



Community of Harbor Bay Isle  
Owners' Association, Inc.  
3195 Mecartney Road  
Alameda, California 94502-6912  
(510) 865-3363

10/21/2011

City of Alameda Community Development Department  
2263 Santa Clara Avenue, Room 190  
Alameda, CA 94501  
Att: Andrew Thomas

Re: Harbor Bay Chuck Corica Golf Course redesign, housing development  
and North Loop Playing fields project

Mr. Thomas,

This is in follow-up to our initial letter to you dated 9/14/11 regarding our concerns that this proposed project will aggravate existing traffic congestion. We bring your attention to our questions regarding added vehicular air pollution and its relationship to the potential for significant negative health implications on our children and the elderly, especially those at higher risk.

We were unable to locate any prior ambient air quality studies purported to determine the levels of pollutants and carcinogens found on the Island Drive corridor. Our interest was to see if a recent baseline measurement existed, particularly relevant to the hour-long morning gridlock there experienced during the school year. In our opinion, the traffic studies (conducted by the developer and/or the City) do not address the implications of the scope and duration of worsened air quality during the gridlocked portion of the commute.

The scientific relationship between exposure to air pollution and higher risk for children is already well studied and proven. Children inhale between 20-50% more polluted air than adults because of higher respiratory rates; they spend more time outdoors than adults; and are more likely to be engaged in strenuous outdoor activities that results in breathing in a greater volume of polluted air (as well as more deeply inhaling carcinogenic particulate matter into their lungs) than adults; all factors that research shows contribute to a higher health risk for children than adults. These risks are typically measured by increased school absences, visits to the doctor and to the emergency room for asthmatic, allergic and other pulmonary related health issues.

Research has shown that exposure to peak concentrations of vehicular pollutants for a 30 minute duration is sufficient to cause pulmonary damage in children. One study suggests that one-hour peak exposures caused changes in symptoms and lung functions in asthmatic children than with a 24-hour average concentration. Another study showed a direct correlation for the onset of asthma in otherwise healthy children exposed to traffic air pollution. In addition, two studies of college freshmen have shown that the damage to lung functions from exposure in early childhood may affect lung function in early adulthood.

In 2003, in an effort to better protect students from vehicular pollution (following recommendations drawn from definitive research), the state changed the Education Code and passed a school "siting" law that specifies there must be a minimum 500 foot setback from the nearest traffic lane of a freeway or busy traffic corridor. While Amelia Earhart was built before this law and before the current commute traffic gridlock, our children play in its yards all the while the vehicles on gridlocked Island Drive sit idling. In fact, during school drop-off, Earhart is surrounded at times on three sides by grid-locked traffic including Robert Davey Jr. and Packet Landing.

During the week of October 17-21, our Association conducted a field survey of drivers exiting Northbound Island Drive during the 7-9 am commute. The survey revealed that starting from the top of Island Drive down at times to within 50 yards of the entrance to the Golf Course; vehicles reached gridlock beginning 7:30 and did not return to unimpeded traffic flow most days until approximately 8:30 am. *(The surveyors noted that the gridlock extends onto and well beyond the Bay Farm Bridge, but Fernside and Otis were not part of the survey).* The survey also revealed that approximately 47% of the vehicles caught in the hour-long gridlock were carrying children to school.

A fact worth noting is that while all in our community live within walking/bicycling distance to a public school, it is clear now that adults driving children to school (for whatever the reason) is a significant part of the vehicles creating the gridlock. (Consider that during the summer school break, there is no gridlock). In 2006, the nearby Costa Brava HOA completed a house-to-house parking survey that revealed residents on average had 2.35 vehicles per household. Given that vehicles from the proposed 130 house project will certainly exit onto Island Drive from the existing Golf course entrance, it does not seem reasonable that the conclusion drawn by the 2010 Abrams Associates traffic survey adequately addresses the size and duration of the traffic impact as well as air quality impacts during the hour-long gridlock.

Specifically, any amount of added vehicles which will extend the duration of that Monday to Friday morning gridlock will certainly have some deleterious impact on our children's health, especially those at higher pulmonary risk. It matters little whether they are walking or bicycling to school on Island Drive; playing on the Amelia Earhart yard waiting for the morning bell, or sitting in their parent's or neighbor's car stuck in the gridlock; they are all breathing in a higher concentration of vehicular exhaust for periods as long as 30 minutes a day.

Whether living in such close proximity to a major metropolitan airport has health implications for our children are unknown because of the lack of measurement. But we strongly encourage the City to thoroughly research these issues and **if it cannot be established definitively that no greater harm will result on our children's health, the City should drop the project.**

Regards,

  
Michael Robles-Wong  
President, Board of Directors  
Community of Harbor Bay Isle Owners Association

cc: City Council  
City Manager  
President's Council  
Harbor Bay Business Park  
Bay Farm Emergency Contact List

Attachments: Costa Brava HOA Parking Survey 2006/07  
Island Drive "Finger" Survey October 17-21, 2011

Bibliography:

Air Pollution and Child Health: Priorities for Action  
Report of a meeting of an Environmental Health Protection Technical  
Advisory Group on Air Pollution  
July 17-18, 1996 Arlington, Virginia

Air Toxicology and Epidemiology: Air Pollution and Children's Health  
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February 28, 2002 (revised 11/26/03)

Ambient Air Pollution: Health Hazards to Children  
American Academy of Pediatrics  
*Pediatrics* Vol. 114 no. 6  
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American Journal of Respiratory and Critical Care Medicine  
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Asthma Onset and Exacerbation in Children Exposed to Traffic Related Air  
Pollution Calif. EPA – Air Resources Board  
<http://www.arb.ca.gov/research/health/healthhup/April09.pdf>

Community Air Quality Monitoring: Special Studies Fruitvale, Oakland  
Lockwood Elementary School  
California Environmental Protection Agency Air Resources Board

The Health Effects of Air Pollution on Children  
Michael Kleinman, PhD  
Professor, Department of Community and Environmental Medicine  
UC Irvine Fall 2000

January 24, 2007

To: Costa Brava Homeowners  
From: 2006 C.B. Parking Committee  
Subject: Preliminary Report and Hearing Notice

The Committee wishes to thank all of our neighbors who were willing to spend time to answer the surveyor's questions. The field survey was completed in early January, and 85% of the 207 households were accounted for. Attached is a copy of the survey summary as well as a copy of the tally sheet.

Households not reported included 28 that did not respond any of the 3 times that the surveyor knocked on their doors, and another 3 that declined to be interviewed. Based on where these households are located, and using the relevant average autos per household ratio, the Committee expanded the number of reported autos by an appropriate estimate of cars for these 31 households. Assuming that these added households would follow typical C.B. parking habits, the Committee concludes that there are a sufficient number of garages, large driveways and parking stalls to just barely accommodate all permanent vehicles reported in use year-round.

This finding does, however, recognize that the location of available and convenient parking stalls does not necessarily coincide with the location of households in most need of these stalls. Of course, a few more vehicles could be regularly parked inside garages. Further, the Committee has observed that a number of residents habitually park vehicles on too-short driveways even when marked stalls are available nearby. Last, certain parking areas, such as the upper portion of Baywalk and the adjoining bays, are nearly always on overload in large part due to the combination of inadequate developer plan design and currently high autos per residence ratios.

Significantly, the Committee estimates that the number of itinerant vehicles driven by adult children and other friends and family (not reported as permanent year-round vehicles), constitutes between 35-45 cars (or 8-10%) over and above the number of permanent vehicles. The addition of these itinerant vehicles on weekend evenings, during the summer, and on holidays typically overwhelms the parking capacity of the entire Association.

The Committee has also completed discussions with: other nearby associations that have adopted parking control strategies; staff of the CHBIHOA; representatives of the Alameda Police and Fire Departments; and staff of the ACI. Following these discussions and analysis of the survey results, the Committee (after reconsideration pursuant to the completion of the public hearing) proposes the following preliminary plans:

**Plan A:**

- Legitimize sideways parking on driveways at least 8' deep and shorter than 16'
- Limit all stall parking to not greater than 24 hour parking
- Adopt no tolerance parking policy to allow APD to ticket at will
- Add 2 stalls to Kiel dog leg left; 1 to Montego dog leg left
- Require landlords to evict tenants if at least one car isn't parked in the garage
- Establish an annual in-your-garage garage sale day; get closet and garage organizer system installer discounts

**Plan B:**

- Legitimize sideways parking as in Plan A
- Add 3 stalls as in Plan A
- All stall parking will require a valid permit to be displayed. Issue annual permits (placards that hang from the rear view mirror), one per valid California Drivers License as follows:

1	CDL in household	= 0 permits
2	" "	= 1 permit
3	" "	= 1 permit
4	" "	= 2 permits
5	" "	= 3 permits
6	" "	= 4 permits
7	" "	= 5 permits
8	" "	= 5 permits
- Hire staff to monitor stalls and issue tickets for stall violations
- Adopt no tolerance policy to allow APD to ticket fire lane violations at will
- Require landlords to evict tenants if at least one car isn't parked in the garage
- Establish an annual in-your-garage garage sale day; get closet and garage organizer system installer discounts

The Committee prefers Plan A because the enforcement of the plan predominantly relies on the City of Alameda Parking Enforcement Unit. The enforcement of Plan B requires a regular financial commitment on the part of the Costa Brava HOA, a commitment that other nearby associations have heretofore been unable to maintain due to a lack of interested vendors and/or volunteers. (The city cannot enforce permitted parking violations on private streets such as ours). Plan B also requires expenditure in money and resources every year in producing and issuing the placards. Both Plans A and B will require some initial outlay to re-sign the parking stalls and to mark the added stalls.

Please note that a 2-hour public hearing on this matter is scheduled for: 7 pm on Friday, February 23, 2007 at the CHBI Meeting Room, (Next to La Val's Pizza). All residents are encouraged to come to the hearing to voice their opinions and to make suggestions to the Committee. Following the public hearing, the Committee will develop a final recommendation and send it to the Costa Brava HOA Board of Directors for consideration.

Happy on Asby	O/T	Num Veh	In Garage	In Drvwy	In Stall	In Fireln
	1 O	2	2			
	2 O	2	1			1
	1 O	2	1			1
	4 O	3	2		1	
	1 O	2	2			
	3 O	3	1		1	1
	1 O	2	2			
	4 O	3	1		1	1
	1 O	2	2			
	1 O	3	1			2
	1 O	2	1			1
	3 O	3	1	1	1	
	N/R					
	N/R					
	N/R					

Pleased: 8/12

Displeased: 4/12

Survey Total 12 29 17 1 4 7

Drvwy/Stalls Available 1 2

Av Autos/Residence 2.42

Happy on Biscay	O/T	Num Veh	In Garage	In Drvwy	In Stall	In Fireln
	2 O	4	1			3
	4 O	3	2			1
	3 O	2	1			1
	4 O	5	2	2		1
	4 O	3	2			1
	2 O	3	1			2
	1 O	3	1	2		
	2 O	2	1			1
	4 O	2	1			1

Pleased: 4/9

Displeased: 5/9

Survey Total 9 27 12 4 11

Drvwy/Stalls Available 2 4

Av Autos/Residence 3

Happy on Uppr Bywlk	O/T	Num Veh	In Garage	In Drvwy	In Stall	In Fireln
	1 O	3	1	2		
	1 O	2	2			
	1 O	3	1	2		
	1 O	4	2	1	1	
	1 O	1	1			
	1 O	3	1	2		
	1 O	1	1			
	1 O	2	1		1	
	1 O	3	0	3		
	1 O	2	1	1		
	1 O	3	2	1		
	1 O	2	1	1		

1 O	2	1	1
1 O	2	1	1
1 T	4	0	4
1 T	1	1	
1 T	2		2

N/R

Pleased: 17/17

Survey Total	17	40	17	21	2
Drwy/Stalls Available				17	21
Av Autos/Residence	2.35				

**Upper Alpha Sectn O/T Num Veh In Garage In Drwy In Stall In FireIn**

**Pleased: 29/38**

**Displeased: 9/38**

Survey Total	38	96	46	26	17	7
Drwy/Stalls Avlbl				20	27	
Av Autos/Residence	2.53					

Happy on Cardigan	O/T	Num Veh	In Garage	In Drwy	In Stall	In FireIn	Safeway
1 O		2	1	1			
2 O		3	1			1	1
3 O		4	1		3		
1 O		1	1				
1 O		2	1			1	
2 O		2	1			1	
2 O		3	1		2		
1 T		3	1	2			

Vacant

Pleased: 7/8

Displeased: 1/8

Survey Total	8	20	8	3	5	3	1
Drwy/Stalls Available				2	3		
Av Autos/Residence	2.5						

**Happy on Diapian O/T Num Veh In Garage In Drwy In Stall In FireIn**

1 O		2	2				
2 O		3	2				1
2 O		2	1			1	
1 O		2	0			2	
1 O		2	0			2	
1 O		2	2				
1 O		2	1			1	
2 O		3	1	1		1	
1 O		3	2			1	
1 O		2	2				
1 O		2	1			1	
1 O		2	2				
1 O		1	1				
2 O		3	2			1	
1 O		2	2				
1 O		2	0	2			
1 O		2	1	1			

1 O	3	1	1	1
1 O	2	2		
1 O	2	2		
2 T	2	0		2
1 T	2	1		1
1 T	2	1		1
1 T	2	1		1
1 T	2	2		

Vacant

Pleased: 25/25

Survey Total	25	54	32	5	16	1
Drwy/Stalls Available				10	21	
Av Autos/Residence	2.16					

Happy on Encounter	O/T	Num Veh	In Garage	In Drwy	In Stall	In Fireln
1 O		2	1	1		
3 O		3	1	1	1	
2 O		2	0		2	
1 O		2	1		1	
2 O		2	1			1
1 O		3	2		1	
2 O		3	2		1	
1 O		0	0			
1 O		2	1	1		

N/R

N/R

Pleased: 8/9

Displeased: 1/9

Survey Total	9	19	9	3	6	1
Drwy/Stalls Available				3	4	
Av Autos/Residence	2.11					

Happy on Fundy	O/T	Num Veh	In Garage	In Drwy	In Stall	In Fireln
2 O		3	2		1	
1 O		1	1			
2 O		2	1			1
2 O		2	1			1
1 O		2	1			1
1 O		2	2			

N/R

N/R

N/R

Pleased: 6/6

Survey Total	6	12	8		1	3
Drwy/Stalls Available				0	5	
Av Autos/Residence	2					

Happy on Galway	O/T	Num Veh	In Garage	In Drwy	In Stall	In Fireln
1 O		3	1	2		
1 O		2	2			
1 O		2	1		1	
1 O		3	2		1	

1 O	1	1		
1 O	1	1		
2 O	3	1	2	
2 O	3	2	1	
2 O	4	2	2	
1 O	2	1	1	
1 O	2	2		
1 O	2	0	2	
1 O	3	2	1	
1 O	2	2		
1 O	2	0	2	
1 O	3	2	1	
1 O	2	2		
1 T	2	1		1

N/R  
N/R  
N/R  
N/R  
N/R

Pleased: 18/18

Survey Total	18	42	25	2	14	1
Drwy/Stalls Available				7	23	
Av Autos/Residence	2.33					

Happy On Hudson	O/T	Num Veh	In Garage	In Drwy	In Stall	In Fireln
1 O		1	1			
1 O		2	2			
2 O		4	2		1	1
2 O		3	1		1	1
1 O		1	1			
1 O		2	2			
3 O		5	1	2	2	
3 O		2	1		1	
2 O		3	1	1	1	
2 O		3	1		2	
1 O		1	1			
1 O		1	1			
1 O		2	2			
1 T		2	1		1	

Vacant  
N/R  
N/R  
N/R

Pleased: 12/14

Displeased: 2/14

Survey Total	14	32	18	3	9	2
Drwy/Stalls Available				5	9	
Av Autos/Residence	2.29					

Happy on Mdl Bywk	O/T	Num Veh	In Garage	In Drwy	In Stall	In Fireln
1 O		3	0		3	
3 T		6	2	2	2	

N/R

Pleased: 1/2

Displeased: 1/2

Survey Total 2 9 2 2 5

Drwy/Stalls Available 0 18

Av Autos/Residence 4.5

**Middle Alpha Sectn** O/T Num Veh In Garage In Drwy In Stall In Fireln Safeway

**Pleased: 77/82**

**Displeased: 5/82**

**Section Total** 82 188 102 18 56 11 1

**Drwy/Stalls Avlbl** 27 83

**Av Autos/Residence** 2.29

Happy on Indian O/T Num Veh In Garage In Drwy In Stall In Fireln

1 O	2	1		1	
1 O	2	2			
1 O	2	1			1
1 O	2	2			
1 O	2	1	1		
1 O	2	1	1		
1 O	2	1			1
1 O	3	2			1
1 O	2	2			
1 O	3	1			2
2 O	4	1			3
1 O	2	2			
1 O	2	2			
1 O	2	2			
1 O	2	1			1
1 T	2	2			
2 T	3	1			2
1 T	1	0			1

Vacant

Vacant

Vacant

N/R

N/R

Pleased: 18/18

Survey Total 18 40 25 2 12 1

Drwy/Stalls Available 6 19

Av Autos/Residence 2.22

Happy on Jervis O/T Num Veh In Garage In Drwy In Stall In Fireln

3 O	3	0		3	
2 O	5	1		3	1
2 O	2	1		1	
2 O	2	1		1	
1 O	2	1			1
1 O	1	1			
2 O	2	1		1	
3 T	3	0		3	

N/R  
N/R  
N/R

Pleased: 6/8

Displeased: 2/8

Survey Total	8	20	6		12	2
Drwy/Stalls Available				2	0	
Av Autos/Residence	2.5					

Happy on Keil	O/T	Num Veh	In Garage	In Drwy	In Stall	In Fireln
2 O		2				1
1 O		2	2			1
1 O		2	0	2		
2 O		2	1		1	
1 O		2	2			
1 O		2	1	1		
1 O		2	1	1		
1 O		2	2			
1 O		2	1			1
2 O		3	1			2
3 O		3	0	1	2	
1 O		2	2			
2 T		2	1			1
1 T		2	1		1	

Vacant  
Vacant  
N/R

Pleased: 13/14

Displeased: 1/14

Survey Total	14	30	15	5	5	5
Drvy/Stalls Available				6	5	
Av Autos/Residence	2.14					

Happy on Montego	O/T	Num Veh	In Garage	In Drwy	In Stall	In Fireln
1 O		2	1	1		
4 O		5	1		2	2
1 O		1	1			
2 O		2	0		2	
3 O		3	1		1	1
3 O		3	1		2	
1 O		2	2			
1 T		2	1			1

N/R

Pleased: 5/8

Displeased: 3/8

Survey Total	8	20	8	1	7	4
Drwy/Stalls Available				2	6	
Baywalk (Lower)					22	
Av Autos/Residence	2.5					

**Lower Alpha Sectn** O/T Num Veh In Garage In Drwy In Stall In Fireln  
**Pleased: 42/48**

**Displeased: 6/48**

<b>Section Total</b>	48	110	54	8	36	12	
<b>Drwy/Stalls Avlbl</b>				16	52		
<b>Av Autos/Residence</b>	2.29						

**Total Costa Brava**

**Pleased: 148/168**

**Displeased: 20/168**

	O/T	Num Veh	In Garage	In Drwy	In Stall	In Fireln	Safeway
<b>Development Total</b>	168	394	202	52	109	30	1
<b>Drwy/Stalls Avlbl</b>				63	162		
<b>Av Autos/Residence</b>	2.35						

## George Kay

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**From:** George Kay <gkay@harborbay.org>  
**Sent:** Monday, October 24, 2011 11:03 AM  
**To:** bokjun@comcast.net  
**Cc:** gkay@harborbay.org  
**Subject:** CHBIOA Traffic Study  
**Attachments:** CHBI Traffic Study.xls

Mike,

Attached are the results of last week's study.

Some observations:

- While we tracked traffic from 7:00 am until 9:00 am (in ½ hour increments), there is only one period of time that matters. That's between 7:30 and 8:30. Traffic flows well between 7:00 and 7:30, and 8:30 and 9:00. The intensity begins at exactly 7:30 and ends at exactly 8:30. This was totally true for the first three days of the week with traffic easing more quickly on Thursday and there was no problem at all on Friday. We checked the school calendar for Friday and it was a normal day.
- From the period of ~ 7:50 – 8:10 gridlock takes place for cars turning left onto Doolittle from Island drive. This is true for Monday through Thursday.
- Only 11% of the cars traveling up Island Drive turn right and 60% are going to work only and 74% going to a combination of work and school.
- Overall 37% of the cars turning left onto Doolittle are going to both School and School/Work, but during the period of 7:30 – 8:30 that percentage goes up to 46%.
- By and large there were no wild swings between the percentages in any key category on a day to day basis.
- Participation increased the first three days of the week and then stabilized as people got used to it.
- There is an endemic problem for residents turning left onto Island Dr. from Robert Davey during the rush hour. There are two left turning lights and people get stuck between them therefore not letting make the left turn onto Robert Davey from Island Dr. This situation needs to be addressed by the city regardless of the addition of the 130 homes. This forces people bring their children to school by continuing up Island and making a U-Turn at the Pavilion.
- The flow of traffic coming onto the island to bring children to school seemed light and peaked @ 7:45 for only a few minutes and did not create much of a backup turning right onto Robert Davey.

Regards,  
George

## CHBIOA Traffic Study

### All Week Total

7:00 to 7:30   7:30 to 8:00   8:00 to 8:30   8:30 to 9:00   Total   %

	7:00 to 7:30	7:30 to 8:00	8:00 to 8:30	8:30 to 9:00	Total	%
<b>Island Dr. to Doolittle - Left:</b>						
Work	546	557	624	529	2256	52.8%
School	121	381	180	78	760	17.8%
Work & School	154	385	204	95	838	19.6%
Personal	35	33	88	138	294	6.9%
Home	11	3	22	23	59	1.4%
Don't Travel at this Time	9	7	26	21	63	1.5%
	<b>876</b>	<b>1366</b>	<b>1144</b>	<b>884</b>	<b>4270</b>	
<b>Island Dr. to Doolittle - Right:</b>						
Work	65	65	82	102	314	60.4%
School	9	10	14	15	48	9.2%
Work & School	13	7	27	24	71	13.7%
Personal	11	8	20	24	63	12.1%
Home	5	2	5	4	16	3.1%
Don't Travel at this Time	1	0	1	6	8	1.5%
	<b>104</b>	<b>92</b>	<b>149</b>	<b>175</b>	<b>520</b>	
<b>Island to Robt. Davey:</b>						
Work	17	43	39	61	160	31.2%
School	8	37	74	19	138	26.9%
Work & School	14	58	65	19	156	30.4%
Personal	5	3	7	14	29	5.7%
Home	1	1	3	13	18	3.5%
Don't Travel at this Time	1	4	4	3	12	2.3%
	<b>46</b>	<b>146</b>	<b>192</b>	<b>129</b>	<b>513</b>	
<b>Total Participants</b>					<b>5303</b>	

<b>Total by Destination:</b>						
	7:00 to 7:30	7:30 to 8:00	8:00 to 8:30	8:30 to 9:00	Total	%
Work	628	665	745	692	2730	51.5%
School	138	428	268	112	946	17.8%
Work & School	181	450	296	138	1065	20.1%
Personal	51	44	115	176	386	7.3%
Home	17	6	30	40	93	1.8%
Don't Travel at this Time	11	11	31	30	83	1.6%
	<b>1026</b>	<b>1604</b>	<b>1485</b>	<b>1188</b>	<b>5303</b>	

**CHBIOA Traffic Study  
7:30 AM - 8:30 AM Only**

7:30 to 8:00   8:00 to 8:30   Total   %

<b>Island Dr. to Doolittle - Left:</b>				
Work	557	624	1181	47.1%
School	381	180	561	22.4%
Work & School	385	204	589	23.5%
Personal	33	88	121	4.8%
Home	3	22	25	1.0%
Don't Travel at this Time	7	26	33	1.3%
	<b>1366</b>	<b>1144</b>	<b>2510</b>	
<b>Island Dr. to Doolittle - Right:</b>				
Work	65	82	147	61.0%
School	10	14	24	10.0%
Work & School	7	27	34	14.1%
Personal	8	20	28	11.6%
Home	2	5	7	2.9%
Don't Travel at this Time	0	1	1	0.4%
	<b>92</b>	<b>149</b>	<b>241</b>	
<b>Island to Robt. Davey:</b>				
Work	43	39	82	24.3%
School	37	74	111	32.8%
Work & School	58	65	123	36.4%
Personal	3	7	10	3.0%
Home	1	3	4	1.2%
Don't Travel at this Time	4	4	8	2.4%
	<b>146</b>	<b>192</b>	<b>338</b>	
<b>Total Participants</b>			<b>3089</b>	

<b>Total by Destination:</b>				
Work	665	745	1410	45.6%
School	428	268	696	22.5%
Work & School	450	296	746	24.2%
Personal	44	115	159	5.1%
Home	6	30	36	1.2%
Don't Travel at this Time	11	31	42	1.4%
	<b>1604</b>	<b>1485</b>	<b>3089</b>	

**CHBIOA Traffic Study  
% by Day**

	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Total</b>
<b>Island Dr. to Doolittle - Left:</b>						
Work	51.2%	53.0%	51.7%	57.5%	50.9%	52.8%
School	17.8%	18.4%	18.6%	16.8%	17.4%	17.8%
Work & School	21.8%	19.7%	20.9%	17.4%	18.6%	19.6%
Personal	5.6%	6.3%	5.6%	6.4%	10.0%	6.9%
Home	1.0%	0.9%	1.6%	1.3%	2.0%	1.4%
Don't Travel at this Time	2.7%	1.7%	1.6%	0.5%	1.1%	1.5%
<b>Island Dr. to Doolittle - Right:</b>						
Work	66.7%	67.0%	54.0%	56.8%	58.8%	60.4%
School	0.0%	7.8%	14.3%	11.0%	10.6%	9.2%
Work & School	10.6%	13.6%	15.9%	13.6%	14.1%	13.7%
Personal	16.7%	11.7%	12.7%	10.2%	11.8%	12.1%
Home	3.0%	0.0%	1.6%	6.8%	2.9%	3.1%
Don't Travel at this Time	3.0%	0.0%	1.6%	1.7%	1.8%	1.5%
<b>Island to Robt. Davey:</b>						
Work	9.1%	14.5%	41.3%	N/C	13.1%	31.2%
School	29.5%	27.6%	24.4%	N/C	37.7%	26.9%
Work & School	31.8%	42.1%	26.5%	N/C	36.1%	30.4%
Personal	9.1%	2.6%	6.0%	N/C	4.9%	5.7%
Home	18.2%	9.2%	0.3%	N/C	3.3%	3.5%
Don't Travel at this Time	2.3%	3.9%	1.5%	N/C	4.9%	2.3%
<b>Island Dr. to Doolittle - Left:</b>						
Work Plus School Combined	39.5%	38.1%	39.5%	34.2%	36.0%	37.4%

N/C = Not Counted

**CHBIOA Traffic Study  
730 to 830 % by Day**

	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	<b>Total</b>
<b>Island Dr. to Doolittle - Left:</b>						
Work	45.1%	49.1%	43.6%	52.5%	45.4%	47.1%
School	22.6%	23.2%	22.7%	20.6%	22.5%	22.4%
Work & School	24.7%	21.2%	26.6%	21.9%	23.0%	23.5%
Personal	4.4%	3.9%	4.5%	3.9%	7.1%	4.8%
Home	0.5%	0.9%	1.5%	0.9%	1.1%	1.0%
Don't Travel at this Time	2.8%	1.7%	1.1%	0.2%	0.9%	100.0%
<b>Island Dr. to Doolittle - Right:</b>						
Work	38.9%	75.0%	64.7%	57.4%	60.0%	61.0%
School	0.0%	7.5%	11.8%	11.1%	11.6%	10.0%
Work & School	22.2%	10.0%	20.6%	13.0%	12.6%	14.1%
Personal	38.9%	7.5%	2.9%	11.1%	11.6%	11.6%
Home	0.0%	0.0%	0.0%	7.4%	3.2%	2.9%
Don't Travel at this Time	0.0%	0.0%	0.0%	0.0%	1.1%	0.4%
<b>Island to Robt. Davey:</b>						
Work	12.1%	9.3%	33.5%	N/C	10.4%	24.3%
School	39.4%	37.0%	27.1%	N/C	47.9%	32.8%
Work & School	30.3%	46.3%	35.5%	N/C	33.3%	36.4%
Personal	9.1%	1.9%	2.0%	N/C	4.2%	3.0%
Home	6.1%	1.9%	0.5%	N/C	0.0%	1.2%
Don't Travel at this Time	3.0%	3.7%	1.5%	N/C	4.2%	2.4%
<b>Island Dr. to Doolittle - Left:</b>						
Work Plus School Combined	47.2%	44.4%	49.3%	42.5%	45.6%	45.8%

N/C = Not Counted

**CHBIOA Traffic Study  
Monday**

7:00 to 7:30   7:30 to 8:00   8:00 to 8:30   8:30 to 9:00   Total   %

**Island Dr. to Doolittle - Left:**

Work	92	96	98	88	374	51.2%	
School	21	70	27	12	130	17.8%	20.2%
Work & School	29	71	35	24	159	21.8%	22.0%
Personal	2	10	9	20	41	5.6%	
Home	2	1	1	3	7	1.0%	
Don't Travel at this Time	3	2	10	5	20	2.7%	
	<b>149</b>	<b>250</b>	<b>180</b>	<b>152</b>	<b>731</b>		

**Island Dr. to Doolittle - Right:**

Work	19	5	2	18	44	66.7%	
School	0	0	0	0	0	0.0%	
Work & School	1	0	4	2	7	10.6%	
Personal	1	2	5	3	11	16.7%	
Home	2	0	0	0	2	3.0%	
Don't Travel at this Time	1	0	0	1	2	3.0%	
	<b>24</b>	<b>7</b>	<b>11</b>	<b>24</b>	<b>66</b>		

**Island to Robt. Davey:**

Work	0	1	3	0	4	9.1%	
School	0	3	10	0	13	29.5%	
Work & School	3	3	7	1	14	31.8%	
Personal	1	1	2	0	4	9.1%	
Home	0	0	2	6	8	18.2%	
Don't Travel at this Time	0	1	0	0	1	2.3%	
	<b>4</b>	<b>9</b>	<b>24</b>	<b>7</b>	<b>44</b>		

**Total Participants**

	<b>177</b>	<b>266</b>	<b>215</b>	<b>183</b>	<b>841</b>		
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**CHBIOA Traffic Study  
Tuesday**

**7:00 to 7:30 7:30 to 8:00 8:00 to 8:30 8:30 to 9:00 Total**

**Island Dr. to Doolittle - Left:**

Work	104	108	156	103	471	53.0%
School	26	78	47	12	163	18.4%
Work & School	38	70	44	23	175	19.7%
Personal	5	4	17	30	56	6.3%
Home	1	0	5	2	8	0.9%
Don't Travel at this Time	2	1	8	4	15	1.7%
	<b>176</b>	<b>261</b>	<b>277</b>	<b>174</b>	<b>888</b>	

**Island Dr. to Doolittle - Right:**

Work	18	10	20	21	69	67.0%
School	0	1	2	5	8	7.8%
Work & School	4	0	4	6	14	13.6%
Personal	4	0	3	5	12	11.7%
Home	0	0	0	0	0	0.0%
Don't Travel at this Time	0	0	0	0	0	0.0%
	<b>26</b>	<b>11</b>	<b>29</b>	<b>37</b>	<b>103</b>	

**Island to Robt. Davey:**

Work	4	1	4	2	11	14.5%
School	1	5	15	0	21	27.6%
Work & School	3	8	17	4	32	42.1%
Personal	1	1	0	0	2	2.6%
Home	1	1	0	5	7	9.2%
Don't Travel at this Time	0	0	2	1	3	3.9%
	<b>10</b>	<b>16</b>	<b>38</b>	<b>12</b>	<b>76</b>	

**Total Participants**

	<b>212</b>	<b>288</b>	<b>344</b>	<b>223</b>	<b>1067</b>	
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**CHBIOA Traffic Study  
Wednesday**

**7:00 to 7:30 7:30 to 8:00 8:00 to 8:30 8:30 to 9:00 Total**

**Island Dr. to Doolittle - Left:**

Work	109	121	112	116	458	51.7%
School	26	77	44	18	165	18.6%
Work & School	22	92	50	21	185	20.9%
Personal	8	10	14	18	50	5.6%
Home	2	2	6	4	14	1.6%
Don't Travel at this Time	1	3	3	7	14	1.6%
	<b>168</b>	<b>305</b>	<b>229</b>	<b>184</b>	<b>886</b>	

**Island Dr. to Doolittle - Right:**

Work	1	9	13	11	34	54.0%
School	3	2	2	2	9	14.3%
Work & School	1	0	7	2	10	15.9%
Personal	1	1	0	6	8	12.7%
Home	1	0	0	0	1	1.6%
Don't Travel at this Time	0	0	0	1	1	1.6%
	<b>7</b>	<b>12</b>	<b>22</b>	<b>22</b>	<b>63</b>	

**Island to Robt. Davey:**

Work	12	38	30	57	137	41.3%
School	7	23	32	19	81	24.4%
Work & School	4	42	30	12	88	26.5%
Personal	3	1	3	13	20	6.0%
Home	0	0	1	0	1	0.3%
Don't Travel at this Time	0	1	2	2	5	1.5%
	<b>26</b>	<b>105</b>	<b>98</b>	<b>103</b>	<b>332</b>	

**Total Participants**

	<b>201</b>	<b>422</b>	<b>349</b>	<b>309</b>	<b>1281</b>	
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**CHBIOA Traffic Study  
Thursday**

**7:00 to 7:30 7:30 to 8:00 8:00 to 8:30 8:30 to 9:00 Total**

**Island Dr. to Doolittle - Left:**

Work	114	118	122	115	469	57.5%
School	23	75	19	20	137	16.8%
Work & School	34	80	20	8	142	17.4%
Personal	8	1	17	26	52	6.4%
Home	3	0	4	4	11	1.3%
Don't Travel at this Time	2	0	1	1	4	0.5%
	<b>184</b>	<b>274</b>	<b>183</b>	<b>174</b>	<b>815</b>	

**Island Dr. to Doolittle - Right:**

Work	13	12	19	23	67	56.8%
School	4	3	3	3	13	11.0%
Work & School	3	2	5	6	16	13.6%
Personal	2	3	3	4	12	10.2%
Home	1	1	3	3	8	6.8%
Don't Travel at this Time	0	0	0	2	2	1.7%
	<b>23</b>	<b>21</b>	<b>33</b>	<b>41</b>	<b>118</b>	

**Island to Robt. Davey:**

Work	0	0	0	0	0	#DIV/0!
School	0	0	0	0	0	#DIV/0!
Work & School	0	0	0	0	0	#DIV/0!
Personal	0	0	0	0	0	#DIV/0!
Home	0	0	0	0	0	#DIV/0!
Don't Travel at this Time	0	0	0	0	0	#DIV/0!
	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

**Total Participants**

	<b>207</b>	<b>295</b>	<b>216</b>	<b>215</b>	<b>933</b>	
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**CHBIOA Traffic Study  
Friday**

**7:00 to 7:30   7:30 to 8:00   8:00 to 8:30   8:30 to 9:00   Total**

**Island Dr. to Doolittle - Left:**

Work	127	114	136	107	484	50.9%
School	25	81	43	16	165	17.4%
Work & School	31	72	55	19	177	18.6%
Personal	12	8	31	44	95	10.0%
Home	3	0	6	10	19	2.0%
Don't Travel at this Time	1	1	4	4	10	1.1%
	<b>199</b>	<b>276</b>	<b>275</b>	<b>200</b>	<b>950</b>	

**Island Dr. to Doolittle - Right:**

Work	14	29	28	29	100	58.8%
School	2	4	7	5	18	10.6%
Work & School	4	5	7	8	24	14.1%
Personal	3	2	9	6	20	11.8%
Home	1	1	2	1	5	2.9%
Don't Travel at this Time	0	0	1	2	3	1.8%
	<b>24</b>	<b>41</b>	<b>54</b>	<b>51</b>	<b>170</b>	

**Island to Robt. Davey:**

Work	1	3	2	2	8	13.1%
School	0	6	17	0	23	37.7%
Work & School	4	5	11	2	22	36.1%
Personal	0	0	2	1	3	4.9%
Home	0	0	0	2	2	3.3%
Don't Travel at this Time	1	2	0	0	3	4.9%
	<b>6</b>	<b>16</b>	<b>32</b>	<b>7</b>	<b>61</b>	

**Total Participants**

	<b>229</b>	<b>333</b>	<b>361</b>	<b>258</b>	<b>1181</b>	
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