		90
Employee Demand																
Average gsf per employee			276	350	350	240				350	350	276			10	
Number of daytime employees	133		4,932	350	245	153	5,812	75		31	29	29		164	1	5,976
% of employees who drive	40%		39%	40%	39%	40%	39%	39%		40%	40%	39%		40%	40%	39%
Number of employees who drive	53		1,937	138	96	61	2,285	30		12	11	11		65	0	2,350
Average employee vehicle occupancy	1.57		1.56	1.58	1.56	1.57	1.56	1.56		1.59	1.59	1.56		1.47	1.57	1.55
Peak parking demand (spaces)	34		1,245	88	62	39	1,468	20		8	8	8		44	1	1,513
% of peak demand during period (ULI)	100%		100%	100%	90%	100%	100%	100%		90%	100%	100%		100%	100%	100%
Subtotal long-term demand (spaces)	34		1,245	88	56	39	1,462	20		8	8	8		44	1	1,507
Total long-term demand (spaces)	1,018	124	1,245	88	56	39	2,570	20	-	8	8	8		44	1	2,615
TOTAL PARKING DEMAND (spaces)	1,018	124	1,457	307	218	312	3,436	20	14	34	26	10		104	3	3,543
Evening Period (7 PM to 9 PM) Peak Parking Demand - NO SF GIANTS GAME																
SHORT-TERM DEMAND																
Daily visitors vehicle trips			2,323	2,402	2,373	3,001	10,098		151	285	195	13		645	14	10,757
Turnover rate (vehicles per space)			5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5		5.4	5.5	5.5
Peak short-term demand (spaces)			212	219	216	273	920		14	26	18	2		60	2	982
% of peak demand during period (ULI)			5%	90%	100%	80%	70%		90%	100%	90%	5%		95%	50%	71%
Total short-term demand (spaces)			11	198	216	219	644		13	26	17	1		57	1	702
LONG-TERM DEMAND																
Residential Demand																
Peak parking demand (spaces per unit)	1.50															
Peak parking demand (spaces)	1,272						1,272							-		1,272
% of peak demand during period (SF Guidelines)	100%						100%							0%		100%
Subtotal long-term demand (spaces)	1,272						1,272							-		1,272
Hotel Guests Demand																
Peak parking demand (spaces per room)		0.50														
Peak parking demand (spaces)		150					150							-		150
% of peak demand during period (ULI)		80%					80%							0%		80%
Subtotal long-term demand (spaces)		120					120							-		120
Employee Demand																
Average gsf per employee			276	350	350	240				350	350	276			10	
Number of daytime employees	133		4,932	350	245	153	5,812	75		31	29	29		164	1	5,976
% of employees who drive	40%		39%	40%	39%	40%	39%	39%		40%	40%	39%		40%	40%	39%
Number of employees who drive	53		1,937	138	96	61	2,285	30		12	11	11		65	0	2,350
Average employee vehicle occupancy	1.57		1.56	1.58	1.56	1.57	1.56	1.56		1.59	1.59	1.56		1.47	1.57	1.55
Peak parking demand (spaces)	34		1,245	88	62	39	1,468	20		8	8	8		44	1	1,513
% of peak demand during period (ULI)	55%		10%	100%	100%	90%	22%	100%		100%	100%	10%		84%	100%	24%
Subtotal long-term demand (spaces)	19		125	88	62	36	330	20		8	8	1		37	1	368
Total long-term demand (spaces)	1,272	139	125	88	62	36	1,722	20	-	8	8	1		37	1	1,760
TOTAL PARKING DEMAND (spaces)	1,272	139	136	286	278	255	2,366	20	13	34	25	2		94	2	2,462

Appendix 11-2
Variants – Air Quality Technical Data

APPENDIX 11-2: VARIANTS - AIR QUALITY TECHNICAL DATA

INTRODUCTION

This Appendix presents the data used to calculate criteria air pollutant emissions and health risks, along with the modeling results, associated with the following variants:

1. Variant 1: Bay Source Cooling
2. Variant 2: Entertainment Venue
3. Variant 3: Reconfigured Parking
4. Variant 4: Hotel Use

The analysis is conducted concurrent with the approach in the Mission Rock Air Quality Technical Report.

VARIANT 1: BAY SOURCE COOLING

ACTIVITY DATA

The table numbers below match the table numbers in the Air Quality Technical Report for comparison purposes.

TABLE 1.CONSTRUCTION EQUIPMENT ACTIVITY

Phase	Applicant-Provided Equipment Type/Fuel	CalEEMod Equipment Type	Number/ Day ^a	Horsepower	Average Hours/ Day
Area 1 (Building A, G, K, China Basin Park, Mission Rock Square, Pier 48)					
Demo + Rough Grade	Loader/Diesel	Tractors/ Loaders/ Backhoes	2	120	8
	Dump Truck/Diesel	n/a ^b	2	325	8
	Bulldozer/Diesel	Crawler Tractors	2	400	8
	Jet Grout Rig/Diesel	Bore/Drill Rigs	2	200	4
	Jet Grout Pump/Diesel	Pumps	2	50	4
	Generator for Jet Grout	Generator Sets	1	400	4

Phase	Applicant-Provided Equipment Type/Fuel	CalEEMod Equipment Type	Number/ Day ^a	Horsepower	Average Hours/ Day
	Rig/Diesel				
	Backhoe/Diesel	Tractors/ Loaders/ Backhoes	1	350	4
	Scraper/Diesel	Scrapers	2	330	2
	Water Truck/Diesel	n/a ^b	1	330	-
Infrastructure	Dump Truck/Diesel	n/a ^b	4	325	4
	Backhoe/Diesel	Tractors/ Loaders/ Backhoes	2	250	4
	Trencher/Diesel	Trenchers	2	41	4
Foundations + Building	Excavator/Diesel	Excavators	2	385	1
	Dump Truck/Diesel	n/a ^b	2	325	1
	Crane/Diesel	Cranes	2	335	4
	Drill/Diesel	Bore/Drill Rigs	2	225	1
	Forklift/Diesel	Forklifts	2	210	2
	Concrete truck/Diesel	n/a ^b	2	325	2
	Water Truck/Diesel	n/a ^b	2	330	2
	Concrete pump/Diesel	Pumps	2	73	2
	Welder/Diesel	Welders	4	35	2
	Air compressor/Diesel	Air Compressors	2	150	5
	Air compressor/Diesel	Air Compressors	4	49	5
	High-lift forklift/Diesel	Forklifts	2	120	2
	Pile hammer/Diesel	Bore/Drill Rigs	2	130	2
	Carrydeck crane/Diesel	Cranes	1	110	4
	45-ton grove crane/Diesel	Cranes	1	215	4
	Boom truck crane/Diesel	Cranes	1	250	4
	CX80 excavator/Diesel	Excavators	1	53	1
	Rubber-tired loader/Diesel	Rubber Tired Loaders	1	260	1
	Temporary generators for welding, metal decking, miscellaneous trades/Diesel	Generator Sets	8	10	4

Phase	Applicant-Provided Equipment Type/Fuel	CalEEMod Equipment Type	Number/ Day ^a	Horsepower	Average Hours/ Day
<i>In-water equipment for Pier 48 seismic upgrade:</i>					
<u>DB Alameda derrick barge</u>					
	• Draw-works engine (crane)	Cranes	1	400	4
	• Genset engine – main house	n/a ^c	1	400	4
	• Deck air compressor	Air Compressors	1	49	4
	• Anchor / spud winch – Engine A	Other Material Handling Eq.	1	117	4
	• Anchor / spud winch – Engine B	Other Material Handling Eq.	1	117	4
	• Deck generator	Generator Sets	1	274	8
<u>Challenger crane barge</u>					
	• Draw-works engine (crane)	Cranes	1	364	4
	• Deck generator	Generator Sets	1	129	8
	• Air compressor	Air Compressors	1	49	4
	• Spud winch	Other Material Handling Eq.	1	120	4
	D36 impact hammer, 89000 lb-ft	Bore/Drill Rigs	1	125	8 (10 days)
	Work boat	n/a ^c	1	50	8
Paving + Landscape	Roller/Diesel	Rollers	1	40	2
	Paver/Diesel	Pavers	1	175	2
	Berm Machine/Diesel	Surfacing Equipment	1	44	1
	Dump truck/Diesel	n/a ^b	1	325	4
	Pickup/Diesel	n/a ^b	2	250	8
Area 2 (Buildings B, C & D)					
Demo + Rough Grade	Loader/Diesel	Tractors/ Loaders/ Backhoes	2	120	8
	Dump Truck/Diesel	n/a ^b	2	325	8
	Bulldozer/Diesel	Crawler	2	400	8

Phase	Applicant-Provided Equipment Type/Fuel	CalEEMod Equipment Type	Number/ Day ^a	Horsepower	Average Hours/ Day
Infrastructure		Tractors			
	Backhoe/Diesel	Tractors/ Loaders/ Backhoes	1	350	4
	Scraper/Diesel	Scrapers	1	330	4
	Water Truck/Diesel	n/a ^b	1	330	4
	Dump Truck/Diesel	n/a ^b	2	325	4
Foundations + Building	Backhoe/Diesel	Tractors/ Loaders/ Backhoes	1	250	4
	Trencher/Diesel	Trenchers	1	41	4
	Excavator/Diesel	Excavators	3	385	1
	Dump Truck/Diesel	n/a ^b	3	325	1
	Crane/Diesel	Cranes	1	335	4
	Crane/Electric	n/a ^d	2	150	4
	Drill/Diesel	Bore/Drill Rigs	1	225	1
	Forklift/Diesel	Forklifts	1	210	2
	Concrete truck/Diesel	n/a ^b	4	325	4
	Water Truck/Diesel	n/a ^b	4	330	4
	Concrete Pump/Diesel	Pumps	4	73	4
	Welder/Diesel	Welders	2	35	2
	Air compressor/Diesel	Air Compressors	2	150	5
	High-lift forklift/Diesel	Forklifts	2	120	2
	Pile hammer/Diesel	Bore/Drill Rigs	4	130	2
	Temporary generators for welding, metal decking, miscellaneous trades / Diesel	Generator Sets	8	10	4
Paving + Landscape	Roller/Diesel	Rollers	1	40	2
	Paver/Diesel	Pavers	1	175	2
	Dump truck/Diesel	n/a ^b	1	325	4
	Pickup/Diesel	n/a ^b	2	250	8

Phase	Applicant-Provided Equipment Type/Fuel	CalEEMod Equipment Type	Number/ Day ^a	Horsepower	Average Hours/ Day
Area 3 (Buildings E, F, & K, Underground Parking)					
Demo + Rough Grade	Loader/Diesel	Tractors/ Loaders/ Backhoes	2	120	8
	Dump Truck/Diesel	n/a ^b	2	325	8
	Bulldozer/Diesel	Crawler Tractors	1	400	8
	Backhoe/Diesel	Tractors/ Loaders/ Backhoes	1	350	4
	Scraper/Diesel	Scrapers	1	330	4
	Water Truck/Diesel	n/a ^b	1	330	4
Infrastructure	Dump Truck/Diesel	n/a ^b	2	325	4
	Backhoe/Diesel	Tractors/ Loaders/ Backhoes	1	250	4
	Trencher/Diesel	Trenchers	1	41	4
Foundations + Building	Dump Truck/Diesel	n/a ^b	3	325	1
	Excavator	Excavators	3	385	1
	Crane/Diesel	Cranes	2	335	4
	Crane/Electric ^a	n/a ^d	1	150	4
	Drill/Diesel	Bore/Drill Rigs	3	225	1
	Forklift/Diesel	Forklifts	3	210	2
	Concrete truck/Diesel	n/a ^b	3	325	2
	Water Truck/Diesel	n/a ^b	3	330	2
	Concrete Pump/Diesel	Pumps	3	73	2
	Welder/Diesel	Welders	6	35	2
	Air compressor/Diesel	Air Compressors	3	150	5
	High-lift forklift/Diesel	Forklifts	3	120	2
	Pile hammer/Diesel	Bore/Drill Rigs	3	130	2
	Temporary generators for welding, metal decking, miscellaneous trades / Diesel	Generator Sets	6	10	4
Paving +	Roller/Diesel	Rollers	1	40	2

Phase	Applicant-Provided Equipment Type/Fuel	CalEEMod Equipment Type	Number/ Day ^a	Horsepower	Average Hours/ Day
Landscape	Paver/Diesel	Pavers	1	175	2
	Dump truck/Diesel	n/a ^b	1	325	4
	Pickup/Diesel	n/a ^b	2	250	8
Area 4 (Buildings H, I & J, Channel Plaza)					
Demo + Rough Grade	Loader/Diesel	Tractors/ Loaders/ Backhoes	2	120	8
	Dump Truck/Diesel	n/a ^b	2	325	8
	Bulldozer/Diesel	Crawler Tractors	1	400	8
	Backhoe/Diesel	Tractors/ Loaders/ Backhoes	1	350	4
	Scraper/Diesel	Scrapers	1	330	4
	Water Truck/Diesel	n/a ^b	1	330	4
Infrastructure	Dump Truck/Diesel	n/a ^b	2	325	4
	Backhoe/Diesel	Tractors/ Loaders/ Backhoes	1	250	4
	Trencher/Diesel	Trenchers	1	41	4
Foundations + Building	Excavator/Diesel	Excavators	3	385	1
	Dump Truck/Diesel	n/a ^b	3	325	1
	Crane/Diesel	Cranes	3	335	4
	Drill/Diesel	Bore/Drill Rigs	1	225	1
	Forklift/Diesel	Forklifts	1	210	2
	Concrete truck/Diesel	n/a ^b	3	325	2
	Water Truck/Diesel	n/a ^b	3	330	2
	Concrete Pump/Diesel	Pumps	3	73	2
	Welder/Diesel	Welders	2	35	2
	Air compressor/Diesel	Air Compressors	2	150	5
	High-lift forklift/Diesel	Forklifts	2	120	2
	Pile Hammer/ Diesel	Bore/Drill Rigs	3	130	2

Phase	Applicant-Provided Equipment Type/Fuel	CalEEMod Equipment Type	Number/ Day ^a	Horsepower	Average Hours/ Day
	Temporary generators for welding, metal decking, miscellaneous trades / Diesel	Generator Sets	5	10	4
Paving + Landscape	Roller/Diesel	Rollers	1	40	2
	Paver/Diesel	Pavers	1	175	2
	Berm Machine/Diesel	Surfacing Equipment	1	44	1
	Dump truck/Diesel	n/a ^b	1	325	4
	Pickup/Diesel	n/a ^b	2	250	8

Source:

Mesikepp, Sam. Hathaway Dinwiddie Construction Company. October 5, 2016—email communication with ICF.

Notes:

- All equipment assumed to operate each day throughout the entire phase duration.
- On-road trucks were modeled based on anticipated daily trips and estimated vehicle miles traveled. See Table 6 for a summary of on-road assumptions used in this analysis.
- In-water equipment was modeled outside of CalEEMod. See Table 5 for a summary of in-water assumptions used in this analysis.
- Electricity use results in indirect criteria pollutant, toxic air contaminant (TAC), and greenhouse gas (GHG) emissions at the applicable power plant, but the Air Quality Technical Report does not evaluate these offsite indirect emissions. Therefore, electric equipment was not included in the CalEEMod modeling or the impact analysis.

Abbreviations:

CalEEMod: **C**ALifornia **E**missions **E**stimator **M**ODEl

Eq.: Equipment

RESULTS TABLES

CONSTRUCTION IMPACTS

TABLE 2. AVERAGE DAILY CONSTRUCTION EMISSIONS BY CATEGORY FOR THE BAY SOURCE COOLING VARIANT

Year	Category ^b	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Exhaust	PM2.5 Exhaust
2017	Off-road Equipment	1.5	16.9	0.7	0.7
	On-road Truck Travel	0.2	5.1	<0.1	<0.1
	On-road Truck Idling	<0.1	0.2	<0.1	<0.1
	Worker Commute	0.3	0.5	<0.1	<0.1
	Fugitive ROG	0.0	0.0	0.0	0.0
	<i>Total</i>	<i>2.0</i>	<i>22.7</i>	<i>0.8</i>	<i>0.7</i>
2018	Off-road Equipment	11.2	101.7	5.0	4.7

Year	Category ^b	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Exhaust	PM2.5 Exhaust
	On-road Truck Travel	0.3	10.2	<0.1	<0.1
	On-road Truck Idling	<0.1	0.3	<0.1	<0.1
	Worker Commute	3.4	6.3	0.1	0.1
	Fugitive ROG	21.9	0.0	0.0	0.0
	<i>Total</i>	36.8	118.5	5.1	4.9
2019	Off-road Equipment	14.3	125.2	6.1	5.9
	On-road Truck Travel	0.4	14.2	<0.1	<0.1
	On-road Truck Idling	<0.1	0.4	<0.1	<0.1
	Worker Commute	6.0	11.1	0.2	0.2
	Fugitive ROG	44.4	0.0	0.0	0.0
	<i>Total</i>	65.1	150.9	6.4	6.1
2020	Off-road Equipment	11.2	97.5	4.6	4.5
	On-road Truck Travel	0.6	19.7	<0.1	<0.1
	On-road Truck Idling	<0.1	0.6	<0.1	<0.1
	Worker Commute	4.3	8.0	0.2	0.2
	Fugitive ROG	33.9	0.0	0.0	0.0
	<i>Total</i>	50.1	125.8	4.9	4.7
2021	Off-road Equipment	6.2	50.9	2.3	2.2
	On-road Truck Travel	0.4	13.1	<0.1	<0.1
	On-road Truck Idling	<0.1	0.4	<0.1	<0.1
	Worker Commute	2.5	4.6	0.1	0.1
	Fugitive ROG	25.1	0.0	0.0	0.0
	<i>Total</i>	34.2	69.1	2.5	2.4
2022	Off-road Equipment	2.4	18.0	0.8	0.8
	On-road Truck Travel	<0.1	3.1	<0.1	<0.1
	On-road Truck Idling	<0.1	<0.1	<0.1	<0.1
	Worker Commute	1.3	2.3	<0.1	<0.1
	Fugitive ROG	14.1	0.0	0.0	0.0
	<i>Total</i>	17.8	23.5	0.9	0.9
2023	Off-road Equipment	0.6	4.1	0.2	0.2
	On-road Truck Travel	<0.1	1.1	<0.1	<0.1
	On-road Truck Idling	<0.1	<0.1	<0.1	<0.1
	Worker Commute	0.3	0.6	<0.1	<0.1
	Fugitive ROG	3.4	0.0	0.0	0.0
	<i>Total</i>	4.4	5.8	0.2	0.2
Significance Threshold		54	54	82	54

Year	Category ^b	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Exhaust	PM2.5 Exhaust

Source:
ENVIRON International Corporation and the California Air Districts. 2013. CalEEMod User's Guide. Version 2013.2. Appendix A: Calculation Details for CalEEMod. Prepared for the California Air Pollution Control Officers Association. July. Available: <<http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendixa.pdf?sfvrsn=2>>. Accessed: October 12, 2015.

Notes:

a. Categories defined as follows:

Off-road Equipment = Operating emissions from heavy-duty equipment, such as bulldozer, cranes, and excavators. Refer to Table 3 for equipment activity assumptions. Emissions were modeled using CalEEMod.

On-road Truck Travel = Operating emissions from heavy-duty on-road trucks. Refer to Table 6 for vehicle activity assumptions. Emissions were modeled using emission factors from EMFAC2014.

On-road Truck Idling = Idling emissions from heavy-duty on-road trucks. The analysis assumed that each truck would idle 5 minutes while unloading soil or material on the project site. Emissions were modeled using idling emission factors from EMFAC2011-HD.

Worker Commute = Operating emission from employee vehicles. Refer to Table 6 vehicle activity assumptions. Emissions were modeled using CalEEMod.

Fugitive ROG = Fugitive ROG emissions from the asphalt paving and the application of architectural coatings. Refer to Section 3.2.1.6, *Asphalt Paving*, for a summary of paving assumptions and Table 8 for a summary of architectural coating assumptions. Paving emissions were modeled using emission factors from the CalEEMod User Guide, where ROG = acres paved * 2.62 pounds ROG/acre paved (ENVIRON 2013). Architectural coating emissions were modeled using CalEEMod.

Emissions over threshold levels are in **bold**

Abbreviations:
CalEEMod: **C**ALifornia Emissions Estimator **M**ODEl

ROG: reactive organic gases

NO_x: nitrogen oxides

PM10: particulate matter less than or equal to 10 microns in diameter

PM2.5: particulate matter less than or equal to 2.5 microns in diameter

lbs: pounds

TABLE 3. SUMMARIZED AVERAGE DAILY CONSTRUCTION EMISSIONS BY ANALYSIS YEAR FOR THE BAY SOURCE COOLING VARIANT

Year	Average Daily Emissions (lbs/day)			
	ROG	NO _x	PM10 Exhaust	PM2.5 Exhaust
2017	2.0	22.7	0.8	0.7
2018	36.8	118.5	5.1	4.9
2019	65.1	150.9	6.4	6.1
2020	50.1	125.8	4.9	4.7
2021	34.2	69.1	2.5	2.4
2022	17.8	23.5	0.9	0.9
2023	4.4	5.8	0.2	0.2
2024	0.0	0.0	0.0	0.0
Significance Threshold	54	54	82	54

Source:

Refer to Table 2.

Notes:Emissions over threshold levels are in **bold**Abbreviations:

ROG: reactive organic gases

NO_x: nitrogen oxides

PM10: particulate matter less than or equal to 10 microns in diameter

PM2.5: particulate matter less than or equal to 2.5 microns in diameter

lbs: pounds

TABLE 4. MITIGATED AVERAGE DAILY CONSTRUCTION EMISSIONS BY CATEGORY FOR THE BAY SOURCE COOLING VARIANT

Year	Category ^b	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Exhaust	PM2.5 Exhaust
2017	Off-road Equipment	0.3	6.0	<0.1	<0.1
	On-road Truck Travel	<0.1	1.7	<0.1	<0.1
	On-road Truck Idling	<0.1	0.1	<0.1	<0.1
	Worker Commute	0.3	0.5	<0.1	<0.1
	Fugitive ROG	0.0	0.0	0.0	0.0
	<i>Total</i>	<i>0.7</i>	<i>8.4</i>	<i><0.1</i>	<i><0.1</i>
2018	Off-road Equipment	2.8	48.1	0.8	0.8
	On-road Truck Travel	0.2	3.8	<0.1	<0.1
	On-road Truck Idling	<0.1	0.3	<0.1	<0.1
	Worker Commute	3.4	6.3	0.1	0.1
	Fugitive ROG	4.2	0.0	0.0	0.0
	<i>Total</i>	<i>10.6</i>	<i>58.6</i>	<i>0.9</i>	<i>0.9</i>

Year	Category ^b	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Exhaust	PM2.5 Exhaust
2019	Off-road Equipment	3.6	68.9	1.0	1.0
	On-road Truck Travel	0.2	5.5	<0.1	<0.1
	On-road Truck Idling	<0.1	0.4	<0.1	<0.1
	Worker Commute	6.0	11.1	0.2	0.2
	Fugitive ROG	8.4	0.0	0.0	0.0
	<i>Total</i>	<i>18.3</i>	<i>85.9</i>	<i>1.3</i>	<i>1.3</i>
2020	Off-road Equipment	3.5	62.6	1.0	1.0
	On-road Truck Travel	0.4	8.2	<0.1	<0.1
	On-road Truck Idling	<0.1	0.6	<0.1	<0.1
	Worker Commute	4.3	8.0	0.2	0.2
	Fugitive ROG	6.4	0.0	0.0	0.0
	<i>Total</i>	<i>14.7</i>	<i>79.3</i>	<i>1.2</i>	<i>1.2</i>
2021	Off-road Equipment	1.8	41.0	0.5	0.5
	On-road Truck Travel	0.3	5.8	<0.1	<0.1
	On-road Truck Idling	<0.1	0.4	<0.1	<0.1
	Worker Commute	2.5	4.6	0.1	0.1
	Fugitive ROG	4.8	0.0	0.0	0.0
	<i>Total</i>	<i>9.4</i>	<i>51.7</i>	<i>0.7</i>	<i>0.6</i>
2022	Off-road Equipment	0.6	15.6	0.2	0.2
	On-road Truck Travel	<0.1	1.4	<0.1	<0.1
	On-road Truck Idling	<0.1	<0.1	<0.1	<0.1
	Worker Commute	1.3	2.3	<0.1	<0.1
	Fugitive ROG	2.7	0.0	0.0	0.0
	<i>Total</i>	<i>4.6</i>	<i>19.4</i>	<i>0.3</i>	<i>0.2</i>
2023	Off-road Equipment	0.2	3.9	<0.1	<0.1
	On-road Truck Travel	<0.1	0.5	<0.1	<0.1
	On-road Truck Idling	<0.1	<0.1	<0.1	<0.1
	Worker Commute	0.3	0.6	<0.1	<0.1
	Fugitive ROG	0.6	0.0	0.0	0.0
	<i>Total</i>	<i>1.2</i>	<i>5.1</i>	<i><0.1</i>	<i><0.1</i>
Significance Threshold		54	54	82	54

Source:

ENVIRON International Corporation and the California Air Districts. 2013. CalEEMod User's Guide. Version 2013.2. Appendix A: Calculation Details for CalEEMod. Prepared for the California Air Pollution Control Officers Association. July. Available: <<http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendixa.pdf?sfvrsn=2>>. Accessed: October 12, 2015.

Notes:

All table references below refer to tables in the Activity Data section above.

Year	Category ^b	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Exhaust	PM2.5 Exhaust
a.	Emissions over threshold levels are in bold				
b.	Mitigated emissions assume all off-road equipment and all diesel generators have Tier 4 interim engines (Measure AQ-1.1), all haul trucks are model year 2010 or newer (Measure AQ-1.2), 90% of all architectural coatings have a maximum of 10 grams of volatile organic compounds per liter (Measure AQ-1.3), and all construction barge engines have Tier 3 engines and all construction work boat engines are model year 2005 or newer (Measure AQ-1.4). Does not include effect of Mitigation Measure M-AQ-1.5, which requires NO _x offsets.				
c.	Categories defined as follows: Off-road Equipment = Operating emissions from heavy-duty equipment, such as bulldozer, cranes, and excavators. Refer to Table 4 for equipment activity assumptions. Emissions were modeled using CalEEMod. On-road Truck Travel = Operating emissions from heavy-duty on-road trucks. Refer to Table 6 for vehicle activity assumptions. Emissions were modeled using emission factors from EMFAC2014. On-road Truck Idling = Idling emissions from heavy-duty on-road trucks. The analysis assumed that each truck would idle 5 minutes while unloading soil or material on the project site. Emissions were modeled using idling emission factors from EMFAC2011-HD. Worker Commute = Operating emission from employee vehicles. Refer to Table 6 vehicle activity assumptions. Emissions were modeled using CalEEMod. Fugitive ROG = Fugitive ROG emissions from the asphalt paving and the application of architectural coatings. Refer to Section 3.2.1.7 of the Air Quality Technical Report for a summary of paving assumptions and Table 8 for a summary of architectural coating assumptions. Paving emissions were modeled using emission factors from the CalEEMod User Guide, where ROG = acres paved * 2.62 pounds ROG/acre paved (ENVIRON 2013). Architectural coating emissions were modeled using CalEEMod.				
<u>Abbreviations:</u>					
ROG:	reactive organic gases				
NO _x :	nitrogen oxides				
PM10:	particulate matter less than or equal to 10 microns in diameter				
PM2.5:	particulate matter less than or equal to 2.5 microns in diameter				
lbs:	pounds				

TABLE 5. SUMMARIZED MITIGATED AVERAGE DAILY CONSTRUCTION EMISSIONS BY ANALYSIS YEAR FOR THE BAY SOURCE COOLING VARIANT

Year	Average Daily Emissions (lbs/day)			
	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust
2017	0.7	8.4	<0.1	<0.1
2018	10.6	58.6	0.9	0.9
2019	18.3	85.9	1.3	1.3
2020	14.7	79.3	1.2	1.2
2021	9.4	51.7	0.7	0.6
2022	4.6	19.4	0.3	0.2
2023	1.2	5.1	<0.1	<0.1
2024	0.0	0.0	0.0	0.0
Significance Threshold	54	54	82	54

Source:

Refer to Table 4.

Notes:

- Emissions over threshold levels are in **bold**
- Mitigated emissions assume all off-road equipment and all diesel generators have Tier 4 interim engines (Measure AQ-1.1), all haul trucks are model year 2010 or newer (Measure AQ-1.2), 90% of all architectural coatings have a maximum of 10 grams of volatile organic compounds per liter (Measure AQ-1.3), and all construction barge engines have Tier 3 engines and all construction work boat engines are model year 2005 or newer (Measure AQ-1.4). Does not include effect of Mitigation Measure M-AQ-1.5, which requires NOx offsets.

Abbreviations:

ROG: reactive organic gases

NOx.: nitrogen oxides

PM10: particulate matter less than or equal to 10 microns in diameter

PM2.5: particulate matter less than or equal to 2.5 microns in diameter

lbs: pounds

OPERATIONAL IMPACTS

The operational impacts are the same as the proposed project High Residential scenario. No tables are presented below.

COMBINED CONSTRUCTION AND OPERATIONAL IMPACTS**TABLE 6. SUMMARIZED AVERAGE DAILY CONSTRUCTION PLUS OPERATIONAL EMISSIONS FOR THE BAY SOURCE COOLING VARIANT**

Year	Average Daily Emissions (lbs/day)							
	ROG	NO _x	PM10 Exhaust	PM10 Dust ^c	PM10 Total ^d	PM2.5 Exhaust	PM2.5 Dust ^c	PM2.5 Total ^d
2017	2.0	22.7	0.8	0.0	0.8	0.7	0.0	0.7
2018	36.8	118.5	5.1	0.0	5.1	4.9	0.0	4.9
2019	65.1	150.9	6.4	0.0	6.4	6.1	0.0	6.1
2020	100.7	150.8	5.7	8.6	14.3	5.5	2.5	7.9
2021	122.4	109.5	3.8	20.9	24.6	3.6	6.0	9.6
2022	122.1	71.7	2.5	25.0	27.5	2.5	7.2	9.6
2023	122.7	65.7	2.2	33.3	35.5	2.2	9.5	11.7
2024	118.1	57.4	2.0	33.3	35.3	1.9	9.5	11.5
Significance Threshold	54	54	82	82	82	54	54	54

Source:

Refer to Table 3 above and Table 10 of the ADEIR.

Notes:

All table references below refer to tables in the Activity Data section above.

- As shown in Tables 1 and 2 of the AQTR, construction of Area 1 would occur between 2017 and 2020. It was conservatively assumed that structures would be fully occupied immediately following construction and operational emissions associated with Area 1 would begin in 2021. Accordingly, concurrent construction and operational activities would occur between 2021 and 2023, resulting in higher daily emissions than either component when analyzed separately. This table presents emissions for overlapping construction and operational activities to analyze maximum air quality impacts during concurrent activities.
- PM10 and PM2.5 dust only includes dust from operations; construction dust is not included as it is addressed by Construction Dust Control Ordinance (Ordinance 176-08, effective July 30, 2008).
- PM10 and PM2.5 total includes exhaust from both construction and operations and dust from operations only.

Abbreviations:

ROG: reactive organic gases

NO_x: nitrogen oxides

PM10: particulate matter less than or equal to 10 microns in diameter

PM2.5: particulate matter less than or equal to 2.5 microns in diameter

lbs: pounds

**TABLE 7. SUMMARIZED MITIGATED AVERAGE DAILY CONSTRUCTION PLUS OPERATIONAL EMISSIONS FOR THE BAY
SOURCE COOLING VARIANT**

Year	Average Daily Emissions (lbs/day)							
	ROG	NO _x	PM10 Exhaust	PM10 Dust ^c	PM10 Total ^d	PM2.5 Exhaust	PM2.5 Dust ^c	PM2.5 Total ^d
2017	0.7	8.4	<0.1	0.0	<0.1	<0.1	0.0	<0.1
2018	10.6	58.6	0.9	0.0	0.9	0.9	0.0	0.9
2019	18.3	85.9	1.3	0.0	1.3	1.3	0.0	1.3
2020	60.8	102.9	1.8	7.2	9.0	1.8	2.1	3.8
2021	89.2	88.9	1.6	17.3	18.9	1.6	4.9	6.5
2022	98.6	63.8	1.4	20.7	22.1	1.4	5.9	7.3
2023	107.0	60.0	1.5	27.6	29.1	1.5	7.9	9.4
2024	105.6	52.5	1.4	27.6	29.0	1.4	7.9	9.3
Significance Threshold	54	54	82	82	82	54	54	54

Source:

Refer to Table 5 above and Table 12 of the ADEIR.

Notes:

All table references below refer to tables in the Activity Data section above.

- Mitigated emissions assume all off-road equipment and all diesel generators have Tier 4 interim engines (Measure AQ-1.1), all haul trucks are model year 2010 or newer (Measure AQ-1.2), 90% of all architectural coatings have a maximum of 10 grams of volatile organic compounds per liter (Measure AQ-1.3), and all construction barge engines have Tier 3 engines and all construction work boat engines are model year 2005 or newer (Measure AQ-1.4). Mitigated operational emissions assume all emergency generators have model year 2008+ engines consistent with ARB ATCM emission rates that also meet Tier 2 standards with level 3 VDECS (Measure AQ-2.1), 90% of all architectural coatings have a maximum of 10 grams of volatile organic compounds per liter (Measure AQ-2.2), and auto vehicle trips are reduced by 20% (Measure AQ-2.3). Does not include effect of Mitigation Measure M-AQ-1.5, which requires ROG and NO_x offsets.
- As shown in Tables 1 and 2 of the AQTR, construction of Area 1 would occur between 2017 and 2020. It was conservatively assumed that structures would be fully occupied immediately following construction and operational emissions associated with Area 1 would begin in 2021. Accordingly, concurrent construction and operational activities would occur between 2021 and 2023, resulting in higher daily emissions than either component when analyzed separately. This table presents emissions for overlapping construction and operational activities to analyze maximum air quality impacts during concurrent activities.
- PM10 and PM2.5 dust only includes dust from operations; construction dust is not included as it is addressed by Construction Dust Control Ordinance (Ordinance 176-08, effective July 30, 2008).
- PM10 and PM2.5 total includes exhaust from both construction and operations and dust from operations only.

Abbreviations:

ROG:	reactive organic gases
NO _x :	nitrogen oxides
PM10:	particulate matter less than or equal to 10 microns in diameter
PM2.5:	particulate matter less than or equal to 2.5 microns in diameter
lbs:	pounds
VDECS:	Verified Diesel Emissions Control Strategies

TOXIC AIR CONTAMINANTS**PM_{2.5} ANALYSIS****TABLE 8. MAXIMUM ANNUAL AVERAGE PM_{2.5} EXHAUST EXPOSURE WITHIN STUDY AREA AT ONSITE AND OFFSITE RECEPTORS NOT LOCATED IN THE APEZ DURING EXISTING/FUTURE CONDITIONS BUT WOULD BE LOCATED IN THE APEZ DURING EXISTING/FUTURE PLUS PROPOSED PROJECT CONDITIONS FOR THE BAY SOURCE COOLING VARIANT**

Receptor	Annual Average PM _{2.5} Concentration (µg/m ³) ^{a, b}			
	Onsite Receptors		Offsite Receptors	
	Bay Source Cooling Variant	Mitigated ^c	Bay Source Cooling Variant	Mitigated ^c
Construction				
<u>2014 Background Analysis</u>				
Total (Background + Project)	10.6	8.6	-	-
Background	8.4	8.4	-	-
Construction Contribution	2.2	0.3	-	-
Significance Threshold for Project Contribution	0.3	N/A ^d	-	-
Above Threshold?	Yes	N/A ^d	-	-
<u>2025 Background Analysis</u>				
Total (Background + Project)	10.6	8.6	-	-
Background	8.4	8.4	-	-
Construction Contribution	2.2	0.3	-	-
Significance Threshold for Project Contribution	0.3	N/A ^d	-	-
Above Threshold?	Yes	N/A ^d	-	-

Sources:

CalEEMod modeling, AERMOD modeling, EMFAC2014 modeling, and other off-model calculations discussed in the AQTR and presented in AQTR Appendix B.

Notes:

- a Mitigated construction emissions assume all off-road equipment and all diesel generators have Tier 4 interim engines (MM AQ-1.1), all haul trucks are model year 2010 (Measure AQ-1.2), and all construction barge engines have Tier 3 engines and all construction work boat engines are model year 2005 or newer (Measure AQ-1.4). Mitigated operational emissions assume all emergency generators have model year 2008+ engines consistent with ARB ATCM emission rates that also meet Tier 2 standards with level 3 VDECS (Measure AQ-2.1) and auto vehicle trips are reduced by 20% through the TDM plan (Mitigation Measure AQ-2.3).
- b “-” means that a receptor does not meet the criteria for the table. For example, there may not be an onsite receptor that is currently in an APEZ or is placed into an APEZ with only the operational contribution from the proposed project.
- c The mitigated values may represent different receptor locations than the Variant 1 values because the highest mitigated values may occur at different locations due to the varying effectiveness of mitigation measures on each individual source of emissions.
- d Because this receptor is not placed into an APEZ with the mitigated project contribution (i.e. the total background plus project annual average PM_{2.5} concentration is less than the APEZ threshold of 10.0 µg/m³), the project-level threshold does not apply.

Receptor	Annual Average PM2.5 Concentration (µg/m³) ^{a, b}			
	Onsite Receptors		Offsite Receptors	
	Bay Source Cooling Variant	Mitigated ^c	Bay Source Cooling Variant	Mitigated ^c
<u>Abbreviations:</u>				
µg/m³:	micrograms per cubic meter			
PM2.5:	particulate matter less than or equal to 2.5 microns in diameter			
APEZ:	Air Pollutant Exposure Zone			
VDECS:	Verified Diesel Emissions Control Strategies			
Emissions over threshold levels are in bold				

CANCER RISK ANALYSIS (DPM/TOG)

TABLE 9. MAXIMUM LIFETIME EXCESS CANCER RISK WITHIN STUDY AREA AT ONSITE AND OFFSITE RECEPTORS CURRENTLY LOCATED IN THE APEZ DURING EXISTING/FUTURE CONDITIONS FOR THE BAY SOURCE COOLING VARIANT

Receptor	Lifetime Excess Cancer Risk (per million) ^{a, b}			
	Onsite Receptors		Offsite Receptors	
	Bay Source Cooling Variant	Mitigated ^c	Bay Source Cooling Variant	Mitigated ^c
Construction Plus Operation				
<u>2014 Background Analysis</u>				
Total (Background + Project)	-	-	131.1	111.2
Background	-	-	107.2	107.2
Construction Plus Operation Contribution	-	-	23.9	4.0
Significance Threshold for Project Contribution	-	-	7.0	7.0
Above Threshold?	-	-	Yes	No
<u>2025 Background Analysis</u>				
Total (Background + Project)	-	-	179.7	164.7
Background	-	-	161.6	161.6
Construction Plus Operation Contribution	-	-	18.1	3.1
Significance Threshold for Project Contribution	-	-	7.0	7.0
Above Threshold?	-	-	Yes	No

Sources:

CalEEMod modeling, AERMOD modeling, EMFAC2014 modeling, and other off-model calculations discussed in the AQTR and presented in AQTR Appendix B.

Notes:

- a Mitigated construction emissions assume all off-road equipment and all diesel generators have Tier 4 interim engines (MM AQ-1.1), all haul trucks are model year 2010 (Measure AQ-1.2), and all construction barge engines have Tier 3 engines and all construction work boat engines are model year 2005 or newer (Measure AQ-1.4). Mitigated operational emissions assume all emergency generators have model year 2008+ engines consistent

Receptor	Lifetime Excess Cancer Risk (per million) ^{a, b}			
	Onsite Receptors		Offsite Receptors	
	Bay Source Cooling Variant	Mitigated ^c	Bay Source Cooling Variant	Mitigated ^c
with ARB ATCM emission rates that also meet Tier 2 standards with level 3 VDECS (Measure AQ-2.1) and auto vehicle trips are reduced by 20% through the TDM plan (Mitigation Measure AQ-2.3).				
b “-” means that a receptor does not meet the criteria for the table. For example, there may not be an onsite receptor that is currently in an APEZ or is placed into an APEZ with only the operational contribution from the proposed project.				
c The mitigated values may represent different receptor locations than the Variant 1 values because the highest mitigated values may occur at different locations due to the varying effectiveness of mitigation measures on each individual source of emissions.				
<u>Abbreviations:</u>				
APEZ: Air Pollutant Exposure Zone				
VDECS: Verified Diesel Emissions Control Strategies				
Emissions over threshold levels are in bold				

TABLE 10. MAXIMUM LIFETIME EXCESS CANCER RISK WITHIN STUDY AREA AT ONSITE AND OFFSITE RECEPTORS NOT LOCATED IN THE APEZ DURING EXISTING/FUTURE CONDITIONS BUT WOULD BE LOCATED IN THE APEZ DURING EXISTING/FUTURE PLUS PROPOSED PROJECT CONDITIONS FOR THE BAY SOURCE COOLING VARIANT

Receptor	Lifetime Excess Cancer Risk (per million) ^{a, b}			
	Onsite Receptors		Offsite Receptors	
	Bay Source Cooling Variant	Mitigated ^c	Bay Source Cooling Variant	Mitigated ^c
Construction Plus Operation				
<u>2014 Background Analysis</u>				
Total (Background + Project)	193.4	78.8	175.3	100.3
Background	53.0	53.0	70.3	91.7
Construction Plus Operation Contribution	140.5	25.9	105.1	8.6
Significance Threshold for Project Contribution	10.0	N/A ^d	10.0	10.0
Above Threshold?	Yes	N/A ^d	Yes	No
<u>2025 Background Analysis</u>				
Total (Background + Project)	178.3	63.7	152.7	103.1
Background	37.8	37.8	47.6	99.7
Construction Plus Operation Contribution	140.5	25.9	105.1	3.4
Significance Threshold for Project Contribution	10.0	N/A ^d	10.0	10.0
Above Threshold?	Yes	N/A ^d	Yes	No
<u>Sources:</u>				
CalEEMod modeling, AERMOD modeling, EMFAC2014 modeling, and other off-model calculations discussed in the AQTR and presented in AQTR Appendix B.				

Notes:

- a Mitigated construction emissions assume all off-road equipment and all diesel generators have Tier 4 interim engines (MM AQ-1.1), all haul trucks are model year 2010 (Measure AQ-1.2), and all construction barge engines have Tier 3 engines and all construction work boat engines are model year 2005 or newer (Measure AQ-1.4). Mitigated operational emissions assume all emergency generators have model year 2008+ engines consistent with ARB ATCM emission rates that also meet Tier 2 standards with level 3 VDECS (Measure AQ-2.1) and auto vehicle trips are reduced by 20% through the TDM plan (Mitigation Measure AQ-2.3).
- b “-” means that a receptor does not meet the criteria for the table. For example, there may not be an onsite receptor that is currently in an APEZ or is placed into an APEZ with only the operational contribution from the proposed project.
- c The mitigated values may represent different receptor locations than the Variant 1 values because the highest mitigated values may occur at different locations due to the varying effectiveness of mitigation measures on each individual source of emissions.
- d Because this receptor is not placed into an APEZ with the mitigated project contribution (i.e. the total background plus project lifetime excess cancer risk is less than the APEZ threshold of 100), the project-level threshold does not apply.

Abbreviations:

APEZ: Air Pollutant Exposure Zone

VDECS: Verified Diesel Emissions Control Strategies

Emissions over threshold levels are in **bold**

VARIANT 2: ENTERTAINMENT VENUE

ACTIVITY DATA

The table numbers below match the table numbers in the Air Quality Technical Report for comparison purposes.

TABLE 11. DWELLING UNITS AND BUILDING SQUARE FOOTAGES BY OPERATIONAL LAND USE TYPE

Land Use Type	Dwelling Units (residential) and Square Footage (nonresidential) ^a			
	Area 1	Area 2	Area 3	Area 4
Residential (dwelling units)	501	239	308	0
Residential (square footage)	500,966	238,828	307,720	0
Commercial - office	279,698	567,702	49,775 ^b	389,006
Commercial – general/retail	32,678	43,849	0 ^b	30,861 ^b
Entertainment Venue at Block E	0	0	100,000 ^b	0
Sit-down Restaurant	23,864	23,864	7,080 ^b	23,864
Quick Service Restaurant	10,227	10,227	3,036 ^b	10,227
Parking Structure	0	837,230	0	0
Underground Parking	0	0	227,180	0
China Basin Park	191,200	0	0	0
Mission Rock Square	0	0	48,366	0
Channel Plaza	0	0	0	21,551

Land Use Type	Dwelling Units (residential) and Square Footage (nonresidential) ^a			
	Area 1	Area 2	Area 3	Area 4
Pier 48 - Brewery/ Distillery	190,500	0	0	0
Pier 48 - Brewery Retail / Exhibition	11,000	0	0	0
Pier 48 - Brewery Restaurant	11,000	0	0	0

Source:

Ballus Armet, Ingrid. Fehr & Peers. October 11, 2016—email communication with ICF

Notes:

- The project site has been divided into four areas, with four construction phases occurring per area. Each area would consist of two to three development blocks and associated area for streets and open space. Table 2 summarizes the proposed development for each area. Used same land use data as the proposed project for the high commercial scenario (Assumption A).
- Assumed the 100,000 additional square feet of Entertainment Venue space would replace the following square footage values from the High Commercial scenario, based on data from Fehr & Peers: for Area 3, 75,500 square feet of *Commercial – office* space, all 9,383 square feet of *Commercial – general/retail* space, 8,829 square feet of *Sit-down Restaurant*, and 3,782 square feet of *Quick Service Restaurant* = 97,494 total square feet; for Area 4, 3,006 square feet of *Commercial – office* space.

TABLE 12. ARCHITECTURAL COATING SQUARE FOOTAGE

Area	Residential Floor Area (ft ²)	Nonresidential Floor Area (ft ²) ^a	Building Surface Area Coated (ft ²)			
			Residential		Nonresidential	
			Interior ^b	Exterior ^c	Interior ^d	Exterior ^e
Area 1	1,014,456	338,152	838,451	279,484	1,014,456	338,152
Area 2	483,627	161,209	968,463	322,821	483,627	161,209
Area 3	623,133	207,711	89,837	29,946	623,133	207,711
Area 4	0	0	680,937	226,979	0	0

Sources:

- ENVIRON International Corporation and the California Air Districts. 2013. CalEEMod User's Guide. Version 2013.2. Appendix A: Calculation Details for CalEEMod. Prepared for the California Air Pollution Control Officers Association. July. Available: <<http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendixa.pdf?sfvrsn=2>>. Accessed: October 12, 2015.
- Mesikepp, Sam. Hathaway Dinwiddie Construction Company. October 5, 2016—email communication with ICF.
- Ballus Armet, Ingrid. Fehr & Peers. October 14, 2016—email communication with ICF

Notes:

- Excludes parking components because they would not require architectural coatings.
- Residential interior coated area = total residential floor area * surface area multiplier * fraction of surface area coated. CalEEMod assumes the total surface for residential painting equals 2.7 times the floor square footage, and that 75% of the interior surface area is painted. Accordingly, the equation becomes total residential floor area * 2.7 * 75%. The default values are described on page A-16 of the CalEEMod User Guide.
- Residential exterior coated area = total residential floor area * surface area multiplier * fraction of surface area coated. CalEEMod assumes the total surface for residential painting equals 2.7 times the floor square footage, and that 25% of the exterior surface area is painted. Accordingly, the equation becomes total residential floor area * 2.7 * 25%.
- Nonresidential interior coated area = total nonresidential floor area * surface area multiplier * fraction of

surface area coated. CalEEMod assumes the total surface for nonresidential painting equals 2.0 times the floor square footage, and that 75% of the interior surface area is painted. Accordingly, the equation becomes total nonresidential floor area * 2.0 * 75%.

- e. Nonresidential exterior coated area = total nonresidential floor area * surface area multiplier * fraction of surface area coated. CalEEMod assumes the total surface for nonresidential painting equals 2.0 times the floor square footage, and that 25% of the exterior surface area is painted. Accordingly, the equation becomes total nonresidential floor area * 2.0 * 25%.

Abbreviations:

CalEEMod: CALifornia Emissions Estimator **MO**Del

ft²: square feet

TABLE 13. CONSUMER PRODUCT SQUARE FOOTAGE

Year	Total Floor Area (ft ²) ^a
2020	1,059,933
2021	2,781,633
2022	3,476,424
2023	3,930,382
2024	3,930,382

Sources:

Hall, Kristen. Urban Designer III, Associate. Perkins+Will. December 2, 2015—email communication with ICF.

Notes:

- a. Total floor area for consumer product use is based on the total square footage presented in Table 1 for all land use types except the following: Parking Structure, Underground Parking, China Basin Park, Mission Rock Square, Channel Plaza

Abbreviations:

ft²: square feet

TABLE 14. DAILY TRIP RATES BY LAND USE TYPE AND ASSUMPTION

Land Use Type	CalEEMod Land Use Type	Daily Auto Trip Rates ^a	Daily Truck Trip Rates ^b	Unit
Residential	Apartments High Rise	1.7	0.03	/DU
Commercial - office	General Office Building	3.1	0.21	/1,000sf
Commercial – general/retail	Strip Mall	20.5	0.22	/1,000sf
Event Venue	Racquet Club	19.1	0.04	
Sit-down Restaurant	High Turnover (Sit Down Restaurant)	25.5	3.60	/1,000sf
Quick Service Restaurant	Fast Food Restaurant w/o Drive Thru	76.4	3.60	/1,000sf
Parking Structure	Enclosed Parking Structure with Elevator	-	-	/1,000sf
Underground Parking	Enclosed Parking Structure with Elevator	-	-	/1,000sf
China Basin Park	Park	2.9	-	/acre
Mission Rock Square	Park	2.9	-	/acre
Channel Plaza	Park	2.9	-	/acre
Pier 48 - Brewery/ Distillery	Manufacturing	0.5	0.16	/1,000sf
Pier 48 - Brewery Retail / Exhibition	Strip Mall	20.5	-	/1,000sf
Pier 48 - Brewery Restaurant	High Turnover (Sit Down Restaurant)	25.5	-	/1,000sf

Source:

Ballus Armet, Ingrid. Fehr & Peers. October 14, 2016—email communication with ICF

Notes:

- Represents daily automobile trips by residents and visitors to residential land uses. The daily trip rates were conservatively assumed 365 days per year. Emissions were modeled using CalEEMod.
- Represents daily truck trips visitor and deliveries to nonresidential (e.g., commercial, retail) land uses. Emissions were modeled using EMFAC2014 emission factors because CalEEMod cannot estimate emissions generated by a fleet mix of only model year 2010 or newer engines, which would be required by Measure AQ-1.2.

Abbreviations:

CalEEMod = CALifornia Emissions Estimator MODel

DU = dwelling unit

sf: square foot

TABLE 15. DAILY TRIP LENGTHS (MILES) BY LAND USE TYPE

Land Use Type	CalEEMod Land Use Type	Automobiles	Vendor Trucks
Residential	Apartments High Rise	4.25	12.1
Commercial - office	General Office Building	6.79	12.1
Commercial – general/retail	Strip Mall	2.67	12.1
Event Venue	Racquet Club	0.63	12.1
Sit-down Restaurant	High Turnover (Sit Down Restaurant)	2.62	12.1
Quick Service Restaurant	Fast Food Restaurant w/o Drive Thru	2.82	12.1
Parking Structure	Enclosed Parking Structure with Elevator	-	-
Underground Parking	Enclosed Parking Structure with Elevator	-	-
China Basin Park	Park	-	-
Mission Rock Square	Park	-	-
Channel Plaza	Park	-	-
Pier 48 - Brewery/ Distillery	Manufacturing	1.15	12.1
Pier 48 - Brewery Retail / Exhibition	Strip Mall	1.15	-
Pier 48 - Brewery Restaurant	High Turnover (Sit Down Restaurant)	1.15	-

Source:

Ballus Armet, Ingrid. Fehr & Peers. October 14, 2016—email communication with ICF

TABLE 16. DAILY VEHICLE TRIPS BY LAND USE TYPE AND SCENARIO

Land Use Type	Daily Auto Trips	Daily Truck Trips
Residential	1,800	31
Commercial - office	3,937	270
Commercial – general/retail	2,203	24
Event Venue	1,905	4
Sit-down Restaurant	2,003	283
Quick Service Restaurant	2,576	121
Parking Structure	0	0
Underground Parking	0	0
China Basin Park	0	0
Mission Rock Square	0	0
Channel Plaza	0	0
Pier 48 - Brewery/ Distillery	90	38
Pier 48 - Brewery Retail / Exhibition	226	0
Pier 48 - Brewery Restaurant	280	0
Total	15,020	772

Source:

Ballus Armet, Ingrid. Fehr & Peers. October 14, 2016—email communication with ICF

RESULTS TABLES

CONSTRUCTION IMPACTS

TABLE 17. AVERAGE DAILY CONSTRUCTION EMISSIONS BY CATEGORY FOR THE ENTERTAINMENT VENUE VARIANT

Year	Category ^b	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Exhaust	PM2.5 Exhaust
2017	Off-road Equipment	1.5	16.9	0.7	0.7
	On-road Truck Travel	0.2	5.1	<0.1	<0.1
	On-road Truck Idling	<0.1	0.2	<0.1	<0.1
	Worker Commute	0.3	0.5	<0.1	<0.1
	Fugitive ROG	0.0	0.0	0.0	0.0
	<i>Total</i>	<i>2.0</i>	<i>22.7</i>	<i>0.8</i>	<i>0.7</i>
2018	Off-road Equipment	11.6	107.1	5.1	4.9
	On-road Truck Travel	0.3	10.2	<0.1	<0.1
	On-road Truck Idling	<0.1	0.3	<0.1	<0.1
	Worker Commute	3.4	6.3	0.1	0.1
	Fugitive ROG	21.9	0.0	0.0	0.0
	<i>Total</i>	<i>37.3</i>	<i>123.9</i>	<i>5.3</i>	<i>5.1</i>
2019	Off-road Equipment	14.7	130.1	6.3	6.0
	On-road Truck Travel	0.4	14.2	<0.1	<0.1
	On-road Truck Idling	<0.1	0.4	<0.1	<0.1
	Worker Commute	6.0	11.1	0.2	0.2
	Fugitive ROG	44.4	0.0	0.0	0.0
	<i>Total</i>	<i>65.6</i>	<i>155.8</i>	<i>6.6</i>	<i>6.3</i>
2020	Off-road Equipment	11.3	98.6	4.7	4.5
	On-road Truck Travel	0.6	19.7	<0.1	<0.1
	On-road Truck Idling	<0.1	0.6	<0.1	<0.1
	Worker Commute	4.3	8.0	0.2	0.2
	Fugitive ROG	31.9	0.0	0.0	0.0
	<i>Total</i>	<i>48.2</i>	<i>126.9</i>	<i>4.9</i>	<i>4.7</i>
2021	Off-road Equipment	6.2	50.9	2.3	2.2
	On-road Truck Travel	0.4	13.1	<0.1	<0.1
	On-road Truck Idling	<0.1	0.4	<0.1	<0.1
	Worker Commute	2.5	4.6	0.1	0.1
	Fugitive ROG	17.3	0.0	0.0	0.0
	<i>Total</i>	<i>26.5</i>	<i>69.1</i>	<i>2.5</i>	<i>2.4</i>
2022	Off-road Equipment	2.4	18.0	0.8	0.8
	On-road Truck Travel	<0.1	3.1	<0.1	<0.1

Year	Category ^b	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Exhaust	PM2.5 Exhaust
	On-road Truck Idling	<0.1	<0.1	<0.1	<0.1
	Worker Commute	1.3	2.3	<0.1	<0.1
	Fugitive ROG	8.2	0.0	0.0	0.0
	<i>Total</i>	<i>11.9</i>	<i>23.5</i>	<i>0.9</i>	<i>0.9</i>
2023	Off-road Equipment	0.6	4.1	0.2	0.2
	On-road Truck Travel	<0.1	1.1	<0.1	<0.1
	On-road Truck Idling	<0.1	<0.1	<0.1	<0.1
	Worker Commute	0.3	0.6	<0.1	<0.1
	Fugitive ROG	2.0	0.0	0.0	0.0
	<i>Total</i>	<i>2.9</i>	<i>5.8</i>	<i>0.2</i>	<i>0.2</i>
Significance Threshold		54	54	82	54

Source:

ENVIRON International Corporation and the California Air Districts. 2013. CalEEMod User's Guide. Version 2013.2. Appendix A: Calculation Details for CalEEMod. Prepared for the California Air Pollution Control Officers Association. July. Available: <<http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendixa.pdf?sfvrsn=2>>. Accessed: October 12, 2015.

Notes:

a. Categories defined as follows:

Off-road Equipment = Operating emissions from heavy-duty equipment, such as bulldozer, cranes, and excavators. Refer to Table 3 for equipment activity assumptions. Emissions were modeled using CalEEMod.

On-road Truck Travel = Operating emissions from heavy-duty on-road trucks. Refer to Table 6 for vehicle activity assumptions. Emissions were modeled using emission factors from EMFAC2014.

On-road Truck Idling = Idling emissions from heavy-duty on-road trucks. The analysis assumed that each truck would idle 5 minutes while unloading soil or material on the project site. Emissions were modeled using idling emission factors from EMFAC2011-HD.

Worker Commute = Operating emission from employee vehicles. Refer to Table 6 vehicle activity assumptions. Emissions were modeled using CalEEMod.

Fugitive ROG = Fugitive ROG emissions from the asphalt paving and the application of architectural coatings. Refer to Section 3.2.1.6, *Asphalt Paving*, for a summary of paving assumptions and Table 8 for a summary of architectural coating assumptions. Paving emissions were modeled using emission factors from the CalEEMod User Guide, where ROG = acres paved * 2.62 pounds ROG/acre paved (ENVIRON 2013). Architectural coating emissions were modeled using CalEEMod.

Emissions over threshold levels are in **bold**

Abbreviations:

CalEEMod: CALifornia Emissions Estimator **MO**del

ROG: reactive organic gases

NO_x: nitrogen oxides

PM10: particulate matter less than or equal to 10 microns in diameter

PM2.5: particulate matter less than or equal to 2.5 microns in diameter

lbs: pounds

TABLE 18. SUMMARIZED AVERAGE DAILY CONSTRUCTION EMISSIONS BY ANALYSIS YEAR FOR THE ENTERTAINMENT VENUE VARIANT

Year	Average Daily Emissions (lbs/day)			
	ROG	NO _x	PM10 Exhaust	PM2.5 Exhaust
2017	2.0	22.7	0.8	0.7
2018	37.3	123.9	5.3	5.1
2019	65.6	155.8	6.6	6.3
2020	48.2	126.9	4.9	4.7
2021	26.5	69.1	2.5	2.4
2022	11.9	23.5	0.9	0.9
2023	2.9	5.8	0.2	0.2
2024	0.0	0.0	0.0	0.0
Significance Threshold	54	54	82	54

Source:

Refer to Table 17.

Notes:Emissions over threshold levels are in **bold**Abbreviations:

ROG: reactive organic gases

NO_x: nitrogen oxides

PM10: particulate matter less than or equal to 10 microns in diameter

PM2.5: particulate matter less than or equal to 2.5 microns in diameter

lbs: pounds

TABLE 19. MITIGATED AVERAGE DAILY CONSTRUCTION EMISSIONS BY CATEGORY FOR THE ENTERTAINMENT VENUE VARIANT

Year	Category ^b	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Exhaust	PM2.5 Exhaust
2017	Off-road Equipment	0.3	6.0	<0.1	<0.1
	On-road Truck Travel	<0.1	1.7	<0.1	<0.1
	On-road Truck Idling	<0.1	0.1	<0.1	<0.1
	Worker Commute	0.3	0.5	<0.1	<0.1
	Fugitive ROG	0.0	0.0	0.0	0.0
	<i>Total</i>	<i>0.7</i>	<i>8.4</i>	<i><0.1</i>	<i><0.1</i>
2018	Off-road Equipment	3.1	52.6	0.8	0.8
	On-road Truck Travel	0.2	3.8	<0.1	<0.1
	On-road Truck Idling	<0.1	0.3	<0.1	<0.1
	Worker Commute	3.4	6.3	0.1	0.1
	Fugitive ROG	4.2	0.0	0.0	0.0
	<i>Total</i>	<i>10.9</i>	<i>63.0</i>	<i>1.0</i>	<i>1.0</i>

Year	Category ^b	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Exhaust	PM2.5 Exhaust
2019	Off-road Equipment	3.8	73.5	1.1	1.1
	On-road Truck Travel	0.2	5.5	<0.1	<0.1
	On-road Truck Idling	<0.1	0.4	<0.1	<0.1
	Worker Commute	6.0	11.1	0.2	0.2
	Fugitive ROG	8.4	0.0	0.0	0.0
	<i>Total</i>	<i>18.5</i>	<i>90.5</i>	<i>1.3</i>	<i>1.3</i>
2020	Off-road Equipment	3.5	63.7	1.0	1.0
	On-road Truck Travel	0.4	8.2	<0.1	<0.1
	On-road Truck Idling	<0.1	0.6	<0.1	<0.1
	Worker Commute	4.3	8.0	0.2	0.2
	Fugitive ROG	6.1	0.0	0.0	0.0
	<i>Total</i>	<i>14.4</i>	<i>80.4</i>	<i>1.2</i>	<i>1.2</i>
2021	Off-road Equipment	1.8	41.0	0.5	0.5
	On-road Truck Travel	0.3	5.8	<0.1	<0.1
	On-road Truck Idling	<0.1	0.4	<0.1	<0.1
	Worker Commute	2.5	4.6	0.1	0.1
	Fugitive ROG	3.3	0.0	0.0	0.0
	<i>Total</i>	<i>8.0</i>	<i>51.7</i>	<i>0.7</i>	<i>0.6</i>
2022	Off-road Equipment	0.6	15.6	0.2	0.2
	On-road Truck Travel	<0.1	1.4	<0.1	<0.1
	On-road Truck Idling	<0.1	<0.1	<0.1	<0.1
	Worker Commute	1.3	2.3	<0.1	<0.1
	Fugitive ROG	1.6	0.0	0.0	0.0
	<i>Total</i>	<i>3.5</i>	<i>19.4</i>	<i>0.3</i>	<i>0.2</i>
2023	Off-road Equipment	0.2	3.9	<0.1	<0.1
	On-road Truck Travel	<0.1	0.5	<0.1	<0.1
	On-road Truck Idling	<0.1	<0.1	<0.1	<0.1
	Worker Commute	0.3	0.6	<0.1	<0.1
	Fugitive ROG	0.4	0.0	0.0	0.0
	<i>Total</i>	<i>0.9</i>	<i>5.1</i>	<i><0.1</i>	<i><0.1</i>
Significance Threshold		54	54	82	54

Year	Category ^b	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Exhaust	PM2.5 Exhaust

Source:

ENVIRON International Corporation and the California Air Districts. 2013. CalEEMod User's Guide. Version 2013.2. Appendix A: Calculation Details for CalEEMod. Prepared for the California Air Pollution Control Officers Association. July. Available: <<http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendixa.pdf?sfvrsn=2>>. Accessed: October 12, 2015.

Notes:

All table references below refer to tables in the Activity Data section above.

- a. Emissions over threshold levels are in **bold**
- b. Mitigated emissions assume all off-road equipment and all diesel generators have Tier 4 interim engines (Measure AQ-1.1), all haul trucks are model year 2010 or newer (Measure AQ-1.2), 90% of all architectural coatings have a maximum of 10 grams of volatile organic compounds per liter (Measure AQ-1.3), and all construction barge engines have Tier 3 engines and all construction work boat engines are model year 2005 or newer (Measure AQ-1.4). Does not include effect of Mitigation Measure M-AQ-1.5, which requires NO_x offsets.
- c. Categories defined as follows:
 Off-road Equipment = Operating emissions from heavy-duty equipment, such as bulldozer, cranes, and excavators. Refer to Table 4 for equipment activity assumptions. Emissions were modeled using CalEEMod.
 On-road Truck Travel = Operating emissions from heavy-duty on-road trucks. Refer to Table 6 for vehicle activity assumptions. Emissions were modeled using emission factors from EMFAC2014.
 On-road Truck Idling = Idling emissions from heavy-duty on-road trucks. The analysis assumed that each truck would idle 5 minutes while unloading soil or material on the project site. Emissions were modeled using idling emission factors from EMFAC2011-HD.
 Worker Commute = Operating emission from employee vehicles. Refer to Table 6 vehicle activity assumptions. Emissions were modeled using CalEEMod.
 Fugitive ROG = Fugitive ROG emissions from the asphalt paving and the application of architectural coatings. Refer to Section 3.2.1.7 of the Air Quality Technical Report for a summary of paving assumptions and Table 8 for a summary of architectural coating assumptions. Paving emissions were modeled using emission factors from the CalEEMod User Guide, where ROG = acres paved * 2.62 pounds ROG/acre paved (ENVIRON 2013). Architectural coating emissions were modeled using CalEEMod.

Abbreviations:

ROG: reactive organic gases
 NO_x: nitrogen oxides
 PM10: particulate matter less than or equal to 10 microns in diameter
 PM2.5: particulate matter less than or equal to 2.5 microns in diameter
 lbs: pounds

TABLE 20. SUMMARIZED MITIGATED AVERAGE DAILY CONSTRUCTION EMISSIONS BY ANALYSIS YEAR FOR THE ENTERTAINMENT VENUE VARIANT

Year	Average Daily Emissions (lbs/day)			
	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust
2017	0.7	8.4	<0.1	<0.1
2018	10.9	63.0	1.0	1.0
2019	18.5	90.5	1.3	1.3
2020	14.4	80.4	1.2	1.2
2021	8.0	51.7	0.7	0.6
2022	3.5	19.4	0.3	0.2
2023	0.9	5.1	<0.1	<0.1
2024	0.0	0.0	0.0	0.0
Significance Threshold	54	54	82	54

Source:

Refer to Table 19.

Notes:

- Emissions over threshold levels are in **bold**
- Mitigated emissions assume all off-road equipment and all diesel generators have Tier 4 interim engines (Measure AQ-1.1), all haul trucks are model year 2010 or newer (Measure AQ-1.2), 90% of all architectural coatings have a maximum of 10 grams of volatile organic compounds per liter (Measure AQ-1.3), and all construction barge engines have Tier 3 engines and all construction work boat engines are model year 2005 or newer (Measure AQ-1.4). Does not include effect of Mitigation Measure M-AQ-1.5, which requires NOx offsets.

Abbreviations:

ROG: reactive organic gases

NOx.: nitrogen oxides

PM10: particulate matter less than or equal to 10 microns in diameter

PM2.5: particulate matter less than or equal to 2.5 microns in diameter

lbs: pounds

OPERATIONAL IMPACTS**TABLE 21. AVERAGE DAILY OPERATIONAL EMISSIONS BY CATEGORY FOR THE ENTERTAINMENT VENUE VARIANT**

Year	Category	Average Daily Emissions (lbs/day)			
		ROG	NOX	PM10 Total ^c	PM2.5 Total ^c
2020	Area	20.2	0.2	0.1	0.1
	Energy	0.4	3.5	0.3	0.3
	Mobile	7.4	5.1	6.5	1.9
	Brewery	21.4	0.0	0.0	0.0
	Generators	0.3	6.1	0.2	0.2
	Onroad Truck Travel	0.5	9.2	1.4	0.5
	Onroad Truck Idling	<0.1	0.3	<0.1	<0.1

Year	Category	Average Daily Emissions (lbs/day)			
		ROG	NOX	PM10 Total ^c	PM2.5 Total ^c
	<i>Total</i>	<i>50.2</i>	<i>24.4</i>	<i>8.5</i>	<i>3.0</i>
2021	Area	49.2	0.4	0.2	0.2
	Energy	0.6	5.5	0.4	0.4
	Mobile	14.7	10.7	14.4	4.2
	Brewery	21.4	0.0	0.0	0.0
	Generators	0.5	9.1	0.3	0.3
	Onroad Truck Travel	0.8	12.2	2.9	1.0
	Onroad Truck Idling	<0.1	0.3	<0.1	<0.1
	<i>Total</i>	87.3	38.2	18.2	6.1
2022	Area	61.5	0.5	0.2	0.2
	Energy	0.8	6.8	0.5	0.5
	Mobile	19.1	12.6	16.6	4.9
	Brewery	21.4	0.0	0.0	0.0
	Generators	0.6	12.2	0.4	0.4
	Onroad Truck Travel	0.8	12.4	3.2	1.1
	Onroad Truck Idling	<0.1	0.3	<0.1	<0.1
	<i>Total</i>	104.2	44.8	21.0	7.1
2023	Area	69.6	0.5	0.2	0.2
	Energy	1.0	8.8	0.7	0.7
	Mobile	24.0	16.1	22.1	6.5
	Brewery	21.4	0.0	0.0	0.0
	Generators	0.8	15.2	0.5	0.5
	Onroad Truck Travel	1.0	14.6	4.4	1.4
	Onroad Truck Idling	<0.1	0.3	<0.1	<0.1
	<i>Total</i>	117.9	55.5	27.9	9.4
2024	Area	69.6	0.5	0.2	0.2
	Energy	1.0	8.8	0.7	0.7
	Mobile	24.0	16.1	22.1	6.5
	Brewery	21.4	0.0	0.0	0.0
	Generators	0.8	15.2	0.5	0.5
	Onroad Truck Travel	0.8	12.3	4.4	1.4
	Onroad Truck Idling	<0.1	0.3	<0.1	<0.1
	<i>Total</i>	117.7	53.2	27.9	9.3
BAAQMD Significance Threshold		54	54	82	54

Year	Category	Average Daily Emissions (lbs/day)			
		ROG	NOX	PM10 Total ^c	PM2.5 Total ^c

Sources:

1. California Air Resources Board. 2012. Appendix B: Emissions Estimation Methodology for Commercial Harbor Craft Operating in California. Available: <<http://www.arb.ca.gov/msei/chc-appendix-b-emission-estimates-ver02-27-2012.pdf>>.
2. Fehr & Peers. 2016. Screencheck Draft - Transportation Impact Study: Mission Rock (Seawall Lot 337/Pier 48). Prepared for the San Francisco Planning Department. July. San Francisco, CA.
3. United States Environmental Protection Agency. 1996. Emissions Factors & AP 42, Compilation of Air Pollutant Emission Factors. 9.12.1 Malt Beverages. Available: <<https://www3.epa.gov/ttnchie1/ap42/>>. Accessed: February 29, 2016.

Notes:

All table references below refer to tables in the Activity Data section above

- a. Emissions over threshold levels are in **bold**

- b. Categories defined as follows:

Area = Emissions from landscaping equipment, consumer products, and natural gas fireplaces. Refer to Tables 1 and 9 for the land use type and sizes assumed in the modeling. Emissions were modeled using CalEEMod.

Energy = Emissions from natural gas combustion for space heating and cooking. Refer to Tables 1 and 9 for the land use type and sizes assumed in the modeling. Emissions were modeled using CalEEMod.

Mobile = Operating emissions from daily resident and commercial truck trips. Refer to Table 10 for the daily vehicle trips by land use type. The trip rates were provided by the *Screencheck Draft- Transportation Impact Study* prepared by the transportation consultants, Fehr & Peers (2016). Emission from resident trips were estimated using CalEEMod; emissions from commercial truck trips were estimated using emission factors from EMFAC2014.

Brewery = Operating emissions from brewing activities. Refer to Table 15 for brewery activity data assumed in the modeling. Emissions were modeled using CalEEMod and emission factors from EMFAC2014.

Generators = Operating emissions from diesel-powered emergency generators. Refer to Table 13 for operating assumptions for the emergency generators. Emissions were modeled using CalEEMod.

On-road Truck Travel = Operating emissions from haul trucks used for deliveries to the Pier 48 brewery. The analysis assumed 38 daily haul truck trips. Emissions were estimated using emission factors from EMFAC2014.

On-road Truck Idling = Idling emissions from haul trucks used for deliveries to the Pier 48 brewery. The analysis assumed that each truck would idle 5 minutes while unloading materials at the brewery. Emissions were estimated using idling emission factors from EMFAC2011-HD.

- c. PM10 and PM2.5 include both exhaust and dust emissions.

Abbreviations:

ROG: reactive organic gases

NO_x: nitrogen oxides

PM10: particulate matter less than or equal to 10 microns in diameter

PM2.5: particulate matter less than or equal to 2.5 microns in diameter

lbs: pounds

TABLE 22. SUMMARIZED AVERAGE DAILY OPERATIONAL EMISSIONS BY CATEGORY FOR THE ENTERTAINMENT VENUE VARIANT

Year	Average Daily Emissions (lbs/day)			
	ROG	NOX	PM10 Total ^b	PM2.5 Total ^b
2017	0.0	0.0	0.0	0.0
2018	0.0	0.0	0.0	0.0
2019	0.0	0.0	0.0	0.0
2020	50.2	24.4	8.5	3.0
2021	87.3	38.2	18.2	6.1
2022	104.2	44.8	21.0	7.1
2023	117.9	55.5	27.9	9.4
2024 (full buildout)	117.7	53.2	27.9	9.3
BAAQMD Significance Threshold	54	54	82	54

Source:

Refer to Table 21.

Notes:

- a. Emissions over threshold levels are in **bold**.
- b. PM10 and PM2.5 include both exhaust and dust emissions.

Abbreviations:

ROG: reactive organic gases

NO_x: nitrogen oxides

PM10: particulate matter less than or equal to 10 microns in diameter

PM2.5: particulate matter less than or equal to 2.5 microns in diameter

lbs: pounds

TABLE 23. MITIGATED AVERAGE DAILY OPERATIONAL EMISSIONS BY CATEGORY FOR THE ENTERTAINMENT VENUE VARIANT

Year	Category	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Total ^c	PM2.5 Total ^c
2020	Area	17.3	0.2	0.1	0.1
	Energy	0.3	3.2	0.2	0.2
	Mobile	5.9	4.1	5.2	1.5
	Brewery	21.4	0.0	0.0	0.0
	Generators	0.3	6.1	<0.1	<0.1
	Onroad Truck Travel	0.5	9.2	1.4	0.5
	Onroad Truck Idling	<0.1	0.3	<0.1	<0.1
	<i>Total</i>	<i>45.8</i>	<i>23.1</i>	<i>7.0</i>	<i>2.4</i>

Year	Category	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Total ^c	PM2.5 Total ^c
2021	Area	44.1	0.4	0.2	0.2
	Energy	0.6	5.0	0.4	0.4
	Mobile	11.8	8.6	11.5	3.4
	Brewery	21.4	0.0	0.0	0.0
	Generators	0.5	9.1	<0.1	<0.1
	Onroad Truck Travel	0.7	11.9	2.9	0.9
	Onroad Truck Idling	<0.1	0.3	<0.1	<0.1
	<i>Total</i>	79.1	35.3	15.0	4.9
2022	Area	55.2	0.5	0.2	0.2
	Energy	0.7	6.2	0.5	0.5
	Mobile	15.3	10.1	13.3	3.9
	Brewery	21.4	0.0	0.0	0.0
	Generators	0.6	12.2	<0.1	<0.1
	Onroad Truck Travel	0.8	12.2	3.2	1.1
	Onroad Truck Idling	<0.1	0.3	<0.1	<0.1
	<i>Total</i>	94.0	41.5	17.3	5.7
2023	Area	62.3	0.5	0.2	0.2
	Energy	0.9	8.0	0.6	0.6
	Mobile	19.2	12.9	17.7	5.2
	Brewery	21.4	0.0	0.0	0.0
	Generators	0.8	15.2	<0.1	<0.1
	Onroad Truck Travel	1.0	14.4	4.4	1.4
	Onroad Truck Idling	<0.1	0.3	<0.1	<0.1
	<i>Total</i>	105.6	51.3	23.0	7.6
2024	Area	62.3	0.5	0.2	0.2
	Energy	0.9	8.0	0.6	0.6
	Mobile	19.2	12.9	17.7	5.2
	Brewery	21.4	0.0	0.0	0.0
	Generators	0.8	15.2	<0.1	<0.1
	Onroad Truck Travel	0.8	12.1	4.4	1.4
	Onroad Truck Idling	<0.1	0.3	<0.1	<0.1
	<i>Total</i>	105.4	49.0	23.0	7.5
BAAQMD Significance Threshold		54	54	82	54

Year	Category	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Total ^c	PM2.5 Total ^c

Sources:

1. California Air Resources Board. 2012. Appendix B: Emissions Estimation Methodology for Commercial Harbor Craft Operating in California. Available: <<http://www.arb.ca.gov/msei/chc-appendix-b-emission-estimates-ver02-27-2012.pdf>>.
2. Fehr & Peers. 2016. Screencheck Draft - Transportation Impact Study: Mission Rock (Seawall Lot 337/Pier 48). Prepared for the San Francisco Planning Department. July. San Francisco, CA.
3. United States Environmental Protection Agency. 1996. Emissions Factors & AP 42, Compilation of Air Pollutant Emission Factors. 9.12.1 Malt Beverages. Available: <<https://www3.epa.gov/ttnchie1/ap42/>>. Accessed: February 29, 2016.

Notes:

All table references below refer to tables in the Activity Data section above

- a. Mitigated emissions assume all emergency generators have model year 2008+ engines consistent with ARB California Airborne Toxics Control Measure (ATCM) emission rates that also meet Tier 2 standards with level 3 VDECS (Measure AQ-2.1), 90% of all architectural coatings have a maximum of 10 grams of volatile organic compounds per liter (Measure AQ-2.2), and auto vehicle trips are reduced by 20% (Measure AQ-2.3). Does not include effect of Mitigation Measure M-AQ-1.5, which requires ROG offsets.
- b. Categories defined as follows:

Area = Emissions from landscaping equipment, consumer products, and natural gas fireplaces. Refer to Tables 1 and 9 for the land use type and sizes assumed in the modeling. Emissions were modeled using CalEEMod.

Energy = Emissions from natural gas combustion for space heating and cooking. Refer to Tables 1 and 9 for the land use type and sizes assumed in the modeling. Emissions were modeled using CalEEMod.

Mobile = Operating emissions from daily resident and commercial truck trips. Refer to Table 10 for the daily vehicle trips by land use type. The trip rates were provided by the *Screencheck Draft- Transportation Impact Study* prepared by the transportation consultants, Fehr & Peers (2016). Emission from resident trips were estimated using CalEEMod; emissions from commercial truck trips were estimated using emission factors from EMFAC2014.

Brewery = Operating emissions from brewing activities. Refer to Table 15 for brewery activity data assumed in the modeling. Emissions were modeled using CalEEMod and emission factors from EMFAC2014.

Generators = Operating emissions from diesel-powered emergency generators. Refer to Table 13 for operating assumptions for the emergency generators. Emissions were modeled using CalEEMod.

On-road Truck Travel = Operating emissions from haul trucks used for deliveries to the Pier 48 brewery. The analysis assumed 38 daily haul truck trips. Emissions were estimated using emission factors from EMFAC2014.

On-road Truck Idling = Idling emissions from haul trucks used for deliveries to the Pier 48 brewery. The analysis assumed that each truck would idle 5 minutes while unloading materials at the brewery. Emissions were estimated using idling emission factors from EMFAC2011-HD.
- c. PM10 and PM2.5 include both exhaust and dust emissions.

Abbreviations:

ROG: reactive organic gases

NO_x: nitrogen oxides

PM10: particulate matter less than or equal to 10 microns in diameter

PM2.5: particulate matter less than or equal to 2.5 microns in diameter

lbs: pounds

VDECS: Verified Diesel Emissions Control Strategies

TABLE 24. SUMMARIZED MITIGATED AVERAGE DAILY OPERATIONAL EMISSIONS BY CATEGORY FOR THE ENTERTAINMENT VENUE VARIANT

Year	Average Daily Emissions (lbs/day)			
	ROG	NO _x	PM10 Total ^b	PM2.5 Total ^b
2017	0.0	0.0	0.0	0.0
2018	0.0	0.0	0.0	0.0
2019	0.0	0.0	0.0	0.0
2020	45.8	23.1	7.0	2.4
2021	79.1	35.3	15.0	4.9
2022	94.0	41.5	17.3	5.7
2023	105.6	51.3	23.0	7.6
2024 (full buildout)	105.4	49.0	23.0	7.5
Significance Threshold	54	54	82	54

Source:

Refer to Table 23.

Notes:

- a. Mitigated emissions assume all emergency generators have model year 2008+ engines consistent with ARB ATCM emission rates that also meet Tier 2 standards with level 3 VDECS (Measure AQ-2.1), 90% of all architectural coatings have a maximum of 10 grams of volatile organic compounds per liter (Measure AQ-2.2), and auto vehicle trips are reduced by 20% (Measure AQ-2.3). Does not include effect of Mitigation Measure M-AQ-1.5, which requires ROG offsets.
- b. PM10 and PM2.5 include both exhaust and dust emissions.

Abbreviations:

ROG: reactive organic gases

NO_x: nitrogen oxides

PM10: particulate matter less than or equal to 10 microns in diameter

PM2.5: particulate matter less than or equal to 2.5 microns in diameter

lbs: pounds

VDECS: Verified Diesel Emissions Control Strategies

COMBINED CONSTRUCTION AND OPERATIONAL IMPACTS**TABLE 25. SUMMARIZED AVERAGE DAILY CONSTRUCTION PLUS OPERATIONAL EMISSIONS FOR THE ENTERTAINMENT VENUE VARIANT**

Year	Average Daily Emissions (lbs/day)							
	ROG	NO _x	PM10 Exhaust	PM10 Dust ^c	PM10 Total ^d	PM2.5 Exhaust	PM2.5 Dust ^c	PM2.5 Total ^d
2017	2.0	22.7	0.8	0.0	0.8	0.7	0.0	0.7
2018	37.3	123.9	5.3	0.0	5.3	5.1	0.0	5.1
2019	65.6	155.8	6.6	0.0	6.6	6.3	0.0	6.3
2020	98.4	151.3	5.7	7.8	13.5	5.5	2.2	7.7
2021	113.8	107.3	3.7	16.9	20.6	3.6	4.8	8.4
2022	116.1	68.3	2.5	19.4	21.9	2.4	5.6	8.0
2023	120.8	61.3	2.2	26.0	28.1	2.1	7.4	9.6
2024	117.7	53.2	1.9	26.0	27.9	1.9	7.5	9.3
Significance Threshold	54	54	82	82	82	54	54	54

Source:

Refer to Tables 18 and 22.

Notes:*All table references below refer to tables in the Activity Data section above*

- As shown in Tables 1 and 2 of the AQTR, construction of Area 1 would occur between 2017 and 2020. It was conservatively assumed that structures would be fully occupied immediately following construction and operational emissions associated with Area 1 would begin in 2021. Accordingly, concurrent construction and operational activities would occur between 2021 and 2023, resulting in higher daily emissions than either component when analyzed separately. This table presents emissions for overlapping construction and operational activities to analyze maximum air quality impacts during concurrent activities.
- PM10 and PM2.5 dust only includes dust from operations; construction dust is not included as it is addressed by Construction Dust Control Ordinance (Ordinance 176-08, effective July 30, 2008).
- PM10 and PM2.5 total includes exhaust from both construction and operations and dust from operations only.

Abbreviations:

ROG: reactive organic gases

NO_x: nitrogen oxides

PM10: particulate matter less than or equal to 10 microns in diameter

PM2.5: particulate matter less than or equal to 2.5 microns in diameter

lbs: pounds

TABLE 26. SUMMARIZED MITIGATED AVERAGE DAILY CONSTRUCTION PLUS OPERATIONAL EMISSIONS FOR THE ENTERTAINMENT VENUE VARIANT

Year	Average Daily Emissions (lbs/day)							
	ROG	NO _x	PM10 Exhaust	PM10 Dust ^c	PM10 Total ^d	PM2.5 Exhaust	PM2.5 Dust ^c	PM2.5 Total ^d
2017	0.7	8.4	<0.1	0.0	<0.1	<0.1	0.0	<0.1
2018	10.9	63.0	1.0	0.0	1.0	1.0	0.0	1.0
2019	18.5	90.5	1.3	0.0	1.3	1.3	0.0	1.3
2020	60.1	103.5	1.8	6.5	8.3	1.8	1.9	3.6
2021	87.0	87.0	1.6	14.1	15.6	1.5	4.0	5.6
2022	97.5	60.9	1.4	16.2	17.5	1.4	4.6	6.0
2023	106.5	56.4	1.4	21.6	23.1	1.4	6.2	7.6
2024	105.4	49.0	1.3	21.6	23.0	1.3	6.2	7.5
Significance Threshold	54	54	82	82	82	54	54	54

Source:

Refer to Tables 20 and 24.

Notes:*All table references below refer to tables in the Activity Data section above*

- Mitigated emissions assume all off-road equipment and all diesel generators have Tier 4 interim engines (Measure AQ-1.1), all haul trucks are model year 2010 or newer (Measure AQ-1.2), 90% of all architectural coatings have a maximum of 10 grams of volatile organic compounds per liter (Measure AQ-1.3), and all construction barge engines have Tier 3 engines and all construction work boat engines are model year 2005 or newer (Measure AQ-1.4). Mitigated operational emissions assume all emergency generators have model year 2008+ engines consistent with ARB ATCM emission rates that also meet Tier 2 standards with level 3 VDECS (Measure AQ-2.1), 90% of all architectural coatings have a maximum of 10 grams of volatile organic compounds per liter (Measure AQ-2.2), and auto vehicle trips are reduced by 20%. Does not include effect of Mitigation Measure M-AQ-1.5, which requires ROG and NO_x offsets.
- As shown in Tables 1 and 2 of the AQTR, construction of Area 1 would occur between 2017 and 2020. It was conservatively assumed that structures would be fully occupied immediately following construction and operational emissions associated with Area 1 would begin in 2021. Accordingly, concurrent construction and operational activities would occur between 2021 and 2023, resulting in higher daily emissions than either component when analyzed separately. This table presents emissions for overlapping construction and operational activities to analyze maximum air quality impacts during concurrent activities.
- PM10 and PM2.5 dust only includes dust from operations; construction dust is not included as it is addressed by Construction Dust Control Ordinance (Ordinance 176-08, effective July 30, 2008).
- PM10 and PM2.5 total includes exhaust from both construction and operations and dust from operations only.

Abbreviations:

ROG: reactive organic gases

NO_x: nitrogen oxides

PM10: particulate matter less than or equal to 10 microns in diameter

PM2.5: particulate matter less than or equal to 2.5 microns in diameter

lbs: pounds

VDECS: Verified Diesel Emissions Control Strategies

TOXIC AIR CONTAMINANTS**PM2.5 ANALYSIS****TABLE 27. MAXIMUM ANNUAL AVERAGE PM2.5 EXHAUST EXPOSURE WITHIN STUDY AREA AT ONSITE AND OFFSITE RECEPTORS NOT LOCATED IN THE APEZ DURING EXISTING/FUTURE CONDITIONS BUT WOULD BE LOCATED IN THE APEZ DURING EXISTING/FUTURE PLUS PROPOSED PROJECT CONDITIONS FOR THE ENTERTAINMENT VENUE VARIANT**

Receptor	Annual Average PM2.5 Concentration ($\mu\text{g}/\text{m}^3$) ^{a, b}			
	Onsite Receptors		Offsite Receptors	
	Variant 2	Mitigated ^c	Variant 2	Mitigated ^c
Construction				
<u>2014 Background Analysis</u>				
Total (Background + Project)	10.7	8.7	-	-
Background	8.4	8.4	-	-
Construction Contribution	2.3	0.3	-	-
Significance Threshold for Project Contribution	0.3	N/A ^d	-	-
Above Threshold?	Yes	N/A ^d	-	-
<u>2025 Background Analysis</u>				
Total (Background + Project)	10.7	8.7	-	-
Background	8.4	8.4	-	-
Construction Contribution	2.3	0.3	-	-
Significance Threshold for Project Contribution	0.3	N/A ^d	-	-
Above Threshold?	Yes	N/A ^d	-	-

Sources:

CalEEMod modeling, AERMOD modeling, EMFAC2014 modeling, and other off-model calculations discussed in the AQTR and presented in AQTR Appendix B.

Notes:

- Mitigated construction emissions assume all off-road equipment and all diesel generators have Tier 4 interim engines (MM AQ-1.1), all haul trucks are model year 2010 (Measure AQ-1.2), and all construction barge engines have Tier 3 engines and all construction work boat engines are model year 2005 or newer (Measure AQ-1.4). Mitigated operational emissions assume all emergency generators have model year 2008+ engines consistent with ARB ATCM emission rates that also meet Tier 2 standards with level 3 VDECS (Measure AQ-2.1) and auto vehicle trips are reduced by 20% through the TDM plan (Mitigation Measure AQ-2.3).
- "-" means that a receptor does not meet the criteria for the table. For example, there may not be an onsite receptor that is currently in an APEZ or is placed into an APEZ with only the operational contribution from the proposed project.
- The mitigated values may represent different receptor locations than the Variant 2 values because the highest mitigated values may occur at different locations due to the varying effectiveness of mitigation measures on each individual source of emissions.
- Because this receptor is not placed into an APEZ with the mitigated project contribution (i.e. the total background plus project annual average PM2.5 concentration is less than the APEZ threshold of 10.0 $\mu\text{g}/\text{m}^3$), the project-level threshold does not apply.

Emissions over threshold levels are in **bold**

CANCER RISK ANALYSIS (DPM/TOG)**TABLE 28. MAXIMUM LIFETIME EXCESS CANCER RISK WITHIN STUDY AREA AT ONSITE AND OFFSITE RECEPTORS CURRENTLY LOCATED IN THE APEZ DURING EXISTING/FUTURE CONDITIONS FOR THE ENTERTAINMENT VENUE VARIANT**

Receptor	Lifetime Excess Cancer Risk (per million) ^{a, b}			
	Onsite Receptors		Offsite Receptors	
	Entertainment Venue Variant	Mitigated ^c	Entertainment Venue Variant	Mitigated ^c
Construction Plus Operation				
<u>2014 Background Analysis</u>				
Total (Background + Project)	-	-	131.7	111.3
Background	-	-	107.2	107.2
Construction Plus Operation Contribution	-	-	24.4	4.0
Significance Threshold for Project Contribution	-	-	7.0	7.0
Above Threshold?	-	-	Yes	No
<u>2025 Background Analysis</u>				
Total (Background + Project)	-	-	180.1	164.8
Background	-	-	161.6	161.6
Construction Plus Operation Contribution	-	-	18.6	3.2
Significance Threshold for Project Contribution	-	-	7.0	7.0
Above Threshold?	-	-	Yes	No

Sources:

CalEEMod modeling, AERMOD modeling, EMFAC2014 modeling, and other off-model calculations discussed in the AQTR and presented in AQTR Appendix B.

Notes:

- a Mitigated construction emissions assume all off-road equipment and all diesel generators have Tier 4 interim engines (MM AQ-1.1), all haul trucks are model year 2010 (Measure AQ-1.2), 90% of and all construction barge engines have Tier 3 engines and all construction work boat engines are model year 2005 or newer (Measure AQ-1.4). Mitigated operational emissions assume all emergency generators have model year 2008+ engines consistent with ARB ATCM emission rates that also meet Tier 2 standards with level 3 VDECS (Measure AQ-2.1) and auto vehicle trips are reduced by 20% through the TDM plan (Mitigation Measure AQ-2.3).
- b “-” means that a receptor does not meet the criteria for the table. For example, there may not be an onsite receptor that is currently in an APEZ or is placed into an APEZ with only the operational contribution from the proposed project.
- c The mitigated values may represent different receptor locations than the Variant 2 values because the highest mitigated values may occur at different locations due to the varying effectiveness of mitigation measures on each individual source of emissions.

Emissions over threshold levels are in **bold**

TABLE 29. MAXIMUM LIFETIME EXCESS CANCER RISK WITHIN STUDY AREA AT ONSITE AND OFFSITE RECEPTORS NOT LOCATED IN THE APEZ DURING EXISTING/FUTURE CONDITIONS BUT WOULD BE LOCATED IN THE APEZ DURING EXISTING/FUTURE PLUS PROPOSED PROJECT CONDITIONS FOR THE ENTERTAINMENT VENUE VARIANT

Receptor	Lifetime Excess Cancer Risk (per million) ^{a, b}			
	Onsite Receptors		Offsite Receptors	
	Entertainment Venue Variant	Mitigated ^c	Entertainment Venue Variant	Mitigated ^c
Construction Plus Operation				
<u>2014 Background Analysis</u>				
Total (Background + Project)	193.2	78.6	178.6	100.5
Background	53.0	53.0	70.3	91.7
Construction Plus Operation Contribution	140.3	25.7	108.4	8.8
Significance Threshold for Project Contribution	10.0	N/A ^d	10.0	10.0
Above Threshold?	Yes	N/A ^d	Yes	No
<u>2025 Background Analysis</u>				
Total (Background + Project)	178.1	63.5	156.1	103.2
Background	37.8	37.8	47.6	99.7
Construction Plus Operation Contribution	140.3	25.7	108.5	3.5
Significance Threshold for Project Contribution	10.0	N/A ^d	10.0	10.0
Above Threshold?	Yes	N/A ^d	Yes	No

Sources:

CalEEMod modeling, AERMOD modeling, EMFAC2014 modeling, and other off-model calculations discussed in the AQTR and presented in AQTR Appendix B.

Notes:

- a Mitigated construction emissions assume all off-road equipment and all diesel generators have Tier 4 interim engines (MM AQ-1.1), all haul trucks are model year 2010 (Measure AQ-1.2), 90% of and all construction barge engines have Tier 3 engines and all construction work boat engines are model year 2005 or newer (Measure AQ-1.4). Mitigated operational emissions assume all emergency generators have model year 2008+ engines consistent with ARB ATCM emission rates that also meet Tier 2 standards with level 3 VDECS (Measure AQ-2.1) and auto vehicle trips are reduced by 20% through the TDM plan (Mitigation Measure AQ-2.3).
- b “-” means that a receptor does not meet the criteria for the table. For example, there may not be an onsite receptor that is currently in an APEZ or is placed into an APEZ with only the operational contribution from the proposed project.
- c The mitigated values may represent different receptor locations than the Variant 2 values because the highest mitigated values may occur at different locations due to the varying effectiveness of mitigation measures on each individual source of emissions.
- d Because this receptor is not placed into an APEZ with the mitigated project contribution (i.e. the total background plus project lifetime excess cancer risk is less than the APEZ threshold of 100), the project-level threshold does not apply.

Emissions over threshold levels are in **bold**

VARIANT 3: RECONFIGURED PARKING

ACTIVITY DATA

The table numbers below match the table numbers in the Air Quality Technical Report for comparison purposes.

TABLE 30. PROPOSED DEVELOPMENT BY AREA AND OVERALL PROJECT PHASING

Area	Proposed Development	Years of Construction	Operational Date	Total Number of Work Days	Total Truck Trips
Area 1	Block A Block G China Basin Park Mission Rock Square	2017–2020	3/31/2020	783	19,398
Area 2	Block B Block C Block D (including Garage)	2018–2021	4/1/2021	783	23,319
Area 3	Block E Block F Block K Parking Garage	2019–2022	4/1/2022	783	12,086
Area 4	Block H Block I Block J Channel Plaza	2020–2023	4/5/2023	785	9,050

Sources:

1. Mesikepp, Sam. Hathaway Dinwiddie Construction Company. October 5, 2016—email communication with ICF
2. Hall, Kristen. Urban Designer III, Associate. Perkins+Will. December 2, 2015—email communication with ICF.

Notes:

- a. Total truck trips include excavation fill removal.

TABLE 31. CONSTRUCTION EQUIPMENT ACTIVITY

Phase	Applicant-Provided Equipment Type/Fuel	CalEEMod Equipment Type	Number/Day ^a	Horsepower	Average Hours/Day
Area 1 (Building A, G, K, China Basin Park, Mission Rock Square, Pier 48)					
Demo + Rough Grade	Loader/Diesel	Tractors/Loaders/Backhoes	2	120	8
	Dump Truck/Diesel	n/a ^b	2	325	8
	Bulldozer/Diesel	Crawler Tractors	2	400	8

Phase	Applicant-Provided Equipment Type/Fuel	CalEEMod Equipment Type	Number/ Day ^a	Horsepower	Average Hours/ Day
	Jet Grout Rig/Diesel	Bore/Drill Rigs	2	200	4
	Jet Grout Pump/Diesel	Pumps	2	50	4
	Generator for Jet Grout Rig/Diesel	Generator Sets	1	400	4
	Backhoe/Diesel	Tractors/ Loaders/ Backhoes	1	350	4
	Scraper/Diesel	Scrapers	2	330	2
	Water Truck/Diesel	n/a ^b	1	330	-
	Dump Truck/Diesel	n/a ^b	4	325	4
Infrastructure	Backhoe/Diesel	Tractors/ Loaders/ Backhoes	2	250	4
	Trencher/Diesel	Trenchers	2	41	4
Foundations + Building	Excavator/Diesel	Excavators	3	385	1
	Dump Truck/Diesel	n/a ^b	3	325	1
	Crane/Diesel	Cranes	2	335	4
	Crane/Electric	Cranes	1	150	4
	Drill/Diesel	Bore/Drill Rigs	3	225	1
	Forklift/Diesel	Forklifts	3	210	2
	Concrete truck/Diesel	n/a ^b	3	325	2
	Water Truck/Diesel	n/a ^b	3	330	2
	Concrete pump/Diesel	Pumps	3	73	2
	Welder/Diesel	Welders	6	35	2
	Air compressor/Diesel	Air Compressors	3	150	5
	Air compressor/Diesel	Air Compressors	6	49	3
	High-lift forklift/Diesel	Forklifts	3	120	2
	Pile hammer/Diesel	Bore/Drill Rigs	3	130	2
	Carrydeck crane/Diesel	Cranes	1	110	4
	45-ton grove crane/Diesel	Cranes	1	215	4
	Boom truck crane/Diesel	Cranes	1	250	4
	CX80 excavator/Diesel	Excavators	1	53	1

Phase	Applicant-Provided Equipment Type/Fuel	CalEEMod Equipment Type	Number/ Day ^a	Horsepower	Average Hours/ Day
	Rubber-tired loader/Diesel	Rubber Tired Loaders	1	260	1
	Temporary generators for welding, metal decking, miscellaneous trades/Diesel	Generator Sets	8	10	4
	<i>In-water equipment for Pier 48 seismic upgrade:</i>				
	<u>DB Alameda derrick barge</u>				
	• Draw-works engine (crane)	Cranes	1	400	4
	• Genset engine – main house	n/a ^c	1	400	4
	• Deck air compressor	Air Compressors	1	49	4
	• Anchor / spud winch – Engine A	Other Material Handling Eq.	1	117	4
	• Anchor / spud winch – Engine B	Other Material Handling Eq.	1	117	4
	• Deck generator	Generator Sets	1	274	8
	<u>Challenger crane barge</u>				
	• Draw-works engine (crane)	Cranes	1	364	4
	• Deck generator	Generator Sets	1	129	8
	• Air compressor	Air Compressors	1	49	4
	• Spud winch	Other Material Handling Eq.	1	120	4
	APE 200 vibratory hammer	Bore/Drill Rigs	1	595	4
	APE 600 vibratory hammer	Bore/Drill Rigs	1	1,200	2
	D36 impact hammer, 89000 lb-ft	Bore/Drill Rigs	1	125	4
	Work boat	n/a ^c	1	50	8

Phase	Applicant-Provided Equipment Type/Fuel	CalEEMod Equipment Type	Number/ Day ^a	Horsepower	Average Hours/ Day
Paving + Landscape	Roller/Diesel	Rollers	1	40	2
	Paver/Diesel	Pavers	1	175	2
	Berm Machine/Diesel	Surfacing Equipment	1	44	1
	Dump truck/Diesel	n/a ^b	2	325	4
	Pickup/Diesel	n/a ^b	2	250	8
Area 2 (Buildings B, C & D)					
Demo + Rough Grade	Loader/Diesel	Tractors/ Loaders/ Backhoes	2	120	8
	Dump Truck/Diesel	n/a ^b	2	325	8
	Bulldozer/Diesel	Crawler Tractors	2	400	8
	Backhoe/Diesel	Tractors/ Loaders/ Backhoes	1	350	4
	Scraper/Diesel	Scrapers	1	330	4
	Water Truck/Diesel	n/a ^b	1	330	4
Infrastructure	Dump Truck/Diesel	n/a ^b	2	325	4
	Backhoe/Diesel	Tractors/ Loaders/ Backhoes	1	250	4
	Trencher/Diesel	Trenchers	1	41	4
Foundations + Building	Excavator/Diesel	Excavators	3	385	2
	Dump Truck/Diesel	n/a ^b	4	325	2
	Crane/Diesel	Cranes	1	335	4
	Crane/Electric	n/a ^d	2	150	4
	Drill/Diesel	Bore/Drill Rigs	3	225	1
	Forklift/Diesel	Forklifts	3	210	2
	Concrete truck/Diesel	n/a ^b	4	325	4
	Water Truck/Diesel	n/a ^b	4	330	4
	Concrete Pump/Diesel	Pumps	4	73	2
	Welder/Diesel	Welders	4	35	2
	Air compressor/Diesel	Air Compressors	3	150	5
	High-lift forklift/Diesel	Forklifts	3	120	2

Phase	Applicant-Provided Equipment Type/Fuel	CalEEMod Equipment Type	Number/ Day ^a	Horsepower	Average Hours/ Day
	Pile hammer/Diesel	Bore/Drill Rigs	4	130	2
	Temporary generators for welding, metal decking, miscellaneous trades / Diesel	Generator Sets	8	10	4
Paving + Landscape	Roller/Diesel	Rollers	1	40	2
	Paver/Diesel	Pavers	1	175	2
	Dump truck/Diesel	n/a ^b	1	325	4
	Pickup/Diesel	n/a ^b	2	250	8
Area 3 (Buildings E, F, & K, Underground Parking)					
Demo + Rough Grade	Loader/Diesel	Tractors/ Loaders/ Backhoes	2	120	8
	Dump Truck/Diesel	n/a ^b	2	325	8
	Bulldozer/Diesel	Crawler Tractors	1	400	8
	Backhoe/Diesel	Tractors/ Loaders/ Backhoes	1	350	4
	Scraper/Diesel	Scrapers	1	330	4
	Water Truck/Diesel	n/a ^b	1	330	4
Infrastructure	Dump Truck/Diesel	n/a ^b	2	325	4
	Backhoe/Diesel	Tractors/ Loaders/ Backhoes	1	250	4
	Trencher/Diesel	Trenchers	1	41	4
Foundations + Building	Dump Truck/Diesel	n/a ^b	3	325	1
	Excavator	Excavators	3	385	1
	Crane/Diesel	Cranes	1	335	4
	Crane/Electric ^a	n/a ^d	2	150	4
	Drill/Diesel	Bore/Drill Rigs	2	225	1
	Forklift/Diesel	Forklifts	2	210	2
	Concrete truck/Diesel	n/a ^b	2	325	2
	Water Truck/Diesel	n/a ^b	2	330	2
	Concrete Pump/Diesel	Pumps	2	73	2

Phase	Applicant-Provided Equipment Type/Fuel	CalEEMod Equipment Type	Number/ Day ^a	Horsepower	Average Hours/ Day
	Welder/Diesel	Welders	4	35	2
	Air compressor/Diesel	Air Compressors	2	150	5
	High-lift forklift/Diesel	Forklifts	2	120	2
	Pile hammer/Diesel	Bore/Drill Rigs	2	130	2
	Temporary generators for welding, metal decking, miscellaneous trades / Diesel	Generator Sets	4	10	4
Paving + Landscape	Roller/Diesel	Rollers	1	40	2
	Paver/Diesel	Pavers	1	175	2
	Berm Machine/Diesel	Surfacing Equipment	1	44	1
	Dump truck/Diesel	n/a ^b	1	325	4
	Pickup/Diesel	n/a ^b	2	250	8
Area 4 (Buildings H, I & J, Channel Plaza)					
Demo + Rough Grade	Loader/Diesel	Tractors/ Loaders/ Backhoes	2	120	8
	Dump Truck/Diesel	n/a ^b	2	325	8
	Bulldozer/Diesel	Crawler Tractors	1	400	8
	Backhoe/Diesel	Tractors/ Loaders/ Backhoes	1	350	4
	Scraper/Diesel	Scrapers	1	330	4
	Water Truck/Diesel	n/a ^b	1	330	4
Infrastructure	Dump Truck/Diesel	n/a ^b	2	325	4
	Backhoe/Diesel	Tractors/ Loaders/ Backhoes	1	250	4
	Trencher/Diesel	Trenchers	1	41	4
Foundations + Building	Excavator/Diesel	Excavators	3	385	1
	Dump Truck/Diesel	n/a ^b	3	325	1
	Crane/Diesel	Cranes	3	335	4

Phase	Applicant-Provided Equipment Type/Fuel	CalEEMod Equipment Type	Number/Day ^a	Horsepower	Average Hours/Day
	Drill/Diesel	Bore/Drill Rigs	3	225	1
	Forklift/Diesel	Forklifts	3	210	2
	Concrete truck/Diesel	n/a ^b	3	325	2
	Water Truck/Diesel	n/a ^b	3	330	2
	Concrete Pump/Diesel	Pumps	3	73	2
	Welder/Diesel	Welders	6	35	2
	Air compressor/Diesel	Air Compressors	3	150	5
	High-lift forklift/Diesel	Forklifts	3	120	2
	Pile Hammer/ Diesel	Bore/Drill Rigs	3	130	2
	Temporary generators for welding, metal decking, miscellaneous trades / Diesel	Generator Sets	6	10	4
Paving + Landscape	Roller/Diesel	Rollers	1	40	2
	Paver/Diesel	Pavers	1	175	2
	Berm Machine/Diesel	Surfacing Equipment	1	44	1
	Dump truck/Diesel	n/a ^b	1	325	4
	Pickup/Diesel	n/a ^b	2	250	8

Source:

Mesikepp, Sam. Hathaway Dinwiddie Construction Company. October 5, 2016 and January 20, 2017—email communications with ICF.

Notes:

- All equipment assumed to operate each day throughout the entire phase duration.
- On-road trucks were modeled based on anticipated daily trips and estimated vehicle miles traveled. See Table 6 for a summary of on-road assumptions used in this analysis.
- In-water equipment was modeled outside of CalEEMod. See Table 5 for a summary of in-water assumptions used in this analysis.
- Electricity use results in indirect criteria pollutant, toxic air contaminant (TAC), and greenhouse gas (GHG) emissions at the applicable power plant, but the Air Quality Technical Report does not evaluate these offsite indirect emissions. Therefore, electric equipment was not included in the CalEEMod modeling or the impact analysis.

Abbreviations:

CalEEMod: CALifornia Emissions Estimator **MODEL**

Eq.: Equipment

TABLE 32. HAULING TRUCK TRIPS AND WORKER TRIPS

Area and Phase	Haul/Vendor Trips ^a		Worker Trips ^b		Soil Moved (cubic yards)		
	Daily	Total ^c	Daily	Total ^c	Import	Export	Balance
Area 1 (Building A, G, China Basin Park, Mission Rock Square)							
Demo + Rough Grade	57	3,395	100	6,000	27,644	n/a	21,000
Infrastructure	6	1,940	100	26,000	-	-	n/a
Foundations + Buildings	17	12,608	860	498,800	-	6,720	n/a
Paving + Landscape	4	1,455	130	10,790	-	-	-
Area 2 (Buildings B, C & D)							
Demo + Rough Grade	49	2,915	60	3,600	13,570	n/a	33,228
Infrastructure	2	408	60	15,600	-	-	n/a
Foundations + Buildings	27	19,623	920	414,000	-	87,450	n/a
Paving + Landscape	1	373	80	17,040	-	-	-
Area 3 (Buildings E, F, & K, Underground Parking)							
Demo + Rough Grade	6	375	60	3,600	9,098	n/a	n/a
Infrastructure	1	375	60	15,600	-	-	n/a
Foundations + Buildings	21	9,970	410	205,000	-	2,700	n/a
Paving + Landscape	4	1,366	60	9,780	-	-	-
Area 4 (Buildings H, I & J, Channel Plaza)							
Demo + Rough Grade	4	256	50	3,000	10,156	n/a	n/a
Infrastructure	1	256	50	13,000	-	-	n/a
Foundations + Buildings	17	7,919	610	353,800	-	7,800	n/a
Paving + Landscape	2	619	80	6,800	-	-	-

Source:

Mesikepp, Sam. Hathaway Dinwiddie Construction Company. October 5, 2016—email communication with ICF

Notes:

- Represents one-way truck trips. The average one-way trip length is 20.6 miles, which is based on anticipated subcontractor delivery locations. Specifically, it was assumed that 15% of deliveries would originate from Brisbane and South San Francisco, 50% from the South Bay, 7.5% from the North Bay, 10% from the East Bay, and 2.5% from Southern California or the Pacific Northwest.
- Represents one-way worker trips. The average one-way trip length is 20.4 miles.
- Total trips account for variation in daily trips and represent total trips for each area and phase.

TABLE 33. ARCHITECTURAL COATING SQUARE FOOTAGE

Area	Residential Floor Area (ft ²)	Nonresidential Floor Area (ft ²) ^a	Building Surface Area Coated (ft ²)			
			Residential		Nonresidential	
			Interior ^b	Exterior ^c	Interior ^d	Exterior ^e
Area 1	500,966	558,967	1,014,456	338,152	838,451	279,484
Area 2	238,828	645,642	483,627	161,209	968,463	322,821
Area 3	307,720	157,385	623,133	207,711	236,078	78,693
Area 4	531,985	64,219	1,077,270	359,090	96,329	32,110

Sources:

1. ENVIRON International Corporation and the California Air Districts. 2013. CalEEMod User's Guide. Version 2013.2. Appendix A: Calculation Details for CalEEMod. Prepared for the California Air Pollution Control Officers Association. July. Available: <<http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendixa.pdf?sfvrsn=2>>. Accessed: October 12, 2015.
2. Mesikepp, Sam. Hathaway Dinwiddie Construction Company. October 5, 2016—email communication with ICF.
3. Ballus Armet, Ingrid. Fehr & Peers. October 14, 2016—email communication with ICF

Notes:

- a. Excludes parking components because they would not require architectural coatings.
- b. Residential interior coated area = total residential floor area * surface area multiplier * fraction of surface area coated. CalEEMod assumes the total surface for residential painting equals 2.7 times the floor square footage, and that 75% of the interior surface area is painted. Accordingly, the equation becomes total residential floor area * 2.7 * 75%. The default values are described on page A-16 of the CalEEMod User Guide.
- c. Residential exterior coated area = total residential floor area * surface area multiplier * fraction of surface area coated. CalEEMod assumes the total surface for residential painting equals 2.7 times the floor square footage, and that 25% of the exterior surface area is painted. Accordingly, the equation becomes total residential floor area * 2.7 * 25%.
- d. Nonresidential interior coated area = total nonresidential floor area * surface area multiplier * fraction of surface area coated. CalEEMod assumes the total surface for nonresidential painting equals 2.0 times the floor square footage, and that 75% of the interior surface area is painted. Accordingly, the equation becomes total nonresidential floor area * 2.0 * 75%.
- e. Nonresidential exterior coated area = total nonresidential floor area * surface area multiplier * fraction of surface area coated. CalEEMod assumes the total surface for nonresidential painting equals 2.0 times the floor square footage, and that 25% of the exterior surface area is painted. Accordingly, the equation becomes total nonresidential floor area * 2.0 * 25%.

Abbreviations:CalEEMod: CALifornia Emissions Estimator **MODEL**ft²: square feet

RESULTS TABLES

CONSTRUCTION IMPACTS

TABLE 34. AVERAGE DAILY CONSTRUCTION EMISSIONS BY CATEGORY FOR THE RECONFIGURED PARKING VARIANT

Year	Category ^b	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Exhaust	PM2.5 Exhaust
2017	Off-road Equipment	1.8	19.1	0.8	0.8
	On-road Truck Travel	0.2	5.8	<0.1	<0.1
	On-road Truck Idling	<0.1	0.2	<0.1	<0.1
	Worker Commute	0.3	0.5	<0.1	<0.1
	Fugitive ROG	0.0	0.0	0.0	0.0
	<i>Total</i>	2.3	25.6	0.9	0.8
2018	Off-road Equipment	11.5	106.4	5.1	4.9
	On-road Truck Travel	0.3	11.8	<0.1	<0.1
	On-road Truck Idling	<0.1	0.4	<0.1	<0.1
	Worker Commute	3.3	6.1	0.1	0.1
	Fugitive ROG	21.9	0.0	0.0	0.0
	<i>Total</i>	37.1	124.5	5.3	5.0
2019	Off-road Equipment	13.6	122.2	5.8	5.6
	On-road Truck Travel	0.6	20.8	<0.1	<0.1
	On-road Truck Idling	<0.1	0.7	<0.1	<0.1
	Worker Commute	5.9	10.9	0.2	0.2
	Fugitive ROG	44.4	0.0	0.0	0.0
	<i>Total</i>	64.6	154.6	6.1	5.9
2020	Off-road Equipment	8.7	76.3	3.7	3.5
	On-road Truck Travel	0.6	18.7	<0.1	<0.1
	On-road Truck Idling	<0.1	0.6	<0.1	<0.1
	Worker Commute	4.3	7.9	0.2	0.2
	Fugitive ROG	33.9	0.0	0.0	0.0
	<i>Total</i>	47.6	103.5	3.9	3.8
2021	Off-road Equipment	5.0	41.7	1.9	1.8
	On-road Truck Travel	0.3	9.7	<0.1	<0.1
	On-road Truck Idling	<0.1	0.3	<0.1	<0.1
	Worker Commute	3.0	5.4	0.1	0.1
	Fugitive ROG	25.1	0.0	0.0	0.0
	<i>Total</i>	33.4	57.1	2.1	2.0

Year	Category ^b	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Exhaust	PM2.5 Exhaust
2022	Off-road Equipment	2.8	23.0	1.0	1.0
	On-road Truck Travel	0.1	4.1	<0.1	<0.1
	On-road Truck Idling	<0.1	0.1	<0.1	<0.1
	Worker Commute	1.7	3.0	<0.1	<0.1
	Fugitive ROG	14.1	0.0	0.0	0.0
	<i>Total</i>	<i>18.7</i>	<i>30.3</i>	<i>1.1</i>	<i>1.1</i>
2023	Off-road Equipment	0.7	5.2	0.2	0.2
	On-road Truck Travel	<0.1	1.3	<0.1	<0.1
	On-road Truck Idling	<0.1	<0.1	<0.1	<0.1
	Worker Commute	0.4	0.8	<0.1	<0.1
	Fugitive ROG	3.4	0.0	0.0	0.0
	<i>Total</i>	<i>4.5</i>	<i>7.3</i>	<i>0.3</i>	<i>0.2</i>
Significance Threshold		54	54	82	54

Source:

ENVIRON International Corporation and the California Air Districts. 2013. CalEEMod User's Guide. Version 2013.2. Appendix A: Calculation Details for CalEEMod. Prepared for the California Air Pollution Control Officers Association. July. Available: <<http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendixa.pdf?sfvrsn=2>>. Accessed: October 12, 2015.

Notes:

a. Categories defined as follows:

Off-road Equipment = Operating emissions from heavy-duty equipment, such as bulldozer, cranes, and excavators. Refer to Table 3 for equipment activity assumptions. Emissions were modeled using CalEEMod.

On-road Truck Travel = Operating emissions from heavy-duty on-road trucks. Refer to Table 6 for vehicle activity assumptions. Emissions were modeled using emission factors from EMFAC2014.

On-road Truck Idling = Idling emissions from heavy-duty on-road trucks. The analysis assumed that each truck would idle 5 minutes while unloading soil or material on the project site. Emissions were modeled using idling emission factors from EMFAC2011-HD.

Worker Commute = Operating emission from employee vehicles. Refer to Table 6 vehicle activity assumptions. Emissions were modeled using CalEEMod.

Fugitive ROG = Fugitive ROG emissions from the asphalt paving and the application of architectural coatings. Refer to Section 3.2.1.6, *Asphalt Paving*, for a summary of paving assumptions and Table 8 for a summary of architectural coating assumptions. Paving emissions were modeled using emission factors from the CalEEMod User Guide, where ROG = acres paved * 2.62 pounds ROG/acre paved (ENVIRON 2013). Architectural coating emissions were modeled using CalEEMod.

Emissions over threshold levels are in **bold**

Abbreviations:

CalEEMod: **C**ALifornia **E**missions Estimator **M**ODEl

ROG: reactive organic gases

NO_x: nitrogen oxides

PM10: particulate matter less than or equal to 10 microns in diameter

PM2.5: particulate matter less than or equal to 2.5 microns in diameter

lbs: pounds

TABLE 35. SUMMARIZED AVERAGE DAILY CONSTRUCTION EMISSIONS BY ANALYSIS YEAR FOR THE RECONFIGURED PARKING VARIANT

Year	Average Daily Emissions (lbs/day)			
	ROG	NO _x	PM10 Exhaust	PM2.5 Exhaust
2017	2.3	25.6	0.9	0.8
2018	37.1	124.5	5.3	5.0
2019	64.6	154.6	6.1	5.9
2020	47.6	103.5	3.9	3.8
2021	33.4	57.1	2.1	2.0
2022	18.7	30.3	1.1	1.1
2023	4.5	7.3	0.3	0.2
2024	0.0	0.0	0.0	0.0
Significance Threshold	54	54	82	54

Source:

Refer to Table 34.

Notes:Emissions over threshold levels are in **bold**Abbreviations:

ROG: reactive organic gases

NO_x: nitrogen oxides

PM10: particulate matter less than or equal to 10 microns in diameter

PM2.5: particulate matter less than or equal to 2.5 microns in diameter

lbs: pounds

TABLE 36. MITIGATED AVERAGE DAILY CONSTRUCTION EMISSIONS BY CATEGORY FOR THE RECONFIGURED PARKING VARIANT

Year	Category ^b	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Exhaust	PM2.5 Exhaust
2017	Off-road Equipment	0.4	7.0	<0.1	<0.1
	On-road Truck Travel	<0.1	2.0	<0.1	<0.1
	On-road Truck Idling	<0.1	0.2	<0.1	<0.1
	Worker Commute	0.3	0.5	<0.1	<0.1
	Fugitive ROG	0.0	0.0	0.0	0.0
	<i>Total</i>	<i>0.8</i>	<i>9.7</i>	<i><0.1</i>	<i><0.1</i>
2018	Off-road Equipment	3.1	51.9	0.9	0.9
	On-road Truck Travel	0.2	4.4	<0.1	<0.1
	On-road Truck Idling	<0.1	0.3	<0.1	<0.1
	Worker Commute	3.3	6.1	0.1	0.1
	Fugitive ROG	4.2	0.0	0.0	0.0
	<i>Total</i>	<i>10.8</i>	<i>62.7</i>	<i>1.0</i>	<i>1.0</i>

Year	Category ^b	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Exhaust	PM2.5 Exhaust
2019	Off-road Equipment	3.7	67.9	1.0	1.0
	On-road Truck Travel	0.4	8.2	<0.1	<0.1
	On-road Truck Idling	<0.1	0.6	<0.1	<0.1
	Worker Commute	5.9	10.9	0.2	0.2
	Fugitive ROG	8.4	0.0	0.0	0.0
	<i>Total</i>	<i>18.5</i>	<i>87.6</i>	<i>1.3</i>	<i>1.3</i>
2020	Off-road Equipment	2.7	45.6	0.8	0.8
	On-road Truck Travel	0.4	7.6	<0.1	<0.1
	On-road Truck Idling	<0.1	0.6	<0.1	<0.1
	Worker Commute	4.3	7.9	0.2	0.2
	Fugitive ROG	6.4	0.0	0.0	0.0
	<i>Total</i>	<i>13.9</i>	<i>61.7</i>	<i>1.0</i>	<i>1.0</i>
2021	Off-road Equipment	1.2	29.2	0.3	0.3
	On-road Truck Travel	0.2	4.3	<0.1	<0.1
	On-road Truck Idling	<0.1	0.3	<0.1	<0.1
	Worker Commute	3.0	5.4	0.1	0.1
	Fugitive ROG	4.8	0.0	0.0	0.0
	<i>Total</i>	<i>9.2</i>	<i>39.2</i>	<i>0.5</i>	<i>0.5</i>
2022	Off-road Equipment	0.7	17.8	0.2	0.2
	On-road Truck Travel	<0.1	1.9	<0.1	<0.1
	On-road Truck Idling	<0.1	0.1	<0.1	<0.1
	Worker Commute	1.7	3.0	<0.1	<0.1
	Fugitive ROG	2.7	0.0	0.0	0.0
	<i>Total</i>	<i>5.2</i>	<i>22.9</i>	<i>0.3</i>	<i>0.3</i>
2023	Off-road Equipment	0.2	4.5	<0.1	<0.1
	On-road Truck Travel	<0.1	0.6	<0.1	<0.1
	On-road Truck Idling	<0.1	<0.1	<0.1	<0.1
	Worker Commute	0.4	0.8	<0.1	<0.1
	Fugitive ROG	0.6	0.0	0.0	0.0
	<i>Total</i>	<i>1.3</i>	<i>5.9</i>	<i><0.1</i>	<i><0.1</i>
Significance Threshold		54	54	82	54

Year	Category ^b	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Exhaust	PM2.5 Exhaust

Source:
ENVIRON International Corporation and the California Air Districts. 2013. CalEEMod User's Guide. Version 2013.2. Appendix A: Calculation Details for CalEEMod. Prepared for the California Air Pollution Control Officers Association. July. Available: <<http://www.aqmd.gov/docs/default-source/caleemod/caleemod-appendixa.pdf?sfvrsn=2>>. Accessed: October 12, 2015.

Notes:
All table references below refer to tables in the Activity Data section above

- Emissions over threshold levels are in **bold**
- Mitigated emissions assume all off-road equipment and all diesel generators have Tier 4 interim engines (Measure AQ-1.1), all haul trucks are model year 2010 or newer (Measure AQ-1.2), 90% of all architectural coatings have a maximum of 10 grams of volatile organic compounds per liter (Measure AQ-1.3), and all construction barge engines have Tier 3 engines and all construction work boat engines are model year 2005 or newer (Measure AQ-1.4). Does not include effect of Mitigation Measure M-AQ-1.5, which requires NO_x offsets.
- Categories defined as follows:
 Off-road Equipment = Operating emissions from heavy-duty equipment, such as bulldozer, cranes, and excavators. Refer to Table 4 for equipment activity assumptions. Emissions were modeled using CalEEMod.
 On-road Truck Travel = Operating emissions from heavy-duty on-road trucks. Refer to Table 6 for vehicle activity assumptions. Emissions were modeled using emission factors from EMFAC2014.
 On-road Truck Idling = Idling emissions from heavy-duty on-road trucks. The analysis assumed that each truck would idle 5 minutes while unloading soil or material on the project site. Emissions were modeled using idling emission factors from EMFAC2011-HD.
 Worker Commute = Operating emission from employee vehicles. Refer to Table 6 vehicle activity assumptions. Emissions were modeled using CalEEMod.
 Fugitive ROG = Fugitive ROG emissions from the asphalt paving and the application of architectural coatings. Refer to Section 3.2.1.7 of the Air Quality Technical Report for a summary of paving assumptions and Table 8 for a summary of architectural coating assumptions. Paving emissions were modeled using emission factors from the CalEEMod User Guide, where ROG = acres paved * 2.62 pounds ROG/acre paved (ENVIRON 2013). Architectural coating emissions were modeled using CalEEMod.

Abbreviations:
 ROG: reactive organic gases
 NO_x: nitrogen oxides
 PM10: particulate matter less than or equal to 10 microns in diameter
 PM2.5: particulate matter less than or equal to 2.5 microns in diameter
 lbs: pounds

TABLE 37. SUMMARIZED MITIGATED AVERAGE DAILY CONSTRUCTION EMISSIONS BY ANALYSIS YEAR FOR THE RECONFIGURED PARKING VARIANT

Year	Average Daily Emissions (lbs/day)			
	ROG	NO _x	PM10 Exhaust	PM2.5 Exhaust
2017	0.8	9.7	<0.1	<0.1
2018	10.8	62.7	1.0	1.0
2019	18.5	87.6	1.3	1.3
2020	13.9	61.7	1.0	1.0

Year	Average Daily Emissions (lbs/day)			
	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust
2021	9.2	39.2	0.5	0.5
2022	5.2	22.9	0.3	0.3
2023	1.3	5.9	<0.1	<0.1
2024	0.0	0.0	0.0	0.0
Significance Threshold	54	54	82	54

Source:

Refer to Table 36.

Notes:

- Emissions over threshold levels are in **bold**
- Mitigated emissions assume all off-road equipment and all diesel generators have Tier 4 interim engines (Measure AQ-1.1), all haul trucks are model year 2010 or newer (Measure AQ-1.2), 90% of all architectural coatings have a maximum of 10 grams of volatile organic compounds per liter (Measure AQ-1.3), and all construction barge engines have Tier 3 engines and all construction work boat engines are model year 2005 or newer (Measure AQ-1.4). Does not include effect of Mitigation Measure M-AQ-1.5, which requires NOx offsets.

Abbreviations:

ROG: reactive organic gases

NOx.: nitrogen oxides

PM10: particulate matter less than or equal to 10 microns in diameter

PM2.5: particulate matter less than or equal to 2.5 microns in diameter

lbs: pounds

OPERATIONAL IMPACTS**TABLE 38. AVERAGE DAILY OPERATIONAL EMISSIONS BY CATEGORY FOR THE RECONFIGURED PARKING VARIANT**

Year	Category	Average Daily Emissions (lbs/day)			
		ROG	NOX	PM10 Total ^c	PM2.5 Total ^c
2020	Area	17.3	0.2	0.1	0.1
	Energy	0.4	3.5	0.3	0.3
	Mobile	7.9	5.0	11.3	3.1
	Brewery	21.4	0.0	0.0	0.0
	Generators	0.3	6.1	0.2	0.2
	Onroad Truck Travel	0.5	9.2	1.4	0.5
	Onroad Truck Idling	<0.1	0.3	<0.1	<0.1
	<i>Total</i>	<i>47.8</i>	<i>24.3</i>	<i>13.3</i>	<i>4.1</i>
2021	Area	48.8	0.4	0.2	0.2
	Energy	0.6	5.5	0.4	0.4
	Mobile	15.7	11.1	27.4	7.5
	Brewery	21.4	0.0	0.0	0.0
	Generators	0.5	9.1	0.3	0.3

Year	Category	Average Daily Emissions (lbs/day)			
		ROG	NOX	PM10 Total ^c	PM2.5 Total ^c
2022	Onroad Truck Travel	0.8	12.2	2.9	1.0
	Onroad Truck Idling	<0.1	0.3	<0.1	<0.1
	<i>Total</i>	87.8	38.6	31.2	9.3
	Area	60.1	0.5	0.2	0.2
	Energy	0.8	6.8	0.5	0.5
	Mobile	19.0	13.2	32.7	8.9
	Brewery	21.4	0.0	0.0	0.0
	Generators	0.6	12.2	0.4	0.4
	Onroad Truck Travel	0.9	13.2	3.6	1.2
	Onroad Truck Idling	<0.1	0.3	<0.1	<0.1
	<i>Total</i>	102.8	46.1	37.4	11.2
2023	Area	69.5	0.5	0.2	0.2
	Energy	1.0	8.8	0.7	0.7
	Mobile	24.3	16.9	43.5	11.9
	Brewery	21.4	0.0	0.0	0.0
	Generators	0.8	15.2	0.5	0.5
	Onroad Truck Travel	1.0	14.2	4.1	1.3
	Onroad Truck Idling	<0.1	0.3	<0.1	<0.1
	<i>Total</i>	118.0	55.8	49.1	14.6
2024	Area	69.5	0.5	0.2	0.2
	Energy	1.0	8.8	0.7	0.7
	Mobile	24.3	16.9	43.5	11.9
	Brewery	21.4	0.0	0.0	0.0
	Generators	0.8	15.2	0.5	0.5
	Onroad Truck Travel	0.8	11.8	4.1	1.3
	Onroad Truck Idling	<0.1	0.3	<0.1	<0.1
	<i>Total</i>	117.8	53.4	49.0	14.5
Significance Threshold		54	54	82	54

Year	Category	Average Daily Emissions (lbs/day)			
		ROG	NOX	PM10 Total ^c	PM2.5 Total ^c

Sources:

1. California Air Resources Board. 2012. Appendix B: Emissions Estimation Methodology for Commercial Harbor Craft Operating in California. Available: <<http://www.arb.ca.gov/msei/chc-appendix-b-emission-estimates-ver02-27-2012.pdf>>.
2. Fehr & Peers. 2016. Screencheck Draft - Transportation Impact Study: Mission Rock (Seawall Lot 337/Pier 48). Prepared for the San Francisco Planning Department. July. San Francisco, CA.
3. United States Environmental Protection Agency. 1996. Emissions Factors & AP 42, Compilation of Air Pollutant Emission Factors. 9.12.1 Malt Beverages. Available: <<https://www3.epa.gov/ttnchie1/ap42/>>. Accessed: February 29, 2016.

Notes:

All table references below refer to tables in the Activity Data section above

- a. Emissions over threshold levels are in **bold**
- b. Categories defined as follows:

Area = Emissions from landscaping equipment, consumer products, and natural gas fireplaces. Refer to Tables 1 and 9 for the land use type and sizes assumed in the modeling. Emissions were modeled using CalEEMod.

Energy = Emissions from natural gas combustion for space heating and cooking. Refer to Tables 1 and 9 for the land use type and sizes assumed in the modeling. Emissions were modeled using CalEEMod.

Mobile = Operating emissions from daily resident and commercial truck trips. Refer to Table 10 for the daily vehicle trips by land use type. The trip rates were provided by the *Screencheck Draft- Transportation Impact Study* prepared by the transportation consultants, Fehr & Peers (2016). Emission from resident trips were estimated using CalEEMod; emissions from commercial truck trips were estimated using emission factors from EMFAC2014.

Brewery = Operating emissions from brewing activities. Refer to Table 15 for brewery activity data assumed in the modeling. Emissions were modeled using CalEEMod and emission factors from EMFAC2014.

Generators = Operating emissions from diesel-powered emergency generators. Refer to Table 13 for operating assumptions for the emergency generators. Emissions were modeled using CalEEMod.

On-road Truck Travel = Operating emissions from haul trucks used for deliveries to the Pier 48 brewery. The analysis assumed 38 daily haul truck trips. Emissions were estimated using emission factors from EMFAC2014.

On-road Truck Idling = Idling emissions from haul trucks used for deliveries to the Pier 48 brewery. The analysis assumed that each truck would idle 5 minutes while unloading materials at the brewery. Emissions were estimated using idling emission factors from EMFAC2011-HD.

Abbreviations:

ROG: reactive organic gases

NO_x: nitrogen oxides

PM10: particulate matter less than or equal to 10 microns in diameter

PM2.5: particulate matter less than or equal to 2.5 microns in diameter

lbs: pounds

TABLE 39. SUMMARIZED AVERAGE DAILY OPERATIONAL EMISSIONS BY CATEGORY FOR THE RECONFIGURED PARKING VARIANT

Year	Average Daily Emissions (lbs/day)			
	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust
2017	0.0	0.0	0.0	0.0
2018	0.0	0.0	0.0	0.0
2019	0.0	0.0	0.0	0.0
2020	47.8	24.3	13.3	4.1
2021	87.8	38.6	31.2	9.3
2022	102.8	46.1	37.4	11.2
2023	118.0	55.8	49.1	14.6
2024 (full buildout)	117.8	53.4	49.0	14.5
Significance Threshold	54	54	82	54

Source:

Refer to Table 38.

Notes:a. Emissions over threshold levels are in **bold**.Abbreviations:

ROG: reactive organic gases

NO_x: nitrogen oxides

PM10: particulate matter less than or equal to 10 microns in diameter

PM2.5: particulate matter less than or equal to 2.5 microns in diameter

lbs: pounds

TABLE 40. MITIGATED AVERAGE DAILY OPERATIONAL EMISSIONS BY CATEGORY FOR THE RECONFIGURED PARKING VARIANT

Year	Category	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Total ^c	PM2.5 Total ^c
2020	Area	17.3	0.2	0.1	0.1
	Energy	0.4	3.5	0.3	0.3
	Mobile	6.3	4.0	9.0	2.5
	Brewery	21.4	0.0	0.0	0.0
	Generators	0.3	6.1	<0.1	<0.1
	Onroad Truck Travel	0.5	9.2	1.4	0.5
	Onroad Truck Idling	<0.1	0.3	<0.1	<0.1
	<i>Total</i>	46.2	23.3	10.9	3.4

Year	Category	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Total ^c	PM2.5 Total ^c
2021	Area	44.1	0.4	0.2	0.2
	Energy	0.6	5.5	0.4	0.4
	Mobile	12.6	8.9	21.9	6.0
	Brewery	21.4	0.0	0.0	0.0
	Generators	0.5	9.1	<0.1	<0.1
	Onroad Truck Travel	0.7	11.9	2.9	0.9
	Onroad Truck Idling	<0.1	0.3	<0.1	<0.1
	<i>Total</i>	79.9	36.1	25.5	7.6
2022	Area	55.2	0.5	0.2	0.2
	Energy	0.8	6.8	0.5	0.5
	Mobile	15.2	10.5	26.2	7.1
	Brewery	21.4	0.0	0.0	0.0
	Generators	0.6	12.2	<0.1	<0.1
	Onroad Truck Travel	0.9	13.0	3.6	1.2
	Onroad Truck Idling	<0.1	0.3	<0.1	<0.1
	<i>Total</i>	94.1	43.2	30.5	9.1
2023	Area	64.4	0.5	0.2	0.2
	Energy	1.0	8.8	0.7	0.7
	Mobile	19.5	13.5	34.8	9.5
	Brewery	21.4	0.0	0.0	0.0
	Generators	0.8	15.2	<0.1	<0.1
	Onroad Truck Travel	1.0	14.0	4.1	1.3
	Onroad Truck Idling	<0.1	0.3	<0.1	<0.1
	<i>Total</i>	108.0	52.2	39.9	11.8
2024	Area	64.4	0.5	0.2	0.2
	Energy	1.0	8.8	0.7	0.7
	Mobile	19.5	13.5	34.8	9.5
	Brewery	21.4	0.0	0.0	0.0
	Generators	0.8	15.2	<0.1	<0.1
	Onroad Truck Travel	0.8	11.6	4.1	1.3
	Onroad Truck Idling	<0.1	0.3	<0.1	<0.1
	<i>Total</i>	107.9	49.8	39.9	11.8
Significance Threshold		54	54	82	54

Year	Category	Average Daily Emissions (lbs/day)			
		ROG	NO _x	PM10 Total ^c	PM2.5 Total ^c

Sources:

1. California Air Resources Board. 2012. Appendix B: Emissions Estimation Methodology for Commercial Harbor Craft Operating in California. Available: <<http://www.arb.ca.gov/msei/chc-appendix-b-emission-estimates-ver02-27-2012.pdf>>.
2. Fehr & Peers. 2016. Screencheck Draft - Transportation Impact Study: Mission Rock (Seawall Lot 337/Pier 48). Prepared for the San Francisco Planning Department. July. San Francisco, CA.
3. United States Environmental Protection Agency. 1996. Emissions Factors & AP 42, Compilation of Air Pollutant Emission Factors. 9.12.1 Malt Beverages. Available: <<https://www3.epa.gov/ttnchie1/ap42/>>. Accessed: February 29, 2016.

Notes:

All table references below refer to tables in the Activity Data section above

- a. Mitigated emissions assume all emergency generators have model year 2008+ engines consistent with ARB California Airborne Toxics Control Measure (ATCM) emission rates that also meet Tier 2 standards with level 3 VDECS (Measure AQ-2.1), 90% of all architectural coatings have a maximum of 10 grams of volatile organic compounds per liter (Measure AQ-2.2), and auto vehicle trips are reduced by 20% (Measure AQ-2.3). Does not include effect of Mitigation Measure M-AQ-1.5, which requires ROG offsets.
- b. Categories defined as follows:

Area = Emissions from landscaping equipment, consumer products, and natural gas fireplaces. Refer to Tables 1 and 9 for the land use type and sizes assumed in the modeling. Emissions were modeled using CalEEMod.

Energy = Emissions from natural gas combustion for space heating and cooking. Refer to Tables 1 and 9 for the land use type and sizes assumed in the modeling. Emissions were modeled using CalEEMod.

Mobile = Operating emissions from daily resident and commercial truck trips. Refer to Table 10 for the daily vehicle trips by land use type. The trip rates were provided by the *Screencheck Draft- Transportation Impact Study* prepared by the transportation consultants, Fehr & Peers (2016). Emission from resident trips were estimated using CalEEMod; emissions from commercial truck trips were estimated using emission factors from EMFAC2014.

Brewery = Operating emissions from brewing activities. Refer to Table 15 for brewery activity data assumed in the modeling. Emissions were modeled using CalEEMod and emission factors from EMFAC2014.

Generators = Operating emissions from diesel-powered emergency generators. Refer to Table 13 for operating assumptions for the emergency generators. Emissions were modeled using CalEEMod.

On-road Truck Travel = Operating emissions from haul trucks used for deliveries to the Pier 48 brewery. The analysis assumed 38 daily haul truck trips. Emissions were estimated using emission factors from EMFAC2014.

On-road Truck Idling = Idling emissions from haul trucks used for deliveries to the Pier 48 brewery. The analysis assumed that each truck would idle 5 minutes while unloading materials at the brewery. Emissions were estimated using idling emission factors from EMFAC2011-HD.
- c. PM10 and PM2.5 include both exhaust and dust emissions.

Abbreviations:

ROG:	reactive organic gases
NO _x :	nitrogen oxides
PM10:	particulate matter less than or equal to 10 microns in diameter
PM2.5:	particulate matter less than or equal to 2.5 microns in diameter
lbs:	pounds
VDECS:	Verified Diesel Emissions Control Strategies

TABLE 41. SUMMARIZED MITIGATED AVERAGE DAILY OPERATIONAL EMISSIONS BY CATEGORY FOR THE RECONFIGURED PARKING VARIANT

Year	Average Daily Emissions (lbs/day)			
	ROG	NO _x	PM10 Total ^b	PM2.5 Total ^b
2017	0.0	0.0	0.0	0.0
2018	0.0	0.0	0.0	0.0
2019	0.0	0.0	0.0	0.0
2020	46.2	23.3	10.9	3.4
2021	79.9	36.1	25.5	7.6
2022	94.1	43.2	30.5	9.1
2023	108.0	52.2	39.9	11.8
2024 (full buildout)	107.9	49.8	39.9	11.8
Significance Threshold	54	54	82	54

Source:

Refer to Table 40.

Notes:

- a. Mitigated emissions assume all emergency generators have model year 2008+ engines consistent with ARB ATCM emission rates that also meet Tier 2 standards with level 3 VDECS (Measure AQ-2.1), 90% all architectural coatings have a maximum of 10 grams of volatile organic compounds per liter (Measure AQ-2.2), and auto vehicle trips are reduced by 20% (Measure AQ-2.3). Does not include effect of Mitigation Measure M-AQ-1.5, which requires ROG offsets.
- b. PM10 and PM2.5 include both exhaust and dust emissions.

Abbreviations:

ROG: reactive organic gases

NO_x: nitrogen oxides

PM10: particulate matter less than or equal to 10 microns in diameter

PM2.5: particulate matter less than or equal to 2.5 microns in diameter

lbs: pounds

VDECS: Verified Diesel Emissions Control Strategies

COMBINED CONSTRUCTION AND OPERATIONAL IMPACTS**TABLE 42. SUMMARIZED AVERAGE DAILY CONSTRUCTION PLUS OPERATIONAL EMISSIONS FOR THE RECONFIGURED PARKING VARIANT**

Year	Average Daily Emissions (lbs/day)							
	ROG	NO _x	PM10 Exhaust	PM10 Dust ^c	PM10 Total ^d	PM2.5 Exhaust	PM2.5 Dust ^c	PM2.5 Total ^d
2017	2.3	25.6	0.9	0.0	0.9	0.8	0.0	0.8
2018	37.1	124.5	5.3	0.0	5.3	5.0	0.0	5.0
2019	64.6	154.6	6.1	0.0	6.1	5.9	0.0	5.9
2020	95.4	127.8	4.7	12.5	17.2	4.5	3.4	7.9
2021	121.2	95.7	3.3	29.9	33.3	3.2	8.1	11.3
2022	121.5	76.4	2.7	35.8	38.6	2.6	9.7	12.3
2023	122.5	63.1	2.2	47.1	49.3	2.2	12.7	14.8
2024	117.8	53.4	1.9	47.1	49.0	1.9	12.7	14.5
Significance Threshold	54	54	82	82	82	54	54	54

Source:

Refer to Tables 35 and 39.

Notes:*All table references below refer to tables in the Activity Data section above*

- As shown in Tables 1 and 2 of the AQTR, construction of Area 1 would occur between 2017 and 2020. It was conservatively assumed that structures would be fully occupied immediately following construction and operational emissions associated with Area 1 would begin in 2021. Accordingly, concurrent construction and operational activities would occur between 2021 and 2023, resulting in higher daily emissions than either component when analyzed separately. This table presents emissions for overlapping construction and operational activities to analyze maximum air quality impacts during concurrent activities.
- PM10 and PM2.5 dust only includes dust from operations; construction dust is not included as it is addressed by Construction Dust Control Ordinance (Ordinance 176-08, effective July 30, 2008).
- PM10 and PM2.5 total includes exhaust from both construction and operations and dust from operations only.

Abbreviations:

ROG: reactive organic gases

NO_x: nitrogen oxides

PM10: particulate matter less than or equal to 10 microns in diameter

PM2.5: particulate matter less than or equal to 2.5 microns in diameter

lbs: pounds

TABLE 43. SUMMARIZED MITIGATED AVERAGE DAILY CONSTRUCTION PLUS OPERATIONAL EMISSIONS FOR THE RECONFIGURED PARKING VARIANT

Year	Average Daily Emissions (lbs/day)							
	ROG	NO _x	PM10 Exhaust	PM10 Dust ^c	PM10 Total ^d	PM2.5 Exhaust	PM2.5 Dust ^c	PM2.5 Total ^d
2017	0.8	9.7	<0.1	0.0	<0.1	<0.1	0.0	<0.1
2018	10.8	62.7	1.0	0.0	1.0	1.0	0.0	1.0
2019	18.5	87.6	1.3	0.0	1.3	1.3	0.0	1.3
2020	60.0	85.0	1.6	10.3	11.9	1.6	2.8	4.3
2021	89.1	75.3	1.4	24.5	25.9	1.4	6.6	8.0
2022	99.3	66.2	1.5	29.4	30.8	1.4	7.9	9.4
2023	109.3	58.1	1.5	38.5	40.0	1.5	10.4	11.9
2024	107.9	49.8	1.4	38.5	39.9	1.4	10.4	11.8
Significance Threshold	54	54	82	82	82	54	54	54

Source:

Refer to Tables 37 and 41.

Notes:*All table references below refer to tables in the Activity Data section above*

- Mitigated emissions assume all off-road equipment and all diesel generators have Tier 4 interim engines (Measure AQ-1.1), all haul trucks are model year 2010 or newer (Measure AQ-1.2), 90% of all architectural coatings have a maximum of 10 grams of volatile organic compounds per liter (Measure AQ-1.3), and all construction barge engines have Tier 3 engines and all construction work boat engines are model year 2005 or newer (Measure AQ-1.4). Mitigated operational emissions assume all emergency generators have model year 2008+ engines consistent with ARB ATCM emission rates that also meet Tier 2 standards with level 3 VDECS (Measure AQ-2.1), 90% all architectural coatings have a maximum of 10 grams of volatile organic compounds per liter (Measure AQ-2.2), and auto vehicle trips are reduced by 20% (Measure AQ-2.3). Does not include effect of Mitigation Measure M-AQ-1.5, which requires ROG and NO_x offsets.
- As shown in Tables 1 and 2 of the AQTR, construction of Area 1 would occur between 2017 and 2020. It was conservatively assumed that structures would be fully occupied immediately following construction and operational emissions associated with Area 1 would begin in 2021. Accordingly, concurrent construction and operational activities would occur between 2021 and 2023, resulting in higher daily emissions than either component when analyzed separately. This table presents emissions for overlapping construction and operational activities to analyze maximum air quality impacts during concurrent activities.
- PM10 and PM2.5 dust only includes dust from operations; construction dust is not included as it is addressed by Construction Dust Control Ordinance (Ordinance 176-08, effective July 30, 2008).
- PM10 and PM2.5 total includes exhaust from both construction and operations and dust from operations only.

Abbreviations:

ROG:	reactive organic gases
NO _x :	nitrogen oxides
PM10:	particulate matter less than or equal to 10 microns in diameter
PM2.5:	particulate matter less than or equal to 2.5 microns in diameter
lbs:	pounds
VDECS:	Verified Diesel Emissions Control Strategies

TOXIC AIR CONTAMINANTS**PM_{2.5} ANALYSIS****TABLE 44. MAXIMUM ANNUAL AVERAGE PM_{2.5} EXHAUST EXPOSURE WITHIN STUDY AREA AT ONSITE AND OFFSITE RECEPTORS NOT LOCATED IN THE APEZ DURING EXISTING/FUTURE CONDITIONS BUT WOULD BE LOCATED IN THE APEZ DURING EXISTING/FUTURE PLUS PROPOSED PROJECT CONDITIONS FOR THE RECONFIGURED PARKING VARIANT**

Receptor	Annual Average PM _{2.5} Concentration (µg/m ³) ^{a, b}			
	Onsite Receptors		Offsite Receptors	
	Reconfigure d Parking Variant	Mitigated ^c	Reconfigure d Parking Variant	Mitigated ^c
Construction				
<u>2014 Background Analysis</u>				
Total (Background + Project)	10.7	8.7	-	-
Background	8.4	8.4	-	-
Construction Contribution	2.3	0.3	-	-
Significance Threshold for Project Contribution	10.7	N/A ^d	-	-
Above Threshold?	Yes	N/A ^d	-	-
<u>2025 Background Analysis</u>				
Total (Background + Project)	10.7	8.7	-	-
Background	8.4	8.4	-	-
Construction Contribution	2.3	0.3	-	-
Significance Threshold for Project Contribution	10.7	N/A ^d	-	-
Above Threshold?	Yes	N/A ^d	-	-

Sources:

CalEEMod modeling, AERMOD modeling, EMFAC2014 modeling, and other off-model calculations discussed in the AQTR and presented in AQTR Appendix B.

Notes:

- a Mitigated construction emissions assume all off-road equipment and all diesel generators have Tier 4 interim engines (MM AQ-1.1), all haul trucks are model year 2010 (Measure AQ-1.2), 90% of and all construction barge engines have Tier 3 engines and all construction work boat engines are model year 2005 or newer (Measure AQ-1.4). Mitigated operational emissions assume all emergency generators have model year 2008+ engines consistent with ARB ATCM emission rates that also meet Tier 2 standards with level 3 VDECS (Measure AQ-2.1) and auto vehicle trips are reduced by 20% (Measure AQ-2.3).
- b “-” means that a receptor does not meet the criteria for the table. For example, there may not be an onsite receptor that is currently in an APEZ or is placed into an APEZ with only the operational contribution from the proposed project.
- c The mitigated values may represent different receptor locations than the Variant 3 values because the highest mitigated values may occur at different locations due to the varying effectiveness of mitigation measures on each individual source of emissions.
- d Because this receptor is not placed into an APEZ with the mitigated project contribution (i.e. the total background plus project annual average PM_{2.5} concentration is less than the APEZ threshold of 10.0 µg/m³), the project-level threshold does not apply

Emissions over threshold levels are in **bold**

CANCER RISK ANALYSIS (DPM/TOG)**TABLE 45. MAXIMUM LIFETIME EXCESS CANCER RISK WITHIN STUDY AREA AT ONSITE AND OFFSITE RECEPTORS CURRENTLY LOCATED IN THE APEZ DURING EXISTING/FUTURE CONDITIONS FOR THE RECONFIGURED PARKING VARIANT**

Receptor	Lifetime Excess Cancer Risk (per million) ^{a, b}			
	Onsite Receptors		Offsite Receptors	
	Reconfigure d Parking Variant	Mitigated ^c	Reconfigure d Parking Variant	Mitigated ^c
Construction Plus Operation				
<u>2014 Background Analysis</u>				
Total (Background + Project)	-	-	130.4	111.2
Background	-	-	107.2	107.2
Construction Plus Operation Contribution	-	-	23.2	4.0
Significance Threshold for Project Contribution	-	-	7.0	7.0
Above Threshold?	-	-	Yes	No
<u>2025 Background Analysis</u>				
Total (Background + Project)	-	-	179.2	164.7
Background	-	-	161.6	161.6
Construction Plus Operation Contribution	-	-	17.6	3.1
Significance Threshold for Project Contribution	-	-	7.0	7.0
Above Threshold?	-	-	Yes	No

Sources:

CalEEMod modeling, AERMOD modeling, EMFAC2014 modeling, and other off-model calculations discussed in the AQTR and presented in AQTR Appendix B.

Notes:

- a Mitigated construction emissions assume all off-road equipment and all diesel generators have Tier 4 interim engines (MM AQ-1.1), all haul trucks are model year 2010 (Measure AQ-1.2), and all construction barge engines have Tier 3 engines and all construction work boat engines are model year 2005 or newer (Measure AQ-1.4). Mitigated operational emissions assume all emergency generators have model year 2008+ engines consistent with ARB ATCM emission rates that also meet Tier 2 standards with level 3 VDECS (Measure AQ-2.1) and auto vehicle trips are reduced by 20% (Measure AQ-2.3).
- b “-” means that a receptor does not meet the criteria for the table. For example, there may not be an onsite receptor that is currently in an APEZ or is placed into an APEZ with only the operational contribution from the proposed project.
- c The mitigated values may represent different receptor locations than the Variant 3 values because the highest mitigated values may occur at different locations due to the varying effectiveness of mitigation measures on each individual source of emissions.

Emissions over threshold levels are in **bold**

TABLE 46. MAXIMUM LIFETIME EXCESS CANCER RISK WITHIN STUDY AREA AT ONSITE AND OFFSITE RECEPTORS NOT LOCATED IN THE APEZ DURING EXISTING/FUTURE CONDITIONS BUT WOULD BE LOCATED IN THE APEZ DURING EXISTING/FUTURE PLUS PROPOSED PROJECT CONDITIONS FOR THE RECONFIGURED PARKING VARIANT

Receptor	Lifetime Excess Cancer Risk (per million) ^{a, b}			
	Onsite Receptors		Offsite Receptors	
	Reconfigure d Parking Variant	Mitigated ^c	Reconfigure d Parking Variant	Mitigated ^c
Construction Plus Operation				
<u>2014 Background Analysis</u>				
Total (Background + Project)	160.3	68.1	175.3	100.5
Background	48.6	48.6	70.3	91.7
Construction Plus Operation Contribution	111.7	19.6	105.0	8.8
Significance Threshold for Project Contribution	10.0	N/A ^d	10.0	10.0
Above Threshold?	Yes	N/A ^d	Yes	No
<u>2025 Background Analysis</u>				
Total (Background + Project)	146.6	54.5	152.6	103.1
Background	34.9	34.9	47.6	99.7
Construction Plus Operation Contribution	111.7	19.6	105.0	3.4
Significance Threshold for Project Contribution	10.0	N/A ^d	10.0	10.0
Above Threshold?	Yes	N/A ^d	Yes	No

Sources:

CalEEMod modeling, AERMOD modeling, EMFAC2014 modeling, and other off-model calculations discussed in the AQTR and presented in AQTR Appendix B.

Notes:

- a Mitigated construction emissions assume all off-road equipment and all diesel generators have Tier 4 interim engines (MM AQ-1.1), all haul trucks are model year 2010 (Measure AQ-1.2), and all construction barge engines have Tier 3 engines and all construction work boat engines are model year 2005 or newer (Measure AQ-1.4). Mitigated operational emissions assume all emergency generators have model year 2008+ engines consistent with ARB ATCM emission rates that also meet Tier 2 standards with level 3 VDECS (Measure AQ-2.1) and auto vehicle trips are reduced by 20% (Measure AQ-2.3).
- b “-” means that a receptor does not meet the criteria for the table. For example, there may not be an onsite receptor that is currently in an APEZ or is placed into an APEZ with only the operational contribution from the proposed project.
- c The mitigated values may represent different receptor locations than the Variant 3 values because the highest mitigated values may occur at different locations due to the varying effectiveness of mitigation measures on each individual source of emissions.
- d Because this receptor is not placed into an APEZ with the mitigated project contribution (i.e. the total background plus project lifetime excess cancer risk is less than the APEZ threshold of 100), the project-level threshold does not apply.

Emissions over threshold levels are in **bold**

VARIANT 4: HOTEL USE

This variant was not modeled, so no tables are necessary