

NOISE FORUM SUMMARY

North/South Field Working Groups

NOISE ABATEMENT REPORT

FOURTH QUARTER 2016

**Compliance Monitoring Quarterly Summary Comparison
Fourth Quarter 2016**

	2014Q4		2016Q4	
	Compl.	N/C	Compl.	N/C
Runway 28R/L Jet Departure Compliance	92%	8%	95%	5%
Total Airport-wide Corporate Jet Departures	2,424	202	2,747	158
Runway 10R/L Jet Landing Compliance	93%	7%	97%	3%
Total Southeast Plan Corporate Jet Landings	139	10	305	10
North Field VFR Departure Compliance	96%	4%	94%	6%
Total Runways 28R/L & 33 Departures	528	22	376	22
North Field Quiet Hours Compliance	51%	49%	69%	31%
Total North Field Quiet Hours Departures	88	85	130	59
Runway 30 BFI Right Turn Departure Compliance	100%	0%	100%	0%
Total Runway 30 Turbojet Departures	16,532	11	16,627	5
Night Time Departure Compliance	99%	1%	98%	2%
Total Runway 30 Night Turbojet Departures	3,181	40	3,089	49
Runway 12 Night Departure Compliance	75%	25%	88%	12%
Total Runway 12 Night Turbojet Departures	47	16	161	22
Runway 30 East Turn Departure Compliance	98%	2%	100%	0%
Total Runway 30 East Turn Departures	4,931	107	5,174	0
100 Degree Radial Turbojet Landing Compliance	92%	8%	92%	8%
Total 100 Degree Radial Turbojet Landings	2,338	216	2,154	186
Engine Runup Program Compliance	100%	0%	100%	0%
Total Evening and Nighttime Engine Runups	9	0	6	0

Link to full report: http://flyquiotoak.com/pages/reports/quarterly_noise_compliance.html

Operation Details	
Beacon Code:	3373
AC Type:	H25C
Operation Type:	Departure
Runway:	28L
Date/Time:	12/13/2016 8:26:14 AM

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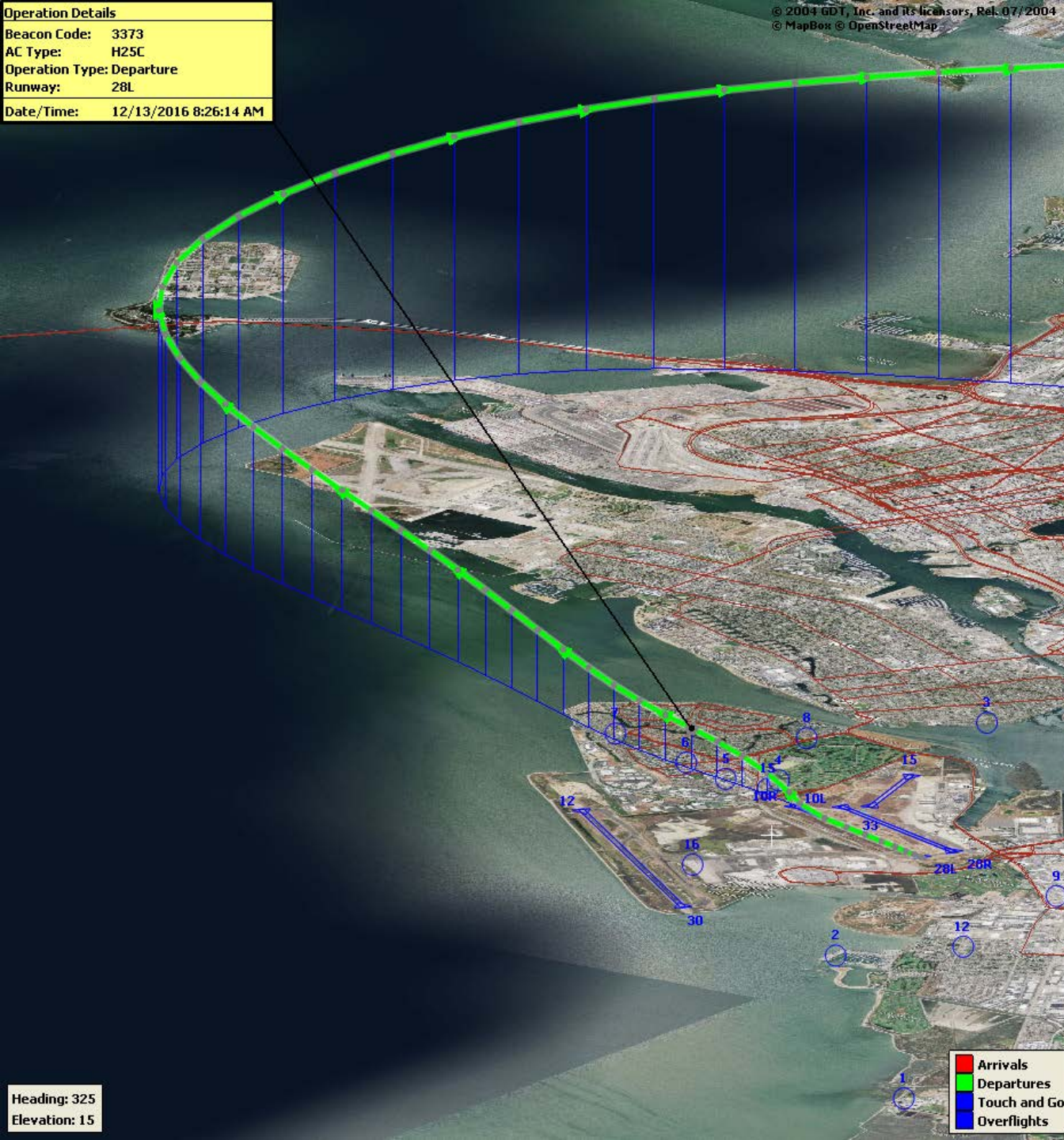
Runway 28R/L Jet Departure NAP

2016Q4
95% Compliance
(2,905 departures)
(158 non-compliant)

2015Q4
92% Compliance
(2,626 departures)
(202 non-compliant)

Heading: 325
 Elevation: 15

■	Arrivals
■	Departures
■	Touch and Go
■	Overflights



Operation Details	
Beacon Code:	4564
AC Type:	C550
Operation Type:	Arrival
Runway:	10R
Date/Time:	12/15/2016 8:15:42 PM

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Runway 10R/L Jet Landing NAP

2016Q4
97% Compliance
(315 landings)
(10 non-compliant)

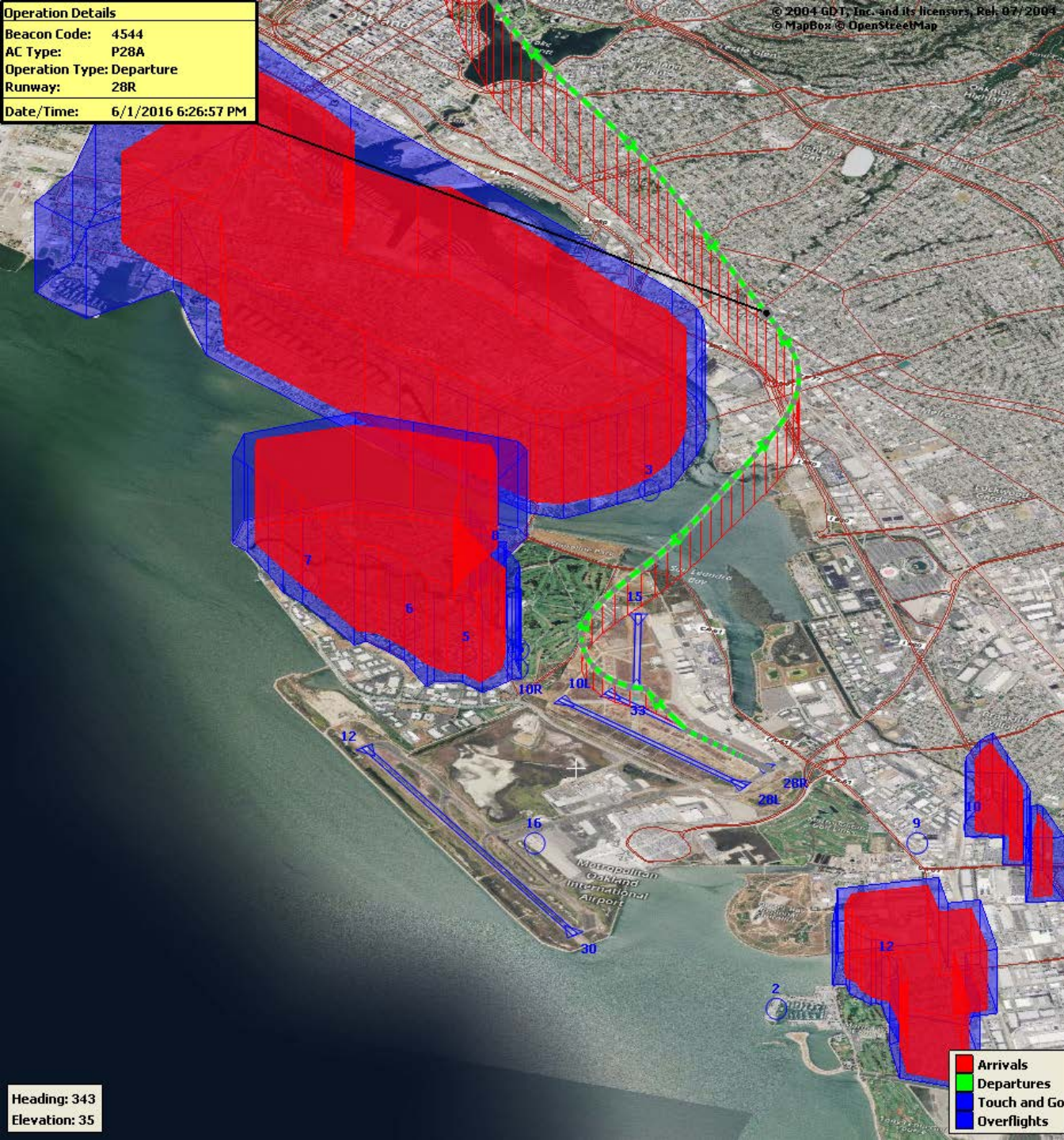
2015Q4
93% Compliance
(149 landings)
(10 non-compliant)

Heading: 325
 Elevation: 15

Arrivals	Red dashed line
Departures	Green dashed line
Touch and Go	Blue dashed line
Overflights	Blue solid line



Operation Details
Beacon Code: 4544
AC Type: P28A
Operation Type: Departure
Runway: 28R
Date/Time: 6/1/2016 6:26:57 PM



VFR Aircraft Departure NAP

2016Q4
94% Compliance
(398 departures)
(22 non-compliant)

2015Q4
96% Compliance
(550 departures)
(22 non-compliant)

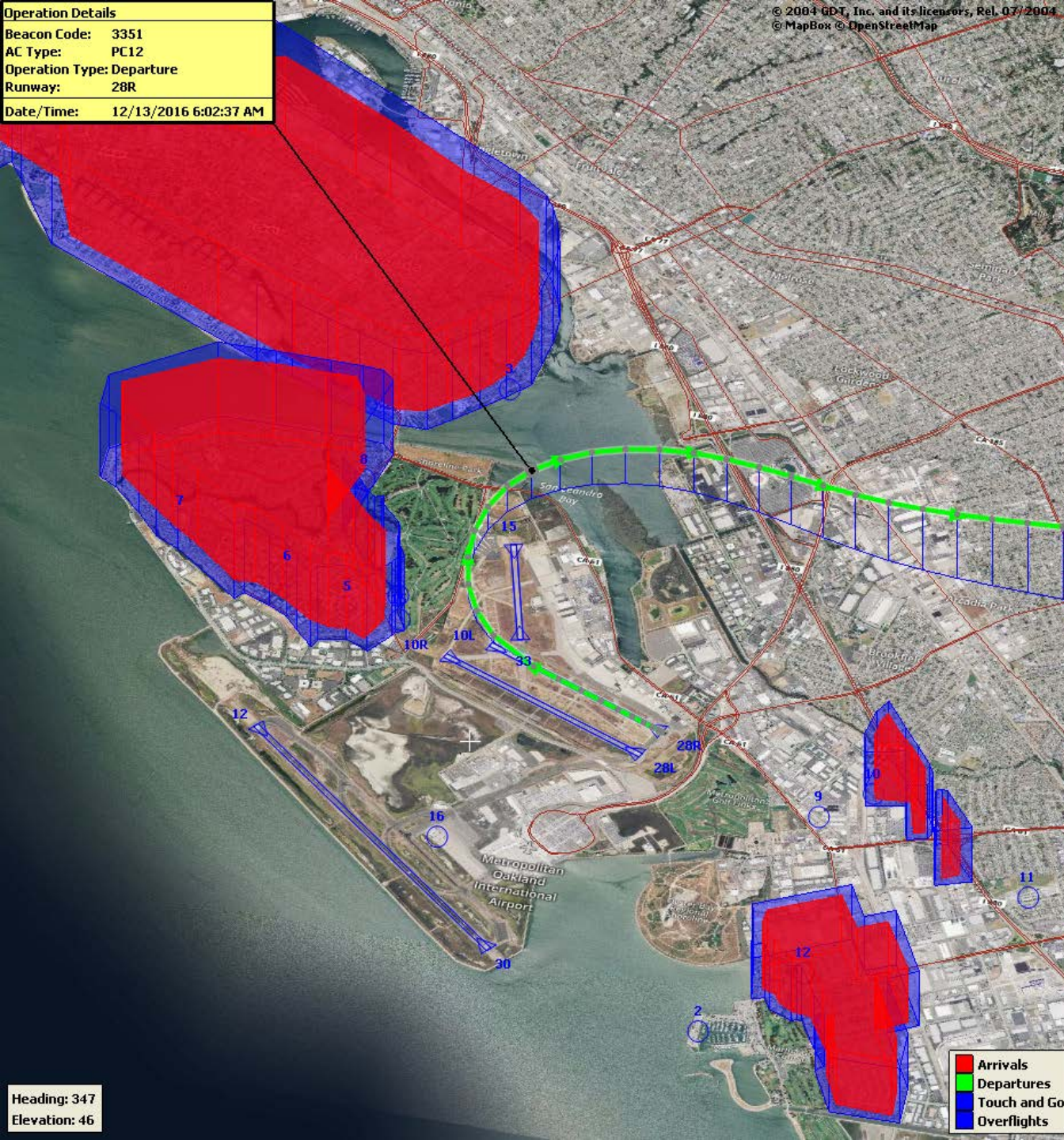
Arrivals
Departures
Touch and Go
Overflights

Heading: 343
Elevation: 35

Operation Details	
Beacon Code:	3351
AC Type:	PC12
Operation Type:	Departure
Runway:	28R
Date/Time:	12/13/2016 6:02:37 AM

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North Field Quiet Hours NAP



2016Q4
69% Compliance
(189 departures)
(59 non-compliant)

2015Q4
51% Compliance
(173 departures)
(88 non-compliant)

Heading: 347
 Elevation: 46

- Arrivals
- Departures
- Touch and Go
- Overflights

Runway 30 Bay Farm Right Turn NAP

2016Q4
100% Compliance
(16,632 departures)
(5 non-compliant)

2015Q4
100% Compliance
(16,543 departures)
(11 non-compliant)

Operation Details	
Beacon Code:	3777
AC Type:	B737
Runway:	30
Date/Time:	3/15/2017 9:53:03 AM

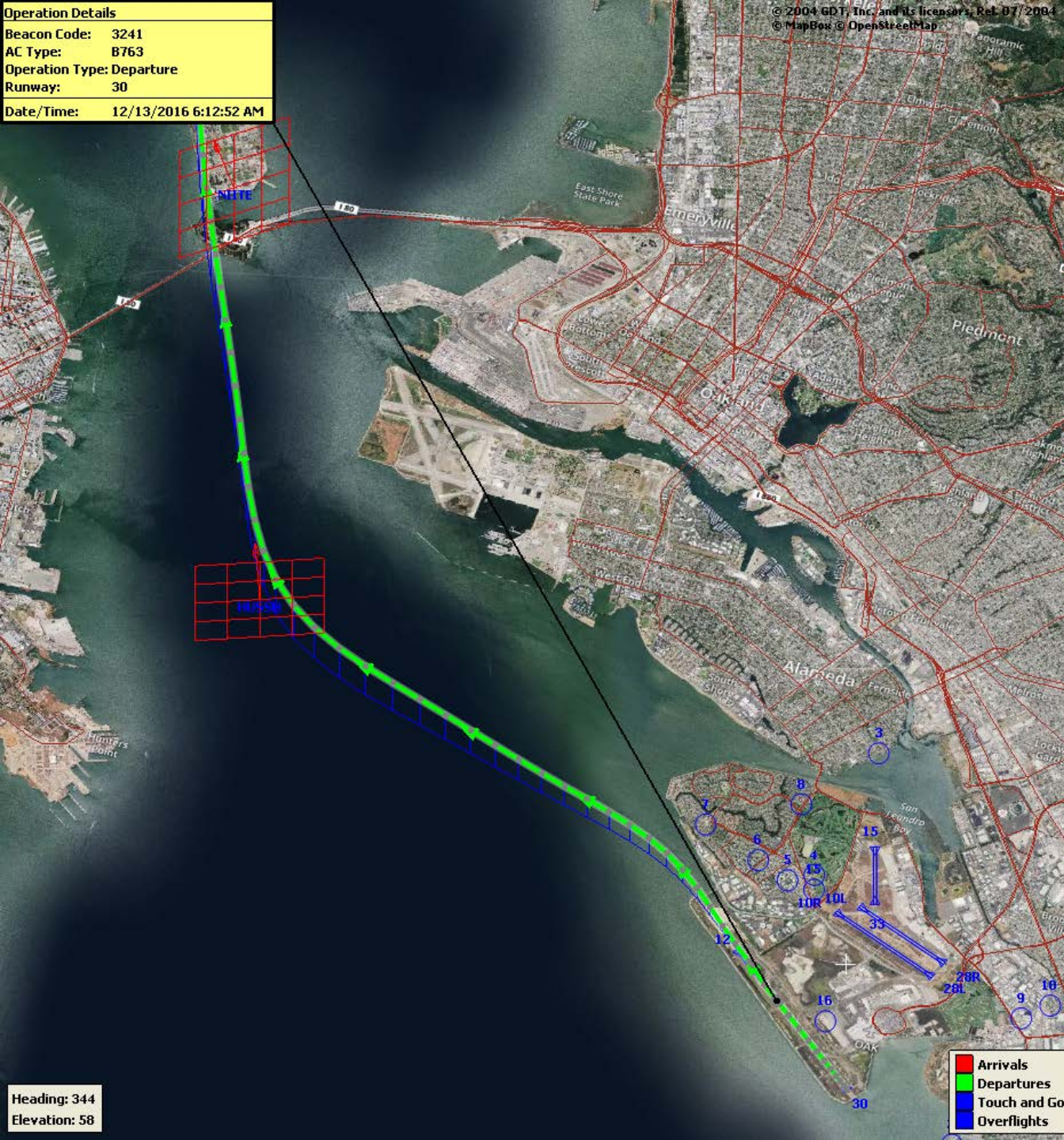
Heading: 337
Elevation: 34

- Arrivals
- Departures
- Touch and Go
- Overflights



Operation Details	
Beacon Code:	3241
AC Type:	B763
Operation Type:	Departure
Runway:	30
Date/Time:	12/13/2016 6:12:52 AM

Heading: 344
Elevation: 58



Night Time Departure NAP

2016Q4
98% Compliance
(3,138 departures)
(49 non-compliant)

2015Q4
99% Compliance
(3,221 departures)
(40 non-compliant)

- Arrivals
- Departures
- Touch and Go
- Overflights

Operation Details
Beacon Code: 3345
AC Type: B763
Operation Type: Departure
Runway: 12
Date/Time: 12/15/2016 3:12:56 AM

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Runway 12 Night Departure NAP

2016Q4
88% Compliance
(183 departures)
(22 non-compliant)

2015Q4
75% Compliance
(63 departures)
(16 non-compliant)



Heading: 2
Elevation: 52

Arrivals
Departures
Touch and Go
Overflights

Operation Details	
Beacon Code:	3257
AC Type:	B737
Operation Type:	Departure
Runway:	30
Date/Time:	12/15/2016 9:42:35 PM

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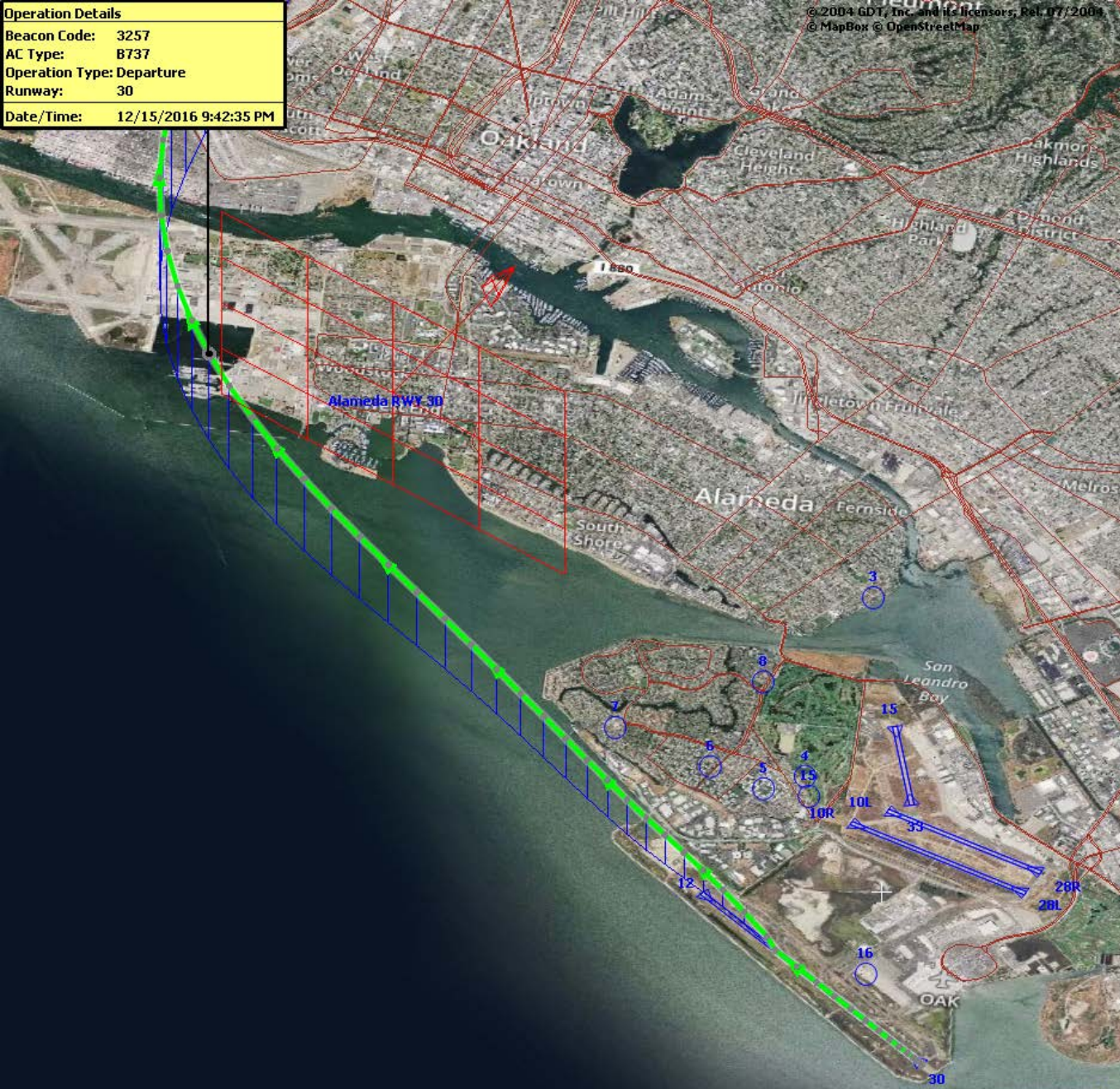
Runway 30 East Turn NAP

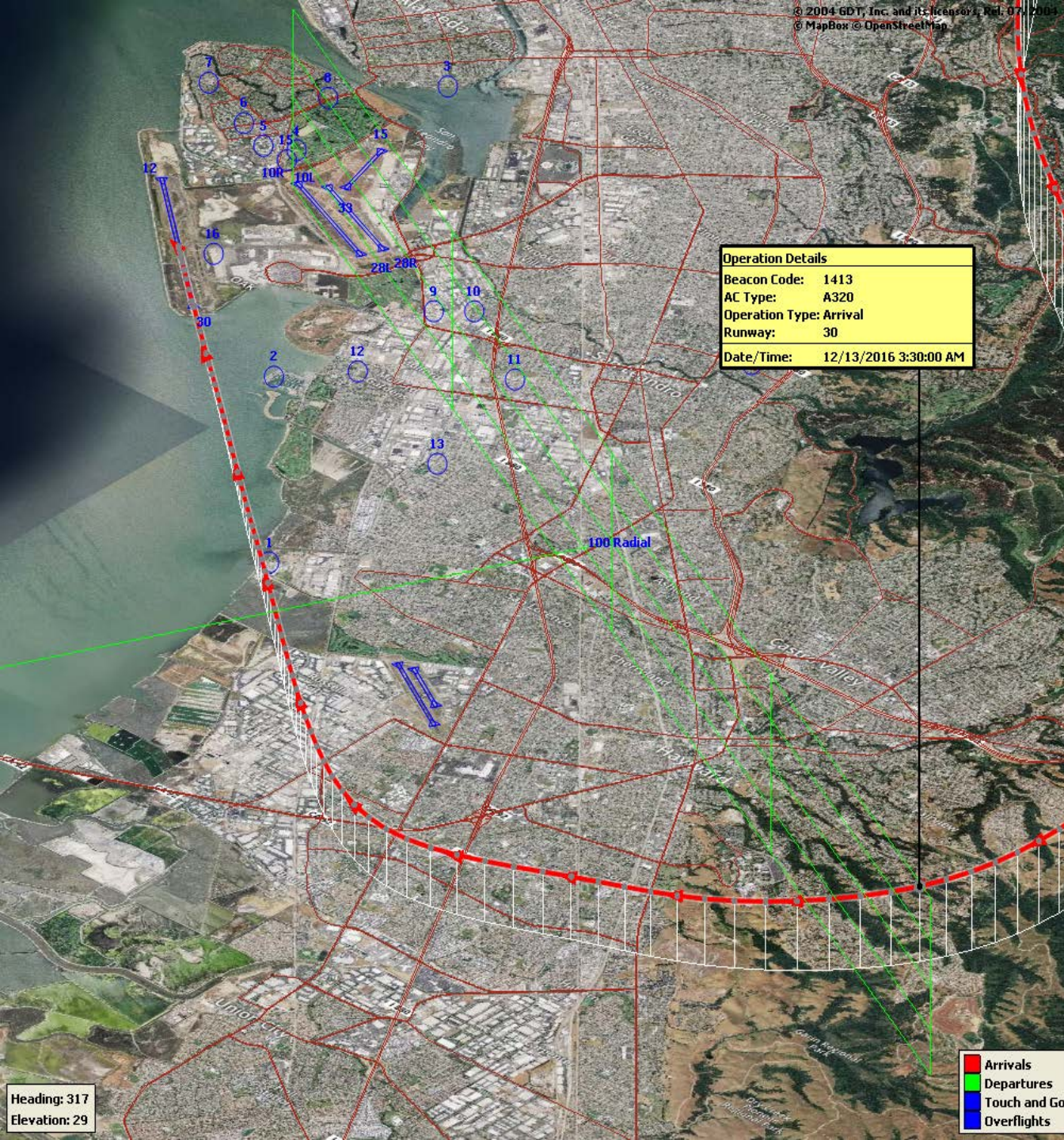
2016Q4
100% Compliance
(5,174 departures)
(0 non-compliant)

2015Q4
98% Compliance
(5,038 departures)
(107 non-compliant)

Heading: 353
Elevation: 46

■	Arrivals
■	Departures
■	Touch and Go
■	Overflights

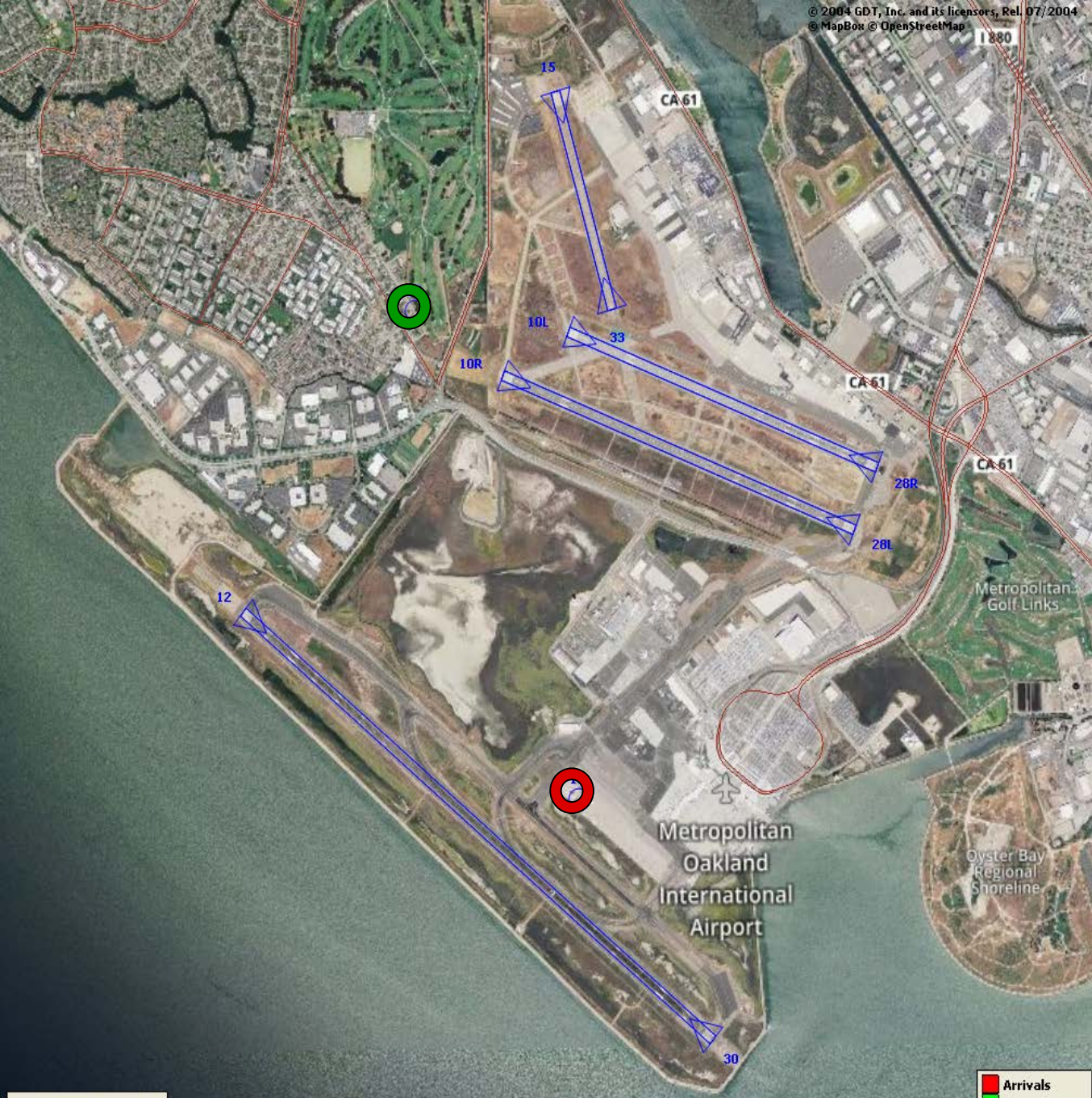




100 Degree Radial At 3,000 ft. NAP

2016Q4
92% Compliance
(2,340 landings)
(186 non-compliant)

2015Q4
92% Compliance
(2,554 landings)
(216 non-compliant)



Engine Run-up NAP

2016Q4
100% Compliance
(6 engine run-ups)*
(0 non-compliant)

2015Q4
100% Compliance
(9 engine run-ups)
(0 non-compliant)

***Only above idle-power run-ups recorded.**



Red square	Arrivals
Green square	Departures
Blue square	Touch and Go
Blue square	Overflights

Table 1. North Field Night Aircraft Departure SEL Noise Measurements
Total Aircraft Departures = 187

Fourth Quarter 2016 (10:00 p.m. to 7:00 a.m.)

NMT Number	Aircraft Noise Events Below SEL 80 dBA	Aircraft Noise Events SEL 80 - 84.9 dBA			Aircraft Noise Events SEL 85 - 89.9 dBA			Aircraft Noise Events SEL ≥ 90 dBA			Total Aircraft Noise Events
		Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	
1	1	2	0.0	0.4%	0	0.0	0.0%	0	0.0	0.0%	3
2	14	2	0.0	0.4%	1	0.0	0.2%	0	0.0	0.0%	17
3	39	10	0.1	1.8%	3	0.0	0.5%	0	0.0	0.0%	52
4	61	52	0.6	9.2%	23	0.3	4.1%	12	0.1	2.1%	148
5	57	16	0.2	2.8%	7	0.1	1.2%	16	0.2	2.8%	96
6	21	8	0.1	1.4%	7	0.1	1.2%	14	0.2	2.5%	50
7	12	11	0.1	1.9%	10	0.1	1.8%	3	0.0	0.5%	36
8	35	17	0.2	3.0%	5	0.1	0.9%	0	0.0	0.0%	57
9	6	8	0.1	1.4%	7	0.1	1.2%	4	0.0	0.7%	25
10	38	32	0.4	5.6%	7	0.1	1.2%	0	0.0	0.0%	77
11	3	2	0.0	0.4%	4	0.0	0.7%	0	0.0	0.0%	9
12	12	5	0.1	0.9%	0	0.0	0.0%	0	0.0	0.0%	17
13	8	2	0.0	0.4%	0	0.0	0.0%	0	0.0	0.0%	10
14	6	1	0.0	0.2%	0	0.0	0.0%	0	0.0	0.0%	7
All NMTs	313	168	2	0	74	1	0	49	1	0	604

Table 2. Aircraft SEL Noise Measurements in Alameda - Total Aircraft Departures = 155

Fourth Quarter 2016 (10:00 p.m. to 7:00 a.m.)

NMT Number	Aircraft Noise Events Below SEL 80 dBA	Aircraft Noise Events SEL 80 - 84.9 dBA			Aircraft Noise Events SEL 85 - 89.9 dBA			Aircraft Noise Events SEL ≥ 90 dBA			Total Aircraft Noise Events
		Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	
3	39	10	0.1	4.2%	3	0.0	1.3%	0	0.0	0.0%	52
4	61	52	0.6	21.8%	23	0.3	9.6%	12	0.1	5.0%	148
5	57	16	0.2	6.7%	7	0.1	2.9%	16	0.2	6.7%	96
6	21	8	0.1	3.3%	7	0.1	2.9%	14	0.2	5.9%	50
7	12	11	0.1	4.6%	10	0.1	4.2%	3	0.0	1.3%	36
8	35	17	0.2	7.1%	5	0.1	2.1%	0	0.0	0.0%	57
Total	225	114	1.3		55	0.6		45	0.5		439

Table 3. Aircraft SEL Noise Measurements in San Leandro - Total Aircraft Departures = 32

Fourth Quarter 2016 (10:00 p.m. to 7:00 a.m.)

NMT Number	Aircraft Noise Events Below SEL 80 dBA	Aircraft Noise Events SEL 80 - 84.9 dBA			Aircraft Noise Events SEL 85 - 89.9 dBA			Aircraft Noise Events SEL ≥ 90 dBA			Total Aircraft Noise Events
		Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	
2	14	2	0.0	0.6%	1	0.0	0.3%	0	0.0	0.0%	17
9	6	8	0.1	2.4%	7	0.1	2.1%	4	0.0	1.2%	25
10	38	32	0.4	9.8%	7	0.1	2.1%	0	0.0	0.0%	77
11	3	2	0.0	0.6%	4	0.0	1.2%	0	0.0	0.0%	9
12	12	5	0.1	1.5%	0	0.0	0.0%	0	0.0	0.0%	17
13	8	2	0.0	0.6%	0	0.0	0.0%	0	0.0	0.0%	10
14	6	1	0.0	0.3%	0	0.0	0.0%	0	0.0	0.0%	7
Total	87	52	0.6		19	0.2		4	0.0		162

**Rolling Take-off Night Departure Procedure (1:00 to 5:00 AM)
Fourth Quarter 2016, NMT 2**

	Aircraft Departures	Recorded Noise Events (a)	Lmax Average	SEL Average	Avg. Duration (seconds)
Baseline (November 2002) [A]					
DC10/MD10	87	32	69	78	22
MD11	32	13	70	79	24
A306	67	21	67	77	25
Fourth Quarter 2016 [B]					
	Total [X]	Est. Avg. Monthly [X/3]			
B763	56	19	22	65	74
DC10/MD10	75	25	37	66	76
MD11	216	72	145	67	77
A306	92	31	43	66	75
B757	177	59	69	66	74
B77L	67	22	30	65	74
Difference [A-B]					
DC10/MD10		-62	5	-3	-2
MD11		40	132	-3	-2
A306		-36	22	-1	-2

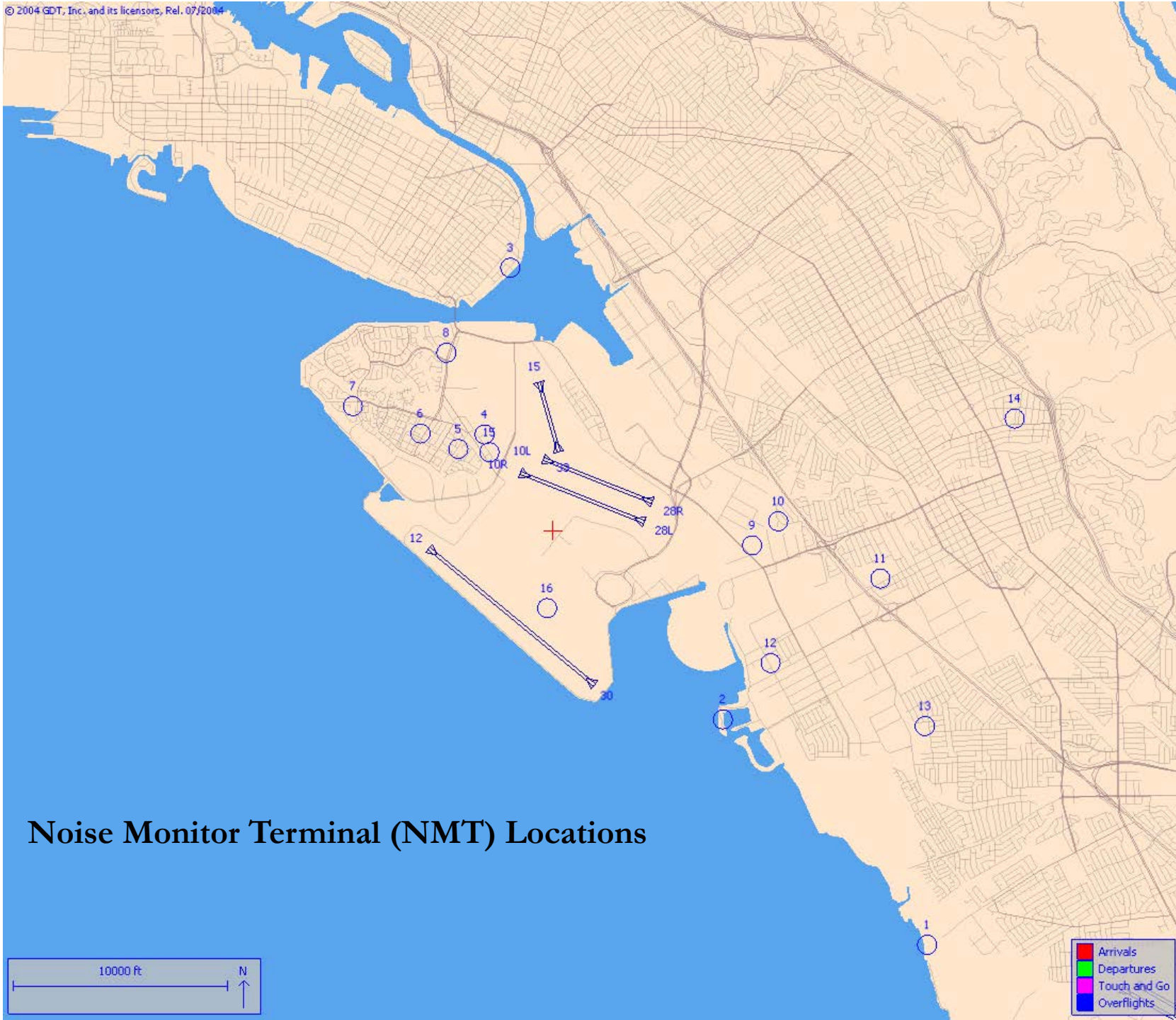
(a) For the current calendar quarter reported, ANOMS does not correlate all departures to their respective noise events; that is most, but not all, aircraft back-blast noise events are effectively correlated as the program software algorithms may misidentify an aircraft noise event.

Source: ANOMS (Airport Noise and Operations Monitoring System)

**Rolling Take-off Night Departure Procedure (1:00 to 5:00 AM)
Fourth Quarter 2015, NMT 2**

	Aircraft Departures	Recorded Noise Events (a)	Lmax Average	SEL Average	Avg. Duration (seconds)
Baseline (November 2002) [A]					
B727	104	101	76	87	44
DC10/MD10	87	32	69	78	22
MD11	32	13	70	79	24
A306	67	21	67	77	25
Fourth Quarter 2015 [B]					
	Total [X]	Est. Avg. Monthly [X/3]			
B727	0	-	-	-	-
DC10/MD10	70	23	38	66	76
MD11	224	75	152	67	77
A306	151	50	75	65	74
B757	142	47	63	65	75
B777	0	-	-	-	-
Difference [A-B]					
B727		-104	-101	-76	-87
DC10/MD10		-64	6	-3	-2
MD11		43	139	-3	-2
A306		-17	54	-2	-3

(a) For the current calendar quarter reported, ANOMS does not correlate all departures to their respective noise events; that is most, but not all, aircraft back-blast noise events are effectively correlated as the program software algorithms may misidentify an aircraft noise event.
Source: ANOMS (Airport Noise and Operations Monitoring System)



Noise Monitor Terminal (NMT) Locations

