

# CORRESPONDENCE

# PNC Pasadena Neighborhood Coalition

P.O. BOX 51022 Pasadena, California 91115  
*Uniting Pasadena Neighborhood Associations on Issues of Livability City-wide*

April 2, 2013

Mayor Bill Bogaard  
City of Pasadena  
100 N. Garfield Ave.  
Pasadena, CA 91109

Re: Draft General Plan Land Use Element Revision

Dear Mayor Bogaard:

The Pasadena Neighborhood Coalition (PNC) has serious concerns about both the process of the General Plan Land Use Element revision, and its specific provisions. While the beginning of the process of revision of this important document was characterized by widespread outreach, numerous public meetings, and participation by many affected parties, the recent process has been just the opposite. In particular, the City seems to have developed its own Specific Plan for each of the Specific Plan areas, without involving the neighborhoods and businesses affected. Neighbors are concerned that once the City Council gives the go-ahead to the Environmental Impact Report, these Specific Plans will be, in essence, approved.

In years past, the General Plan Land Use Element revision has been developed first, and the Specific Plans developed afterwards, in a detailed, open, and participatory process involving affected neighborhood and business groups. For the current revision, it appears that the Specific Plans are being re-written **simultaneously** with the General Plan revision. And in this current process the City has not consulted with, or even notified the affected neighborhoods and businesses in the Specific Plan areas. For example, the City's "Change Map - North Lake" areas NL-4 and NL-5 are proposed for higher density, in places **over five times more dense** than the current North Lake Specific Plan (NLSP). During the last NLSP revision, now over six years ago, residents fought to maintain the existing density in these two areas, and succeeded. Now the affected neighborhoods must fight this battle all over again -- this time without any public notice.

The PNC urges you and the City Council to immediately stop the development of Specific Plans until the General Plan Land Use Element has been approved by you. But if the decision is made to revise the Specific Plans simultaneously with the General Plan, then we urge that you stop all further action on the General Plan and begin public workshops on the Specific Plans as soon as possible. Above all, the maps of zoning changes staff has produced in each Specific Plan area should be regarded as **very preliminary proposals**, made without consulting affected neighborhoods and businesses.

The concept of mixed use may well be a useful planning tool. However, there is a hidden danger in its application adjacent to residential neighborhoods. State law allows mixed use developments which include low and moderate income housing to be built much larger, higher, and denser than non-mixed use developments. Such developments could tower over adjacent residential neighborhoods, and could dramatically change the streetscape. Accordingly, we ask that any map showing proposed density changes, also have a companion map showing the effects of using the state's low and moderate income housing allowances.

Yours truly,

Bob Kneisel, Chairperson  
Pasadena Neighborhood Coalition

# Change Map - North Lake

## HOUSING

- Low Density Res  
0-6 DU/Acre
- Low-Med Density Res  
0-12 DU/Acre
- Medium Density Residential  
0-16 DU/Acre
- Med-High Density Residential  
0-32 DU/Acre
- High Density Residential  
0-48 DU/Acre
- Urban Housing  
0-87 DU/Acre

## MIXED-USE

- Low Mixed Use  
(0.0-1.0 FAR)
- Med Mixed Use  
(0.0-2.25 FAR)
- High Mixed Use  
(0.0-3.0 FAR)
- OPEN SPACE
- Parks
- Sphere of Influence

## COMMERCIAL

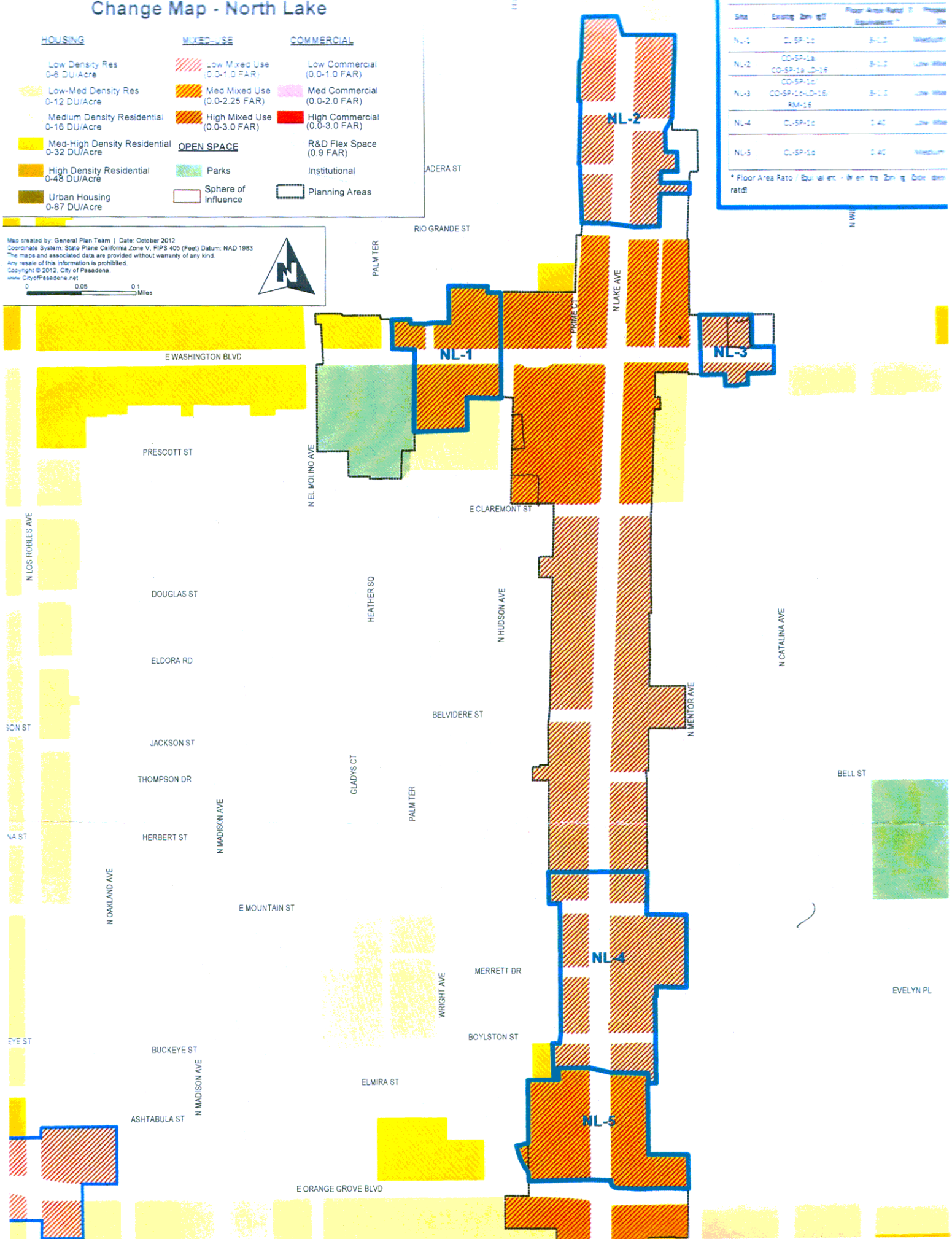
- Low Commercial  
(0.0-1.0 FAR)
- Med Commercial  
(0.0-2.0 FAR)
- High Commercial  
(0.0-3.0 FAR)
- R&D Flex Space  
(0.9 FAR)
- Institutional
- Planning Areas

Map created by: General Plan Team | Date: October 2012  
 Coordinate System: State Plane California Zone V, FIPS 405 (Feet) Datum: NAD 1983  
 The maps and associated data are provided without warranty of any kind.  
 Any resale of this information is prohibited.  
 Copyright © 2012, City of Pasadena.  
 www.CityofPasadena.net



Site	Existing Zoning	Floor Area Ratio / Equivalent *	Proposed Equipment **	Use
NL-1	CU-SP-10c	3-1.2		Medium
NL-2	CO-SP-10a CO-SP-10a-UD-15	3-1.2		Low-Med
NL-3	CO-SP-10c-UD-15 RM-15	3-1.2		Low-Med
NL-4	CU-SP-10c	1.40		Low-Med
NL-5	CU-SP-10c	1.40		Medium

\* Floor Area Ratio / Equivalent - When the Zoning Code does not  
 ratify



**MARSHA V. ROOD, FAICP**  
**216 S. Madison Avenue, #302**  
**Pasadena, CA 91101**  
**626.568.8329**  
**marsharood@earthlink.net**

April 3, 2013

The Honorable Bill Bogaard, Mayor  
Members of the City Council  
City of Pasadena  
100 North Garfield Avenue  
Pasadena, CA 91109

Attn: Mark Jomsky, City Clerk

Subject: Proposed Draft General Plan

Dear Mayor Bogaard and Council Members:

I am a resident of the Central District and serve on the Board of Directors of the Downtown Pasadena Neighborhood Association. I respectfully request that the following be considered for inclusion in the final Draft General Plan:

- 1. Correct the Proposed Jobs/Housing Balance: The Draft General Plan as presented degrades the current jobs/housing balance from 1.87 to 2.10 jobs to housing units; adjustments must be made to correct this increased imbalance.***

**Justification:** According to the background studies conducted for the Draft General Plan by Stanley R. Hoffman Associates, Inc. (Hoffman Associates), the current the jobs/housing balance in Pasadena is 111,029 jobs to 59,453 housing units resulting in a *current jobs/housing unit ratio of 1.87*.

$$\frac{111,029 \text{ jobs}}{59,453 \text{ housing units}} = 1.87 \text{ jobs - to - housing ratio}$$

Existing  
ratio

Also according Hoffman Associates, the Draft General Plan (with a planning horizon of 2035) development levels call for a ratio of 147,732 jobs to

70,246 housing units by 2035 which will result in a proposed jobs/housing balance ratio of 2.10.

**Degraded ratio if staff recommendation for development levels is adopted**

$$\frac{147,732 \text{ jobs}}{70,246 \text{ housing units}} = 2.10 \text{ jobs/housing ratio}$$

In order to preserve the citywide current jobs/housing balance of 1.87 by 2035, 79,001 housing units would have to be provided citywide to accommodate future commercial use projections. This represents an increment of 19,548 housing units (i.e. 79,001 – 59,453); however, only a total of 8,705 housing units (comprised of a development level increment of 7,105 housing units and 1,600 housing units constructed, under construction (2009 – 2011) or under a Master Plan are called for by 2035. *If a 1.87 jobs/housing balance is to be achieved citywide by 2035 based upon the number of projected jobs, a 17,888 housing unit development level would be required.*

**Citywide development level:**  
**17,888**  
housing units needed to maintain a 1.87 jobs/housing ratio

In terms of the Central District, the Draft General Plan development level calls for about half (71,327 jobs out of the citywide total of 147,732 total) to be located in the Central District by 2035. This indicates that about half (48.2%) of the new housing units should be called for in the Central District. In order to achieve a 1.87 jobs/housing ratio in the Central District, about half of the increment of 19,546 housing units citywide or 9,422 housing units should be called for in the Central District by 2035. However, in addition to the 1,330 housing units constructed, under construction (2009-

**Central District development level:**  
**8,092**  
housing units needed to maintain a 1.87 jobs/housing ratio

2011) and under an approved Master Plan, only a development level of 3,750 housing units for a total of 5,080 housing units are called for. *In order to achieve a 1.87 jobs/housing balance in the Central District, an incremental development level of 8,092 housing units should be called for.*

**Benefits:** The benefits of having a more stable balance of commercial and residential uses in the city, particularly in the Central District, are that there will be: (a) more residents within the Primary Trade Area who can walk/bike to retail centers, groceries, and services; (b) improved opportunities to live within walking/biking distance of places of employment; (c) reduced personal transportation costs; (d) reduced housing costs achieved through denser, mixed-use living; (e) reduced personal travel time, vehicle miles traveled and air pollution, and (f) greater density will shift more trips away from private vehicles to travel modes which emit fewer greenhouse gases. (Please see Attachment No. 1 for further documentation.)

- 2. Include in the Implementation Section of the proposed General Plan the preparation of "Form-Based Codes" for the Specific Plan areas of the City, with the Central District Specific Plan as the first priority.***

**Justification:** According to the Form-Based Code Institute, form-based codes address the relationship between building facades and the public realm, the form and mass of buildings in relation to one another, and the scale and types of streets and block. Form-Based Codes, in contrast to Zoning, conceptualize a public realm by pulling together the individual elements including diverse street types, a variety of public and private open spaces, and contextual building types into a *complete, cohesive, and memorable place*; land use *per se* is of secondary emphasis. The regulations and standards in Form-Based Codes are keyed to a Regulating Plan that designates the appropriate form and scale (and therefore, character) of development. Zoning, on the other hand, focuses on the segregation of land uses, and the control of development intensity through abstract and uncoordinated parameters such as Floor Area Ratios (FARs), dwelling units per acre, setbacks, parking ratios, and traffic LOS which neglect an integrated built form. Form-Based Codes are regulatory, not advisory as are design guidelines, and are drafted to implement a community-based vision and plan.

Design guidelines as the city has now, in contrast to Form-Based Codes, are explanatory and interpretive recommendations that encourage, but do not require, their use. Design guidelines are administered by a design commission and staff and are created to fit a wide range (although not all)

situations. Design *guidelines* are typically preferred by architects and urban designers who feel that any standard(s) limit(s) their creative expression. As a result, design guidelines are difficult to apply consistently over time, offer too much room for subjective interpretation and are difficult to enforce. *Importantly, design guidelines represent a key barrier to protecting and enhancing distinctive and unique places because they lack clear and precise place-based and integrated/complementary standards and a predictable review process over time.* Finally, because they require oversight by discretionary review bodies, design guidelines can lead to protracted and politicized planning process (and law suits) that cost the community, the city and the developer time and money.

*The Central District Specific Plan should have first priority for the development and implementation of Form-Based Codes because the Central District is the primary focus for new development in the Draft General Plan.*

**Benefits:** Form-Based Codes are clear and precise standards, developed with community input, to create a *specific place* that achieves a community-based vision and goals for an area. The benefits are that the community has a higher level of comfort with the end result, city staff has a more streamlined, easier to administer review process (i.e. more ministerial and less discretionary decisions), and design review bodies have significantly fewer opportunities for subjective interpretations over time. In my opinion, most developers are willing to build to higher standards if the rules are clear and the process is predictable. The time saved by virtue of a clearer entitlement process is many times a bigger incentive than any money a city can offer.

Respectfully submitted,

*Marsha V. Rood*

Attachment No. 1: *Excerpt from Julie Campoli, Made for Walking - Density and Neighborhood Form; Lincoln Institute of Land Policy, Cambridge, Massachusetts, 2012*

## Attachment No. 1

### Excerpt from Julie Campoli, Made for Walking – Density and Neighborhood Form; Lincoln Institute of Land Policy, Cambridge, Massachusetts, 2012; Page 11

---

A more compact, transit-rich urban form will help reduce VMT by giving many more people alternative ways to move around. And when driving is necessary, we won't have to go quite as far on a daily basis. It will take many years to reach the point where we see the benefits of these changes, but within a generation we could cut our transportation-related emissions to levels that will align them with those of other developed nations.

#### Can More Compact Urban Form Help?

It may seem obvious to anyone shuttling from their child's soccer game to the hardware store to the super-market that a low-density land use pattern demands more time behind the wheel. But, would we drive less if we lived in denser cities, and would an altered urban landscape help slow climate change?

Three recent empirical studies analyzed the relationship between land use patterns and driving habits by measuring the impacts of a more compact urban form on VMT. *Growing Cooler* (Ewing et al. 2008), *Moving Cooler* (Cambridge Systematics 2009), and *Driving and the Built Environment* (Transportation Research Board 2009) all concluded that developing at higher population densities and mixing land uses will reduce the number of miles Americans drive each year. Locating jobs and people in close proximity would shorten trips, and people would be more likely to walk or ride a bike. Greater density also would make public transit possible by shifting more trips away from private vehicles and toward modes that emit fewer greenhouse gases.

The studies diverged on the question of how much difference such a density change would make, but all three focused on a target date of 2050. *Growing Cooler* envisioned a scenario in which we could be driving 20 to 40 percent fewer miles and lowering our greenhouse gas emissions by 18 to 36 percent (Ewing et al. 2008). The authors of *Moving Cooler* (Cambridge Systematics 2009) outlined various levels of reductions based on how aggressively we change our land use practices, estimating that expanding current best practices could achieve a 20 percent reduction. A maximum effort, including comprehensive growth boundaries, minimum required densities, and jobs/housing

balance, as well as nonland use strategies could reduce emissions by 60 percent. In *Driving and the Built Environment* the Transportation Research Board (2009) estimated a more modest reduction in the range from 1 to 11 percent.

The divergent opinions resulted from different assumptions about how likely we are to change our land use policies and how quickly our growth rate might alter the built environment through redevelopment. Critics of *Driving and the Built Environment* said the report underestimated the market appeal of compact development, and that changing demographics and rising gas prices will increase the potential for a shift toward denser urban forms (Ewing, Nelson, and Bartholomew 2009). Indeed, recent trends covered in chapter 6 indicate they may be right.

These three studies are not the final word, as research on the topic continues to show. A 2011 land use transportation modeling analysis of the Charlotte, North Carolina, area found that long term reductions of CO<sub>2</sub> emissions are possible by shifting to a more compact development pattern. Comparing a high-density, mixed-use, transit-oriented model with a low-density, auto-dependent pattern, the study determined that climate-warming carbon dioxide, along with the pollutants carbon monoxide, nitrogen oxides, and hydrocarbons, would be 5.5 to 7.1 percent lower overall in the dense transit model (Rodriguez et al. 2011). Combined with better fuel efficiency and alternative energy use, this shift could make a significant difference by 2050. The authors stress, however, that the scenario they modeled will not be sufficient. Since they expect population growth and the associated increase in travel to double CO<sub>2</sub> emissions over the next 40 years, an even more aggressive reduction in urban footprints must be paired with breakthrough automotive technologies to slow the build-up of greenhouse gases.

The most dramatic reductions in VMT would come from combining land use changes with other strategies that create economic incentives for driving less. Pay-as-you drive auto insurance, congestion pricing, higher parking fees, intercity tolls, and other pricing policies can induce people to combine trips or leave a car at home (U.S. DOT 2010). In the absence of a higher gas tax, these



(p.1)

TO: Mayor Bill Bogaard, City Council Members Victor Gordo, Margaret McAustin, Jacque Robinson, Joel Bryant, Gene Masuda, Steve Madison, Terry Tornek

CC: Vincent P. Bertoni, Directory of Planning Department, City of Pasadena Senior Planner Laura Dahl; Planner Scott Reimers

FROM: Residents of North Mentor Avenue (Orange Grove to Mountain), Bungalow Heaven Landmark District, adjacent to site segments "NL-4" & "NL-5" on new General Plan map of proposed zoning ("land use") changes

March 2013

We are the homeowners of North Mentor Avenue, living within the Bungalow Heaven Landmark District, between Orange Grove and Mountain. Our homes lie adjacent to the areas designated as site segments "NL-4" and "NL-5" on the new General Plan map of proposed zoning changes.

Only last week, we were shocked to discover that zoning changes are being proposed by the Planning Staff for the new General Plan that **completely disregard and contradict the protective zoning that our historic neighborhood unanimously sought and worked so hard to successfully obtain, culminating in a vote at the City Council hearing in June of 2007 to implement this protective zoning.** Prior to this City Council hearing, our block engaged in much research of our own and participated in numerous meetings within our own neighborhood, with the Planning Staff, and with our City Councilman Victor Gordo. **Our stance on this has not changed,** and we are quite upset that we did not even receive notices to alert us that new proposed zoning changes that would affect our neighborhood had been scheduled to be voted upon at Planning Commission hearings.

We strongly oppose the proposed zoning changes, and as we previously expressed in 2007, we **hereby unanimously insist that:**

**(1) Zoning for site segments "NL-4" and "NL-5" must remain "commercial" and NOT "mixed use."** The reason for our stance remains unchanged since 2007. The segment of North Lake Avenue between Orange Grove and Mountain must retain height limits set at 30 feet maximum (measured at a structure's highest point, including any towers, etc.), 2-story maximum, with no bonuses, as was set into the North Lake Specific Plan at the City Council hearing in 2007. **"Mixed use" zoning gives us no protection against overscaled development adjacent to our important Bungalow Heaven historic neighborhood, as developers can utilize State law SB 1818 for density and height bonuses.**

We find it unacceptable to allow higher development on Lake Avenue between Orange Grove and Mountain, and along the commercial frontage of Orange Grove and Mountain. This strip runs directly adjacent to and behind our homes on Mentor Avenue, a block which significantly contributes to both a *National Landmark District* and a local Landmark District.

(CONTINUED)

P. 2

As this block of North Mentor is the locale of some of the largest, oldest and most important historic homes in the city's much beloved and visited Bungalow Heaven Landmark District, with many of the homes having opened their doors to the public for Bungalow Heaven's popular annual tours, **it is vital that the historic context of these homes and this block be protected and preserved.** With no way of stopping the use of SB 1818, mixed use development adjacent to this block would dwarf the residences and severely compromise the historic integrity of the block. The view of tall buildings on contiguous lots looming above the homes and yards on the west side of the street, or within the CVS lot, would forever disrupt the historic character and setting of these homes and the streetscape, and the single-family residential flavor of the block. Likewise, it would negatively impact quality of life and privacy. Real estate experts also confirm for us that it would severely lower the property values of the homes here.

Additionally, we have studied and assessed the technique of "stepping down" a tall structure using an encroachment plane, and have concluded that it does not sufficiently mitigate the negative impact of such large structures upon single-family homes.

For all of the above reasons, we find that mixed-use zoning is inappropriate to site segments "NL-4" and "NL-5" in the new General Plan.

**(2) Site Segments "NL-4" and "NL-5" in the new General Plan must both be set to a "Low Density Floor Area Ratio (FAR)".** Our own research on FAR and interviews with architects and developers who design and build both commercial and mixed-use structures have made it clear that a 2.0 to 2.5 maximum FAR ("medium density") results in structures at least three stories high and often four stories high (and even higher articulations are possible) due to the need for a variety of different setbacks and design modulations, all of which affect the buildable area of a lot and thus the maximum allowable floor area of the building's actual design. In order to build an attractive and well-functioning building and not simply a "box," there are a wide variety of necessary setbacks, as well as aesthetic setbacks for open space and green areas, and, of course, needed design modulations. **Therefore, since, as discussed above, we will only accept structures limited to a maximum of 2-stories, with a maximum height of 30 feet, measured at a structure's highest point, adjacent to our historic residential street, this requires setting the zoning of site segments "NL-4" and "NL-5" to "low density." And, since any FAR number can accommodate a huge variety of height and bulk articulations, the actual allowable maximum FAR for site segments "NL-4" and "NL-5" must be contingent on complying with the maximum 2-story, maximum 30 foot height limits established in the zoning for this area in 2007. Likewise, they should be guided by excellent design standards for this area.**

As of the writing of this letter, the Planning Department has informed us that no work has been done on new design guidelines for the North Lake Specific Plan since we advocated for this in 2007. To raise the existing low-density commercial FAR allowance to 1.0 from the current zoning's equivalent limit of between 0.4 to 0.5 FAR without excellent design guidelines in place seems imprudent.

(CONTINUED)

P. 3

During our period of research in 2007, and since then, we have found many excellent examples in other cities of successful and beautifully designed retail and business districts where the scale has been retained at 2-stories--including streets with noise and traffic comparable to North Lake. We look forward to sharing our findings and our ideas when design guidelines are discussed for the North Lake Specific Plan.

**(3) Development on North Lake Avenue and along Orange Grove and Mountain must not encroach onto Mentor, a historic single-family residential zone.** The map of proposed zoning changes for North Lake Avenue for the new General Plan has shaded in areas of Mentor as if they are part of a planned redevelopment area for North Lake Avenue, Orange Grove and Mountain. As of the writing of this letter, the City Planning staff has been unable to tell us if this was accidental or deliberate. **The new General Plan map must be corrected to reflect and delineate the following existing zoning:**

- **A large segment of the CVS parking lot along Mentor Avenue (separated from the street by a wall and some trees) is currently zoned RS6 Single Family Residential, with a commercial overlay zone for the CVS parking lot. We insist that this remain unchanged, so that any future development of the CVS lot can include a plan to return historic homes to the west side of Mentor Avenue south of Mountain.** As was elaborated upon in 2007, this would mend a longstanding “wound” of our historic district and provide a proper buffering of this section of the street from the commercial Lake Avenue, while still allowing ample room for commercial development on Lake and for parking. Ideally, historic homes could be moved to this site for restoration, but if unavailable, new homes reproducing the historic styles of the neighborhood could be built. We feel very strongly about this, and plan to initiate discussion with Pasadena Heritage about this long-range plan.
- **701 and 711 North Mentor must retain the zoning of RS6 Single Family Residential.** This was zoned back to RS6 at the June 2007 City Council hearing, to allow for the existing historic courtyard apartments to be restored, or to allow a historic single-family home to be relocated there. Alternatively, a historic reproduction single-family home could be built there if no appropriate historic home were available for relocation. Our neighborhood’s preference is to see these courtyard apartments retained and restored, and we have begun talks with Pasadena Heritage about this matter.
- **The auto body shop which fronts Orange Grove, but which possesses a large wall on the Mentor side, was rezoned at some point from commercial to RM-16 (allowing a 16-unit multi-family structure to be built). This zoning must not be changed to a higher density “commercial” or “mixed use,” and, rather, needs to be down-zoned to protect our historic residential street from an overscaled development utilizing State Law SB 1818.** This lot is very sensitively located, wrapping onto our historic block, and it is absolutely unacceptable to us for this area to become the site of a development incompatible in scale and character with our neighborhood. Additionally, design guidelines for any future structure at this location should provide sufficient buffering to screen its view from Mentor.

**(CONTINUED)**

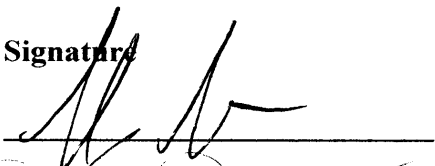



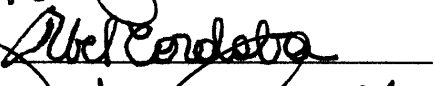

In closing, we wish to point out that an in-depth investigative article by the Los Angeles Times (6/30/07), as well as studies conducted by major universities, have found that the large mixed-use residential structures being built in close proximity to mass-transit lines in Los Angeles, Pasadena and other Southern California cities, are not decreasing traffic as planned. Instead, with only a miniscule number of residents of these buildings using the transit system, and the vast majority driving their cars (generally, 2 cars per unit), these developments have in fact been found now to increase traffic congestion.

North Lake Avenue is already one of the most congested thoroughfares in Pasadena, with the surrounding neighborhoods among the most densely populated in the city. Our neighborhood already has ongoing and serious problems with traffic, noise, trash, late-night loitering and crime, and we feel that these problems will only be made worse by a nearby increase in population.

Finally, among the written goals put forth by the Planning Staff in introducing the new General Plan is the need to "protect and preserve residential neighborhoods and historic areas." But the proposed zoning changes to the portion of North Lake Avenue, Orange Grove, and Mountain adjacent to our important historic neighborhood clearly would not do that.

Money will be spent by the City on an EIR to study mixed use development on North Lake Avenue, but it seems a shame to waste money studying the impact of such development adjacent to our Bungalow Heaven Landmark District, when the homeowners here and our supporters throughout the city--and beyond--already know that it would have a severe negative impact. We also know that we will not accept such damaging development adjacent to our historic neighborhood.

Thank you,  
North Mentor Avenue Residents

Signature	Printed Name	Address
	<u>Armando Gomez</u>	<u>831 N. MENTOR AVE</u>
	<u>Veronica Gomez</u>	<u>831 N. MENTOR AVE</u>
	<u>Regina Gomez</u>	<u>831 N. MENTOR AVE</u>
	<u>Valentin A. Bourquet</u>	<u>814 N. Mentor Ave.</u>
	<u>Abel Cordoba</u>	<u>814 N. Mentor Ave.</u>
	<u>Janice Cordoba</u>	<u>814 N. Mentor Ave</u>

↓ (CONTINUED) ↓

P.5

In closing, we wish to point out that an in-depth investigative article by the Los Angeles Times (6/30/07), as well as studies conducted by major universities, have found that the large mixed-use residential structures being built in close proximity to mass-transit lines in Los Angeles, Pasadena and other Southern California cities, are not decreasing traffic as planned. Instead, with only a miniscule number of residents of these buildings using the transit system, and the vast majority driving their cars (generally, 2 cars per unit), these developments have in fact been found now to increase traffic congestion.

North Lake Avenue is already one of the most congested thoroughfares in Pasadena, with the surrounding neighborhoods among the most densely populated in the city. Our neighborhood already has ongoing and serious problems with traffic, noise, trash, late-night loitering and crime, and we feel that these problems will only be made worse by a nearby increase in population.

Finally, among the written goals put forth by the Planning Staff in introducing the new General Plan is the need to "protect and preserve residential neighborhoods and historic areas." But the proposed zoning changes to the portion of North Lake Avenue, Orange Grove, and Mountain adjacent to our important historic neighborhood clearly would not do that.

Money will be spent by the City on an EIR to study mixed use development on North Lake Avenue, but it seems a shame to waste money studying the impact of such development adjacent to our Bungalow Heaven Landmark District, when the homeowners here and our supporters throughout the city--and beyond--already know that it would have a severe negative impact. We also know that we will not accept such damaging development adjacent to our historic neighborhood.

Thank you,  
North Mentor Avenue Residents

Signature	Printed Name	Address
	Carmen Marsh Weiser	747 N. Mentor
	Phil Weiser	747 N. Mentor Ave
	Toni Weiser	747 N. Mentor Ave
	Nico Weiser	747 N. Mentor
	Brandon Clark	765 N. Mentor
	Peter/Dionise	765 N. Mentor

↓ (CONTINUED) ↓

P.6

In closing, we wish to point out that an in-depth investigative article by the Los Angeles Times (6/30/07), as well as studies conducted by major universities, have found that the large mixed-use residential structures being built in close proximity to mass-transit lines in Los Angeles, Pasadena and other Southern California cities, are not decreasing traffic as planned. Instead, with only a miniscule number of residents of these buildings using the transit system, and the vast majority driving their cars (generally, 2 cars per unit), these developments have in fact been found now to increase traffic congestion.

North Lake Avenue is already one of the most congested thoroughfares in Pasadena, with the surrounding neighborhoods among the most densely populated in the city. Our neighborhood already has ongoing and serious problems with traffic, noise, trash, late-night loitering and crime, and we feel that these problems will only be made worse by a nearby increase in population.

Finally, among the written goals put forth by the Planning Staff in introducing the new General Plan is the need to "protect and preserve residential neighborhoods and historic areas." But the proposed zoning changes to the portion of North Lake Avenue, Orange Grove, and Mountain adjacent to our important historic neighborhood clearly would not do that.


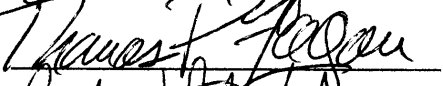
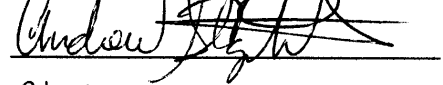
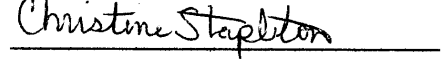
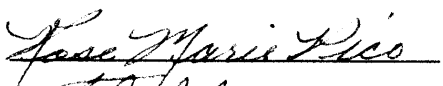

Money will be spent by the City on an EIR to study mixed use development on North Lake Avenue, but it seems a shame to waste money studying the impact of such development adjacent to our Bungalow Heaven Landmark District, when the homeowners here and our supporters throughout the city--and beyond--already know that it would have a severe negative impact. We also know that we will not accept such damaging development adjacent to our historic neighborhood.

Thank you,  
North Mentor Avenue Residents

**Signature**

**Printed Name**

**Address**

	Elizabeth Fagan	784 N. Mentor Ave.
	Thomas P. Fagan	784 N. Mentor Ave.
	Andrew Stapleton	808 N. Mentor Ave.
	Christine Stapleton	808 N Mentor Ave
	Rose Marie Pica	715 N. Mentor Ave
	Thomas P. Pico Sr.	715 N. MENTOR

↓ (CONTINUED) ↓

P. 7

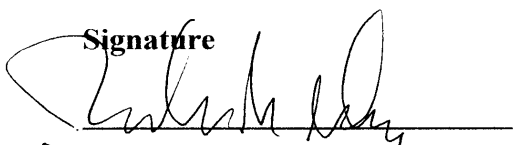
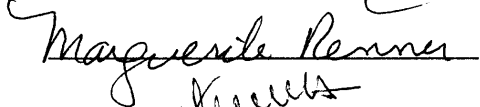

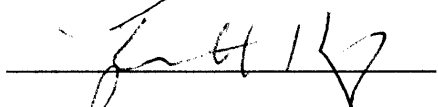
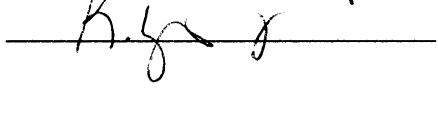

In closing, we wish to point out that an in-depth investigative article by the Los Angeles Times (6/30/07), as well as studies conducted by major universities, have found that the large mixed-use residential structures being built in close proximity to mass-transit lines in Los Angeles, Pasadena and other Southern California cities, are not decreasing traffic as planned. Instead, with only a miniscule number of residents of these buildings using the transit system, and the vast majority driving their cars (generally, 2 cars per unit), these developments have in fact been found now to increase traffic congestion.

North Lake Avenue is already one of the most congested thoroughfares in Pasadena, with the surrounding neighborhoods among the most densely populated in the city. Our neighborhood already has ongoing and serious problems with traffic, noise, trash, late-night loitering and crime, and we feel that these problems will only be made worse by a nearby increase in population.

Finally, among the written goals put forth by the Planning Staff in introducing the new General Plan is the need to "protect and preserve residential neighborhoods and historic areas." But the proposed zoning changes to the portion of North Lake Avenue, Orange Grove, and Mountain adjacent to our important historic neighborhood clearly would not do that.

Money will be spent by the City on an EIR to study mixed use development on North Lake Avenue, but it seems a shame to waste money studying the impact of such development adjacent to our Bungalow Heaven Landmark District, when the homeowners here and our supporters throughout the city--and beyond--already know that it would have a severe negative impact. We also know that we will not accept such damaging development adjacent to our historic neighborhood.

Thank you,  
North Mentor Avenue Residents

Signature	Printed Name	Address
	Robert M. Nelson	775 N. Mentor Ave Pasadena CA 91104
	MARGUERITE RENNER	775 N. MENTOR AVE.
	Giovinezza Hasbun	743 N. Mentor Ave.
	JUAN C. HASBUN	743 N. MENTOR AVE.
	Kenneth Hasbun	796 N. Mentor Ave.
	Rafael Hasbun	796 N. Mentor Ave.

↓ (CONTINUED) ↓

P. 8


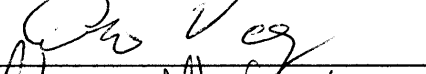


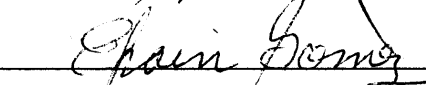
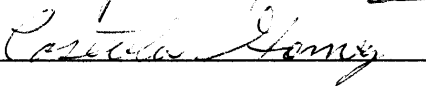
In closing, we wish to point out that an in-depth investigative article by the Los Angeles Times (6/30/07), as well as studies conducted by major universities, have found that the large mixed-use residential structures being built in close proximity to mass-transit lines in Los Angeles, Pasadena and other Southern California cities, are not decreasing traffic as planned. Instead, with only a miniscule number of residents of these buildings using the transit system, and the vast majority driving their cars (generally, 2 cars per unit), these developments have in fact been found now to increase traffic congestion.

North Lake Avenue is already one of the most congested thoroughfares in Pasadena, with the surrounding neighborhoods among the most densely populated in the city. Our neighborhood already has ongoing and serious problems with traffic, noise, trash, late-night loitering and crime, and we feel that these problems will only be made worse by a nearby increase in population.

Finally, among the written goals put forth by the Planning Staff in introducing the new General Plan is the need to "protect and preserve residential neighborhoods and historic areas." But the proposed zoning changes to the portion of North Lake Avenue, Orange Grove, and Mountain adjacent to our important historic neighborhood clearly would not do that.

Money will be spent by the City on an EIR to study mixed use development on North Lake Avenue, but it seems a shame to waste money studying the impact of such development adjacent to our Bungalow Heaven Landmark District, when the homeowners here and our supporters throughout the city--and beyond--already know that it would have a severe negative impact. We also know that we will not accept such damaging development adjacent to our historic neighborhood.

Thank you,  
North Mentor Avenue Residents

Signature	Printed Name	Address
	Alberto Sanchez	850 N. Mentor Ave 91104
	Armando Valadez Sr.	850 N. Mentor Ave 91104
	Clarisa S. Valadez	850 N. Mentor Ave 91104
	Vanessa R. Valadez	850 N. Mentor Ave 91104
	EFRDIN GOMEZ	2825 N MENTOR 91104
	CASTUIT GOMEZ	325 N MENTOR 9114

↓ (CONTINUED) ↓



P.9

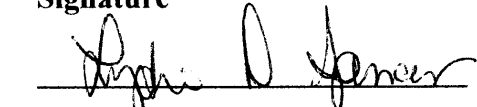
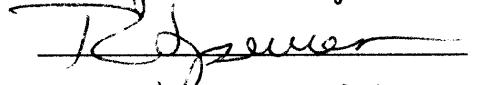
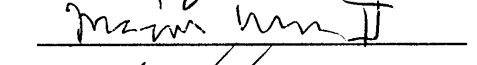
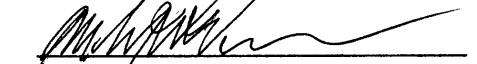
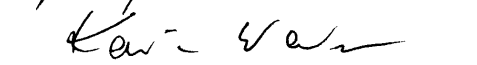
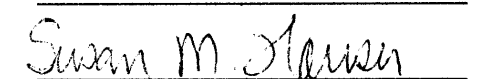
In closing, we wish to point out that an in-depth investigative article by the Los Angeles Times (6/30/07), as well as studies conducted by major universities, have found that the large mixed-use residential structures being built in close proximity to mass-transit lines in Los Angeles, Pasadena and other Southern California cities, are not decreasing traffic as planned. Instead, with only a miniscule number of residents of these buildings using the transit system, and the vast majority driving their cars (generally, 2 cars per unit), these developments have in fact been found now to increase traffic congestion.

North Lake Avenue is already one of the most congested thoroughfares in Pasadena, with the surrounding neighborhoods among the most densely populated in the city. Our neighborhood already has ongoing and serious problems with traffic, noise, trash, late-night loitering and crime, and we feel that these problems will only be made worse by a nearby increase in population.

Finally, among the written goals put forth by the Planning Staff in introducing the new General Plan is the need to "protect and preserve residential neighborhoods and historic areas." But the proposed zoning changes to the portion of North Lake Avenue, Orange Grove, and Mountain adjacent to our important historic neighborhood clearly would not do that.

Money will be spent by the City on an EIR to study mixed use development on North Lake Avenue, but it seems a shame to waste money studying the impact of such development adjacent to our Bungalow Heaven Landmark District, when the homeowners here and our supporters throughout the city--and beyond--already know that it would have a severe negative impact. We also know that we will not accept such damaging development adjacent to our historic neighborhood.

Thank you,  
North Mentor Avenue Residents

Signature	Printed Name	Address
	Lydia D. SPENCER	714 N MENTOR AVE
	Robert F. Spencer	714 N. Mentor Ave
	MICHAEL WARNER II	726 N/6 MENTOR AV
	MICHAEL WARNER	726 N/6 MENTOR AV
	Karin Warner	726 N/6 MENTOR AV
	Susan M. Houser	834 N Mentor Av.

↓ (CONTINUED) ↓

P. 10

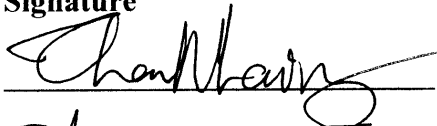
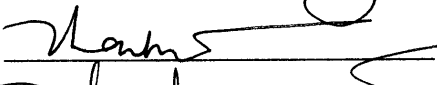
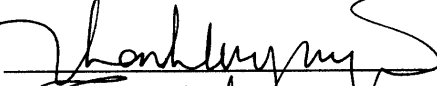
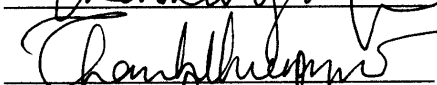
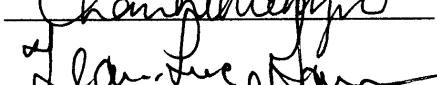
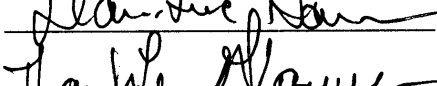
In closing, we wish to point out that an in-depth investigative article by the Los Angeles Times (6/30/07), as well as studies conducted by major universities, have found that the large mixed-use residential structures being built in close proximity to mass-transit lines in Los Angeles, Pasadena and other Southern California cities, are not decreasing traffic as planned. Instead, with only a miniscule number of residents of these buildings using the transit system, and the vast majority driving their cars (generally, 2 cars per unit), these developments have in fact been found now to increase traffic congestion.

North Lake Avenue is already one of the most congested thoroughfares in Pasadena, with the surrounding neighborhoods among the most densely populated in the city. Our neighborhood already has ongoing and serious problems with traffic, noise, trash, late-night loitering and crime, and we feel that these problems will only be made worse by a nearby increase in population.

Finally, among the written goals put forth by the Planning Staff in introducing the new General Plan is the need to "protect and preserve residential neighborhoods and historic areas." But the proposed zoning changes to the portion of North Lake Avenue, Orange Grove, and Mountain adjacent to our important historic neighborhood clearly would not do that.

Money will be spent by the City on an EIR to study mixed use development on North Lake Avenue, but it seems a shame to waste money studying the impact of such development adjacent to our Bungalow Heaven Landmark District, when the homeowners here and our supporters throughout the city--and beyond--already know that it would have a severe negative impact. We also know that we will not accept such damaging development adjacent to our historic neighborhood.

Thank you,  
North Mentor Avenue Residents

Signature	Printed Name	Address
	Thanh-Hai Nguyen	797 N. Mentor Ave
	Thanh-Nhan Nguyen	797 N. Mentor Ave
	Thanh-Tuyen Nguyen	787 N. Mentor Ave
	Thanh-Thien Nguyen	787 N. Mentor Ave
	Jean-Luc Gauvreau	787 N. Mentor Ave
	Thanh-Le Nguyen	787 N. Mentor Ave

↓ (CONTINUED) ↓

P. 11

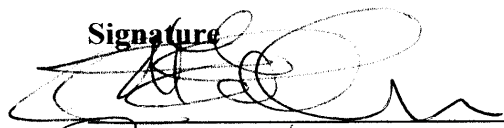
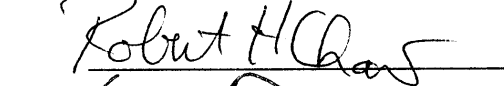


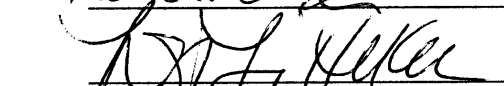
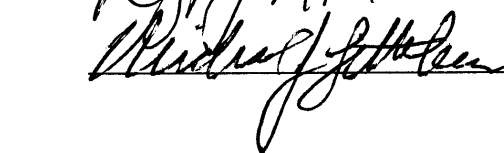
In closing, we wish to point out that an in-depth investigative article by the Los Angeles Times (6/30/07), as well as studies conducted by major universities, have found that the large mixed-use residential structures being built in close proximity to mass-transit lines in Los Angeles, Pasadena and other Southern California cities, are not decreasing traffic as planned. Instead, with only a miniscule number of residents of these buildings using the transit system, and the vast majority driving their cars (generally, 2 cars per unit), these developments have in fact been found now to increase traffic congestion.

North Lake Avenue is already one of the most congested thoroughfares in Pasadena, with the surrounding neighborhoods among the most densely populated in the city. Our neighborhood already has ongoing and serious problems with traffic, noise, trash, late-night loitering and crime, and we feel that these problems will only be made worse by a nearby increase in population.

Finally, among the written goals put forth by the Planning Staff in introducing the new General Plan is the need to "protect and preserve residential neighborhoods and historic areas." But the proposed zoning changes to the portion of North Lake Avenue, Orange Grove, and Mountain adjacent to our important historic neighborhood clearly would not do that.

Money will be spent by the City on an EIR to study mixed use development on North Lake Avenue, but it seems a shame to waste money studying the impact of such development adjacent to our Bungalow Heaven Landmark District, when the homeowners here and our supporters throughout the city--and beyond--already know that it would have a severe negative impact. We also know that we will not accept such damaging development adjacent to our historic neighborhood.

Thank you,  
North Mentor Avenue Residents

Signature	Printed Name	Address
	Linley Fathorn	868 N. Mentor Ave
	Robert H. Chow	868 N. Mentor Ave.
	SARA ROBERTS	890 N. MENTOR AVE
	PAUL HENCZEL	890 N. Mentor Ave
	Nancy Littenker	840 N. Mentor Ave.
	Michael Littenker	" " "

↓ (CONTINUED) ↓

P. 12

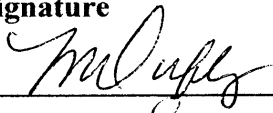
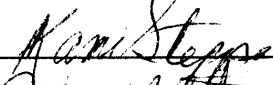


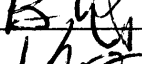
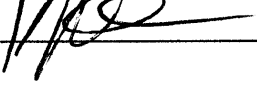
In closing, we wish to point out that an in-depth investigative article by the Los Angeles Times (6/30/07), as well as studies conducted by major universities, have found that the large mixed-use residential structures being built in close proximity to mass-transit lines in Los Angeles, Pasadena and other Southern California cities, are not decreasing traffic as planned. Instead, with only a miniscule number of residents of these buildings using the transit system, and the vast majority driving their cars (generally, 2 cars per unit), these developments have in fact been found now to increase traffic congestion.

North Lake Avenue is already one of the most congested thoroughfares in Pasadena, with the surrounding neighborhoods among the most densely populated in the city. Our neighborhood already has ongoing and serious problems with traffic, noise, trash, late-night loitering and crime, and we feel that these problems will only be made worse by a nearby increase in population.

Finally, among the written goals put forth by the Planning Staff in introducing the new General Plan is the need to "protect and preserve residential neighborhoods and historic areas." But the proposed zoning changes to the portion of North Lake Avenue, Orange Grove, and Mountain adjacent to our important historic neighborhood clearly would not do that.

Money will be spent by the City on an EIR to study mixed use development on North Lake Avenue, but it seems a shame to waste money studying the impact of such development adjacent to our Bungalow Heaven Landmark District, when the homeowners here and our supporters throughout the city--and beyond--already know that it would have a severe negative impact. We also know that we will not accept such damaging development adjacent to our historic neighborhood.

Thank you,  
North Mentor Avenue Residents

Signature	Printed Name	Address
	Monica Duffy	776 N. Mentor Ave, Pasadena 91104
	Kami Steppes	760 N. MENTOR AVE PASADENA 91104
	Robert Steppes	760 N. MENTOR
	Larry M. STEPPES	760 N. MENTOR ave
	Brian Clougherty	750 N. Mentor
	Kristy Clougherty	750 N. Mentor

↓ (CONTINUED) ↓

P.13

In closing, we wish to point out that an in-depth investigative article by the Los Angeles Times (6/30/07), as well as studies conducted by major universities, have found that the large mixed-use residential structures being built in close proximity to mass-transit lines in Los Angeles, Pasadena and other Southern California cities, are not decreasing traffic as planned. Instead, with only a miniscule number of residents of these buildings using the transit system, and the vast majority driving their cars (generally, 2 cars per unit), these developments have in fact been found now to increase traffic congestion.

North Lake Avenue is already one of the most congested thoroughfares in Pasadena, with the surrounding neighborhoods among the most densely populated in the city. Our neighborhood already has ongoing and serious problems with traffic, noise, trash, late-night loitering and crime, and we feel that these problems will only be made worse by a nearby increase in population.

Finally, among the written goals put forth by the Planning Staff in introducing the new General Plan is the need to "protect and preserve residential neighborhoods and historic areas." But the proposed zoning changes to the portion of North Lake Avenue, Orange Grove, and Mountain adjacent to our important historic neighborhood clearly would not do that.

Money will be spent by the City on an EIR to study mixed use development on North Lake Avenue, but it seems a shame to waste money studying the impact of such development adjacent to our Bungalow Heaven Landmark District, when the homeowners here and our supporters throughout the city--and beyond--already know that it would have a severe negative impact. We also know that we will not accept such damaging development adjacent to our historic neighborhood.

Thank you,  
North Mentor Avenue Residents

**Signature**

**Printed Name**

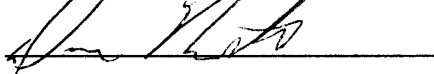
**Address**



Anahid Sam. Rykova 731 N. Mentor Ave.



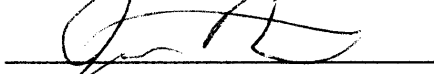
Anahid. Rykova. 731 N. Mentor Ave.



Denise Roberts 874 N. Mentor Ave.

Barbara Roberts

Barbara Roberts 874 N. Mentor Ave



Joseph Roberts 874 N. Mentor Ave.



(CONTINUED)



P. 14

In closing, we wish to point out that an in-depth investigative article by the Los Angeles Times (6/30/07), as well as studies conducted by major universities, have found that the large mixed-use residential structures being built in close proximity to mass-transit lines in Los Angeles, Pasadena and other Southern California cities, are not decreasing traffic as planned. Instead, with only a miniscule number of residents of these buildings using the transit system, and the vast majority driving their cars (generally, 2 cars per unit), these developments have in fact been found now to increase traffic congestion.

North Lake Avenue is already one of the most congested thoroughfares in Pasadena, with the surrounding neighborhoods among the most densely populated in the city. Our neighborhood already has ongoing and serious problems with traffic, noise, trash, late-night loitering and crime, and we feel that these problems will only be made worse by a nearby increase in population.

Finally, among the written goals put forth by the Planning Staff in introducing the new General Plan is the need to "protect and preserve residential neighborhoods and historic areas." But the proposed zoning changes to the portion of North Lake Avenue, Orange Grove, and Mountain adjacent to our important historic neighborhood clearly would not do that.

Money will be spent by the City on an EIR to study mixed use development on North Lake Avenue, but it seems a shame to waste money studying the impact of such development adjacent to our Bungalow Heaven Landmark District, when the homeowners here and our supporters throughout the city--and beyond--already know that it would have a severe negative impact. We also know that we will not accept such damaging development adjacent to our historic neighborhood.

Thank you,  
North Mentor Avenue Residents

Signature	Printed Name	Address
<u>Serman Fabregas</u>	<u>SERMAN FABREGAS</u>	<u>826 N. MENTOR AV. PASADENA</u>
<u>JR Cadena</u>	<u>Gilbert Cadena</u>	<u>783 N. Mentor Ave, Pas</u>
<u>Lara Medina</u>	<u>Lara Medina</u>	<u>783 N Mentor Ave, Pasadena</u>
<u>Marisol Medina Cadena</u>	<u>Marisol Medina Cadena</u>	<u>783 N. mentor Ave</u>
_____	_____ ↓	(CONTINUED) ↓
_____	_____	_____

P.15

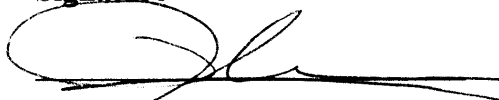
In closing, we wish to point out that an in-depth investigative article by the Los Angeles Times (6/30/07), as well as studies conducted by major universities, have found that the large mixed-use residential structures being built in close proximity to mass-transit lines in Los Angeles, Pasadena and other Southern California cities, are not decreasing traffic as planned. Instead, with only a miniscule number of residents of these buildings using the transit system, and the vast majority driving their cars (generally, 2 cars per unit), these developments have in fact been found now to increase traffic congestion.

North Lake Avenue is already one of the most congested thoroughfares in Pasadena, with the surrounding neighborhoods among the most densely populated in the city. Our neighborhood already has ongoing and serious problems with traffic, noise, trash, late-night loitering and crime, and we feel that these problems will only be made worse by a nearby increase in population.

Finally, among the written goals put forth by the Planning Staff in introducing the new General Plan is the need to "protect and preserve residential neighborhoods and historic areas." But the proposed zoning changes to the portion of North Lake Avenue, Orange Grove, and Mountain adjacent to our important historic neighborhood clearly would not do that.

Money will be spent by the City on an EIR to study mixed use development on North Lake Avenue, but it seems a shame to waste money studying the impact of such development adjacent to our Bungalow Heaven Landmark District, when the homeowners here and our supporters throughout the city--and beyond--already know that it would have a severe negative impact. We also know that we will not accept such damaging development adjacent to our historic neighborhood.

Thank you,  
North Mentor Avenue Residents

Signature	Printed Name	Address
	<del>PAPA</del> Myungos	731 N. Mentor Ave.
<u>Bibiana Myungos</u>	Bibiana Myungos	731 N. Mentor Ave.
<u>Juan Gonzalez</u>	Juan Gonzalez	727 N. MENTOR
<u>Hermila Gonzalez</u>	HERMILA GONZALEZ	727 N. Mentor
		(CONTINUED)

P. 16

In closing, we wish to point out that an in-depth investigative article by the Los Angeles Times (6/30/07), as well as studies conducted by major universities, have found that the large mixed-use residential structures being built in close proximity to mass-transit lines in Los Angeles, Pasadena and other Southern California cities, are not decreasing traffic as planned. Instead, with only a miniscule number of residents of these buildings using the transit system, and the vast majority driving their cars (generally, 2 cars per unit), these developments have in fact been found now to increase traffic congestion.

North Lake Avenue is already one of the most congested thoroughfares in Pasadena, with the surrounding neighborhoods among the most densely populated in the city. Our neighborhood already has ongoing and serious problems with traffic, noise, trash, late-night loitering and crime, and we feel that these problems will only be made worse by a nearby increase in population.

Finally, among the written goals put forth by the Planning Staff in introducing the new General Plan is the need to "protect and preserve residential neighborhoods and historic areas." But the proposed zoning changes to the portion of North Lake Avenue, Orange Grove, and Mountain adjacent to our important historic neighborhood clearly would not do that.

Money will be spent by the City on an EIR to study mixed use development on North Lake Avenue, but it seems a shame to waste money studying the impact of such development adjacent to our Bungalow Heaven Landmark District, when the homeowners here and our supporters throughout the city--and beyond--already know that it would have a severe negative impact. We also know that we will not accept such damaging development adjacent to our historic neighborhood.

Thank you,  
North Mentor Avenue Residents

Signature  
Monica D Mayall  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Printed Name  
Monica D Mayall  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Address  
815 N, Mentor Ave  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

↓  
↓ (CONTINUED) ↓



P. 17

In closing, we wish to point out that an in-depth investigative article by the Los Angeles Times (6/30/07), as well as studies conducted by major universities, have found that the large mixed-use residential structures being built in close proximity to mass-transit lines in Los Angeles, Pasadena and other Southern California cities, are not decreasing traffic as planned. Instead, with only a miniscule number of residents of these buildings using the transit system, and the vast majority driving their cars (generally, 2 cars per unit), these developments have in fact been found now to increase traffic congestion.

North Lake Avenue is already one of the most congested thoroughfares in Pasadena, with the surrounding neighborhoods among the most densely populated in the city. Our neighborhood already has ongoing and serious problems with traffic, noise, trash, late-night loitering and crime, and we feel that these problems will only be made worse by a nearby increase in population.

Finally, among the written goals put forth by the Planning Staff in introducing the new General Plan is the need to "protect and preserve residential neighborhoods and historic areas." But the proposed zoning changes to the portion of North Lake Avenue, Orange Grove, and Mountain adjacent to our important historic neighborhood clearly would not do that.

Money will be spent by the City on an EIR to study mixed use development on North Lake Avenue, but it seems a shame to waste money studying the impact of such development adjacent to our Bungalow Heaven Landmark District, when the homeowners here and our supporters throughout the city--and beyond--already know that it would have a severe negative impact. We also know that we will not accept such damaging development adjacent to our historic neighborhood.

Thank you,  
North Mentor Avenue Residents

Signature	Printed Name	Address
<u>Susan A. Currier</u>	<u>Susan A. Currier</u>	<u>700 N. Mentor Ave.</u>
<u>Joe Currier</u>	<u>Joe Currier</u>	<u>700 N. Mentor Ave.</u>
<u>Geri Lynn G. Okamoto</u>	<u>Geri Lynn G. Okamoto</u>	<u>706 N. Mentor Ave.</u>
<u>R. Scott Okamoto</u>	<u>R. Scott Okamoto</u>	<u>706 N. Mentor Ave.</u>
<u>Janna Beling</u>	<u>Janna Beling</u>	<u>734 N. Mentor Ave</u>
<u>Peter Sipsis</u>	<u>PETER SIPSIS</u>	<u>734 N. MENTOR AVE.</u>

↓ (CONTINUED) ↓

P.18

**ADDENDUM:**

2 to 3 additional signature pages to be submitted, with signatures from homeowners who were out of town at the time of this petition signing, but who have read and have committed to signing this petition.

This will bring total signatures to 100% of property owners on North Mentor Avenue between Orange Grove and Mountain.

April 4, 2012

Day One, Inc.  
175 N. Euclid Ave.  
Pasadena, CA 91101



Pasadena City Council  
175 N. Garfield Ave.  
Pasadena, CA 91101

**RE: Public Health Implications of Proposed Land-Use Siting, Densities - Draft General Plan**

Dear Mayor Bogaard and Members of the Pasadena City Council,

Day One is a Pasadena-based non-profit organization with over two decades of experience in the realm of public health education, policy and environmental prevention. As such, Day One is actively interested in planning and land-use decisions that affect the health and well-being of residents of the City of Pasadena and greater San Gabriel Valley.

As you consider important land-use planning decisions for the health and future of our City in the coming weeks, Day One would like to provide you with some additional information on the public health implications of freeway-adjacent residential housing and the siting of future development in the City.

**Health Risks of Freeway-adjacent TOD**

While encouraging "transit-oriented development" (or TOD) is generally a good idea - greater use of public transit is associated with higher rates of "active transportation" (i.e., walking, biking) and the many accompanying health and environmental benefits - concentrating development along congested highways is increasingly viewed by the scientific community as a recipe for poor health.

Why? Residents of housing near busy freeways are exposed to significantly higher levels of air pollution than those who reside only a few blocks away. In a landmark 2004 Children's Health study, USC researchers found that children who live within 500 feet of a freeway - about one block - contracted asthma at higher levels. Since then a growing body of research has found that those who live adjacent to freeways are at higher risk for impaired lung development, stroke, heart disease, and cancer. Other researchers discovered that proximity to freeways increases expectant mothers' risk for premature birth, as well as having children with autism (Please see the attached and below for additional information on health risks).

**Mitigating Negative Externalities of Freeway TOD**

Addressing air pollution near freeways is not easy. Tree buffers and building siting (e.g., orienting windows away from the pollution source) can help, but fine particles created by car exhaust, tire rubber, and brake dust, just like tobacco smoke, find their way through windows, cracks, ventilation systems and even the best air filtration systems. Even closed, triple-paned windows don't keep the pollution out.

There is already a surfeit of freeway-adjacent housing in Pasadena, and the large multi-family complexes lining parts of the 210 are not going anywhere. The question is where the City should encourage future growth. If we listen to the science, it's clear that placing residents, especially children, close to freeways is a recipe for poor health.

In 2011, city leaders recognized drifting tobacco smoke as a serious danger to public health and banned smoking in apartments and condominiums. This choice should be far easier. Air pollution from freeways, like tobacco smoke, can't be easily contained. City leaders and staff should acknowledge the science and limit further housing density within 500 feet of a freeway, as the California Air Resources Board (CARB) recommends in its 2005 Air Quality and Land Use Handbook, cited and pasted below.

### Recommendations

1. Restrict additional residential housing within 500 feet of the 210 freeway to create a buffer from freeway pollutants.
2. Increase proposed FAR and unit levels in the South Fair Oaks District to encourage the development of high density residential around the pedestrian-friendly Gold Line Fillmore and Del Mar stations (two of only 3 Pasadena stations not located in the middle of a freeway).
3. Promote living arrangements that facilitate active transportation by increasing proposed residential and commercial development levels in the Central District, where additional pedestrian, bike and transit-friendly development and centrally-located, affordable housing is welcome and ideal.

As you weigh in on the draft General Plan, Day One urges you to carefully consider these issues. We also encourage you to solicit the technical expertise and feedback of the City's Public Health Department in making decisions that will strongly influence the health and well-being of current and future Pasadena residents for decades to come. For your convenience, we have copied additional, germane information from the California Air Resources Board, Los Angeles County Department of Health, and other sources below.

Thank you for your consideration,



Christy Zamani  
Executive Director, Day One  
christy@dayonepasadena.org  
office (626)229-9750

Cc Vice Mayor Margaret McAustin  
Council Member Victor Gordo  
Council Member John Kennedy  
Council Member Steve Madison  
Council Member Gene Masuda  
Council Member Jackie Robinson  
Council Member Terry Tornek  
City Manager Michael Beck  
Public Health Director Eric Walsh, MD MPH  
City Clerk Mark Jomsky

## **Recommendations for Freeway Adjacent Land Use**

Los Angeles County Department of Public Health  
Bureau of Toxicology and Environmental Assessment

*Below information courtesy of Cyrus Rangan, M.D. FAAP ACMT, Director, Bureau of Toxicology and Environmental Assessment LA County Department of Public Health*

### **1. The following land use guidelines are currently used to address near roadway air quality issues:**

- SCAQMD: Air Quality Issues Regarding Land Use Guidance Document; Chap 2, (aqmd.gov); 1-800-288-3186
- Bay Area Air Quality Management District; CEQA Air Quality Guidelines, 2011 (baaqmd.gov); 415-749-5000
- CARB (California Air Resources Board), ARB Handbook, 2005 (arb.ca.gov); 1-800-363-7664 or 866-397-5462

### **2. Specific recommendations for the reduction of particulate matter in residential units:**

- Fisk, Performance & Costs of Particulate Air Filtration in HVAC Supply Airstreams; 1/6/2003
- Rivard, Assessment & Mitigation of Air Pollutant Health Effects from Intra-urban Roadways: Guidance for Land Use Planning & Environmental Review, City of San Francisco, 5/6/2008
- BAAQMD, CEQA Air Quality Guidelines, May 2011

### **3. Based on this large body of scientific evidence, the air quality considerations lead us to recommend:**

- A buffer of at least 500 feet should be maintained between the development of new schools, housing or other sensitive land uses and freeways. Consideration should be given to extending this minimum buffer zone based on site-specific conditions, given the fact that unhealthy traffic emissions are often present at greater distances. Exceptions to this recommended practice should be made only upon a finding by the decision-making body that the benefits of such development outweigh the public health risks.
- New schools, housing or other sensitive land uses built within 1500 feet of a freeway should adhere to current best-practice mitigation measures to reduce exposure to air pollution, which may include: the use of air filtration to enhance heating, ventilation and air conditioning (HVAC) systems, and the orientation of site buildings and placement of outdoor facilities designed for moderate physical activity as far from the emission source as possible.
- Parks and recreational facilities provide great benefits to community residents including increased levels of physical activity, improved mental health, and opportunities to strengthen social ties with neighbors.[i]However, siting parks and active recreational facilities near freeways may increase public exposure to harmful pollutants, particularly while exercising. Studies show that heavy exercise near sources of traffic pollution may have adverse health effects.[iv] , [v], [vi] However, there are also substantial health benefits associated with exercise.[vii] Therefore, DPH recommends the following cautionary approach when siting parks and active recreational facilities near freeways:
- New parks with athletic fields, courts, and other outdoor facilities designed for moderate to vigorous physical activity, should be sited at least 500 feet from a freeway. Consideration should be given to extending this minimum buffer zone based on site-specific conditions given the fact that unhealthy traffic emissions are often

present at greater distances. Exceptions to this recommended practice should be made only upon a finding by the decision-making body that the benefits of such development outweigh the public health risks.

- New parks built within 1500 feet of freeways should adhere to best-practice mitigation measures that minimize exposure to air pollution. These include the placement of athletic fields, courts, and other active outdoor facilities as far as possible from the air pollution source.

[i] L. Frank et al. 2005. Linking Objectively Measured Physical Activity with Objectively Measured Urban Form: Findings From SMARTRAQ. *American Journal of Preventive Medicine*, at 117-1255.

[ii] Tabbush R and E O'Brien. 2003. *Health and Well-being: Trees, Woodlands, and Natural Spaces*. Forestry Commission, Edinburgh.

[iii] E. Kuo et al. 1998. Transforming Inner-City Neighborhoods: Trees, Sense of Safety, and Preference. *Environmental Behavior*. 30(1): 28-59.

[iv] McConnell R, Berhane K, Gilliland F, London SJ, Islam T, Gauderman WJ, Avol E, Margolis HG, Peters JM. Asthma in exercising children exposed to ozone: a cohort study. *Lancet*. 2002 Feb 2;359(9304):386-91.

[v] Sharman JE, Cockcroft JR, and JS Coombes. Cardiovascular implications of exposure to traffic air pollution during exercise. *Q J Med* 2004; 97:637-643.

[vi] Rundell KW, Caviston R, Hollenbach AM, and K Murphy. *Vehicular Air Pollution, Playgrounds, and Youth Athletic Fields*. 2006, Vol. 18, No. 8, Pages 541-547.

[vii] de Hartog JJ, Boogaard H, Nijland H, and G Hoek. Do the Health Benefits of Cycling Outweigh the Risks? *Environmental Health Perspectives*. 2010; 118(8): 1109-1116.

The above guidelines, references, and recommendations include construction, engineering controls, operational mitigation measures and disclosure statements to prospective occupants. And, again, these recommendations are based primarily on the air quality issues.

Cyrus Rangan M.D. FAAP ACMT  
 Director, Bureau of Toxicology and Environmental Assessment LA County Department of Public Health  
 695 S. Vermont Ave  
 Los Angeles, CA 90005  
 (213) 738-3220  
[crangan@ph.lacounty.gov](mailto:crangan@ph.lacounty.gov)

**California Air Resources Board – Air Quality and Land Use Handbook:  
A Community Health Perspective (2005)**

*Below pasted excerpt from “Freeways and High Traffic Roads” Section; pages 8-10 (19-21 in document)*

“The data on the effects of proximity to traffic-related emissions provides additional information that can be used in land use siting and regulatory actions by air agencies. The key observation in these studies is that close proximity increases both exposure and the potential for adverse health effects. Other effects associated with traffic emissions include premature death in elderly individuals with heart disease.

**Key Health Findings**

- Reduced lung function in children was associated with traffic density, especially trucks, within 1,000 feet and the association was strongest within 300 feet. (Brunekreef, 1997)
- Increased asthma hospitalizations were associated with living within 650 feet of heavy traffic and heavy truck volume. (Lin, 2000)
- Asthma symptoms increased with proximity to roadways and the risk was greatest within 300 feet. (Venn, 2001)
- Asthma and bronchitis symptoms in children were associated with proximity to high traffic in a San Francisco Bay Area community with good overall regional air quality. (Kim, 2004)
- A San Diego study found increased medical visits in children living within 550 feet of heavy traffic. (English, 1999)

In these and other proximity studies, the distance from the roadway and truck traffic densities were key factors affecting the strength of the association with adverse health effects. **In the above health studies, the association of traffic related emissions with adverse health effects was seen within 1,000 feet and was strongest within 300 feet. This demonstrates that the adverse effects diminished with distance.**

In addition to the respiratory health effects in children, proximity to freeways increases potential cancer risk and contributes to total particulate matter exposure. There are three carcinogenic toxic air contaminants that constitute the majority of the known health risk from motor vehicle traffic – diesel particulate matter (diesel PM) from trucks, and benzene and 1,3-butadiene from passenger vehicles. On a typical urban freeway (truck traffic of 10,000-20,000/day), diesel PM represents about 70 percent of the potential cancer risk from the vehicle traffic. Diesel particulate emissions are also of special concern because health studies show an association between particulate matter and premature mortality in those with existing cardiovascular disease.

**Distance Related Findings**

A southern California study (Zhu, 2002) showed measured concentrations of vehicle-related pollutants, including ultra-fine particles, decreased dramatically within approximately 300 feet of the 710 and 405 freeways. Another study looked at the validity of using distance from a roadway as a measure of exposure to traffic related air pollution (Knape, 1999). **This study showed that concentrations of traffic related pollutants declined with distance from the road, primarily in the first 500 feet.**

These findings are consistent with air quality modeling and risk analyses done by ARB staff that show an estimated range of potential cancer risk that decreases with distance from freeways. The estimated risk varies with the local meteorology, including wind pattern. As an example, at 300 feet downwind from a freeway (Interstate 80) with truck traffic of 10,000 trucks per day, the potential cancer risk was as high as 100 in one million (ARB Roseville Rail Yard Study).

The cancer health risk at 300 feet on the upwind side of the freeway was much less. The risk at that distance for other freeways will vary based on local conditions – it may be higher or lower. However, in all these analyses the relative exposure and health risk dropped substantially within the first 300 feet.

State law restricts the siting of new schools within 500 feet of a freeway, urban roadways with 100,000 vehicles/day, or rural roadways with 50,000 vehicles with some exceptions. However, no such requirements apply to the siting of residences, day care centers, playgrounds, or medical facilities. The available data shows that exposure is greatly reduced at approximately 300 feet. In the traffic-related studies the additional health risk attributable to the proximity effect was strongest within 1,000 feet.

The combination of the children’s health studies and the distance related findings suggests that it is important to avoid exposing children to elevated air pollution levels immediately downwind of freeways and high traffic roadways. **These studies suggest a substantial benefit to a 500-foot separation.** The impact of traffic emissions is on a gradient that at some point becomes indistinguishable from the regional air pollution problem. As air agencies work to reduce the underlying regional health risk from diesel PM and other pollutants, the impact of proximity will also be reduced. In the meantime, as a preventative measure, we hope to avoid exposing more children and other vulnerable individuals to the highest concentrations of traffic-related emissions.

#### Recommendation

- **Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.**

#### References

- Brunekreef, B. et al. “Air pollution from truck traffic and lung function in children living near motorways.” *Epidemiology*. 1997; 8:298-303
- Lin, S. et al. “Childhood asthma hospitalization and residential exposure to state route traffic.” *Environ Res*. 2002;88:73-81
- Venn. et al. “Living near a main road and the risk of wheezing illness in children.” *American Journal of Respiratory and Critical Care Medicine*. 2001; Vol.164, pp. 2177-2180
- Kim, J. et al. “Traffic-related air pollution and respiratory health: East Bay Children’s Respiratory Health Study.” *American Journal of Respiratory and Critical Care Medicine* 2004; Vol. 170. pp. 520-526
- Zhu, Y et al. “Study of Ultra-Fine Particles Near A Major Highway With Heavy- Duty Diesel Traffic.” *Atmospheric Environment*. 2002 ; 36:4323-4335
- Knape, M. “Traffic related air pollution in city districts near motorways.” *The Science of the Total Environment*. 1999; 235:339-341
- *Roseville Rail Yard Study*. ARB (October 2004)
- *ARB Diesel Risk Reduction Plan*. (2000)
- Delfino RJ “Epidemiologic Evidence for Asthma and Exposure to Air Toxics: Linkages Between Occupational, Indoor, and Community Air Pollution Research.” *Environmental Health Perspectives*. (2002) 110 (supplement 4): 573-589
- English P., Neutra R., Scalf R. Sullivan M. Waller L. Zhu L. “Examining Associations Between Childhood Asthma and Traffic Flow Using a Geographic Information System.” (1999) *Environmental Health Perspectives* 107(9): 761-767



## Quotes and Contact Information for Additional Experts in Field

### 1) Dr. Rob McConnell, Associate Professor of Preventive Medicine, USC Keck School

Co-principal investigator for the Community Intervention Project on Childhood Asthma

- “putting high density residential development adjacent to a freeway is a bad idea. It will make people sick. Buffer zone is a good policy. 500 feet is a defensible number.”
- Possibility of increased cardiovascular benefits of a couple block walk to transit stations

#### **Rob S. McConnell**

Associate Professor of Preventive Medicine, Division of Occupational and Environmental Health

Keck School of Medicine

Co-principal Investigator, Community Intervention Project on Childhood Asthma

Contact at: (323) 442-1096

rmcconne@hsc.usc.edu

#### Expertise:

- helping urban children with asthma via community-based interventions to control exposure to dust mites and other indoor antigens
- measuring the efficacy of educational programs in environmental health
- evaluating the effects of air pollution on childhood respiratory health
- epidemiology - design and analysis of studies relating health outcomes to environmental exposures

### 2) Dr. Joseph K. Lyou, President & CEO, Coalition for Clean Air, Governor’s Appointee, South Coast Air Quality Management District Governing Board

- “The data from air quality research studies do suggest that a buffer zone is a good idea. The exposure difference can be significant given even an extra few hundred feet of separation between air pollution sources, such as freeways, and residents.”

#### **Joseph K. Lyou, Ph.D.**

**President & CEO, Coalition for Clean Air**

**Governor’s Appointee, South Coast Air Quality Management District Governing Board**

800 Wilshire Blvd. | Suite 1010 | Los Angeles, CA 90017

(213) 223-6866 | [ccair.org](http://ccair.org) | [aqmd.gov](http://aqmd.gov)

joe@ccair.org

## Sample Media Articles on the Issue

### **People Living or Working Near Major Freeways Are Exposed to 30 Times the Concentration of Dangerous Particles From Motor Vehicle Emissions**

**UCLA NEWS** <http://www.scpcs.ucla.edu/news/ZhuHinds%20PR%20Oct02.pdf>

Oct. 17, 2002

People who live, work or travel within 165 feet downwind of a major freeway or busy intersection are exposed to potentially hazardous particle concentrations up to 30 times greater than normal background concentrations found at a greater distance, according to two recently published UCLA studies.

The studies — published in the Journal of the Air and Waste Management Association and in Atmospheric Environment — show that proximity to a major freeway or highway dramatically increases exposure to “ultrafine” particles (tiny particles less than 0.1 micrometers in diameter), which are linked to neurological changes, mild pulmonary inflammation and cardiovascular problems. The U.S. Environmental Protection Agency (EPA) currently regulates particles less than 2.5 micrometers in diameter, and ultrafines represent the very smallest particles inhaled by the public.

### **Study finds traffic pollution can speed hardening of arteries**

**People living within 328 feet of an L.A. freeway were found to have twice the average progression of atherosclerosis -- thickening of artery walls that can lead to heart disease and stroke.**

February 14, 2010 | By Margot Roosevelt

<http://articles.latimes.com/2010/feb/14/local/la-me-freeway-pollution14-2010feb14>

Los Angeles residents living near freeways experience a hardening of the arteries that leads to heart disease and strokes at twice the rate of those who live farther away, a study has found.

The paper is the first to link automobile and truck exhaust to the progression of atherosclerosis -- the thickening of artery walls -- in humans. The study was conducted by researchers from USC and UC Berkeley, along with colleagues in Spain and Switzerland, and published this week in the [journal PLoS ONE](#).

Researchers used ultrasound to measure the carotid artery wall thickness of 1,483 people who lived within 100 meters, or 328 feet, of Los Angeles freeways. Taking measurements every six months for three years, they correlated their findings with levels of outdoor particulates -- the toxic dust that spews from tailpipes -- at the residents' homes.

They found that artery wall thickness in study participants accelerated annually by 5.5 micrometers -- one-twentieth the thickness of a human hair -- more than twice the average progression.

According to co-author Howard N. Hodis, director of the Atherosclerosis Research Unit at USC's Keck School of Medicine, the findings show that "environmental factors may play a larger role in the risk for cardiovascular disease than previously suspected."

UC Berkeley co-author Michael Jerrett noted that "for the first time, we have shown that air pollution contributes to the early formation of heart disease, known as atherosclerosis, which is connected to nearly half the deaths in Western societies. . . . By controlling air pollution from traffic, we may see much larger benefits to public health than we previously thought."

The study comes at a time of growing alarm over the effects of [freeway pollution](#) on nearby schools and homes. In the four-county Los Angeles Basin, 1.5 million people live within 300 meters, or 984 feet, of major freeways.

The [Natural Resources Defense Council](#) is battling in federal court to overturn the caps on motor-vehicle emissions set by Southern California air quality officials, saying that they fail to account for higher pollution near freeways.

And Los Angeles and Long Beach residents are fighting expansion of the [truck-clogged 710 Freeway](#), saying it will lead to higher rates of asthma, heart disease and cancer in densely populated areas.

In July, the U.S. Environmental Protection Agency launched [a major study](#) of traffic pollution near Detroit roadways to examine whether it leads to severe asthma attacks in children.

More than a third of Californians report that they or a family member suffer from asthma or respiratory problems, according to a survey last year. The Obama administration is proposing tighter standards for two vehicle-related pollutants: [nitrogen dioxide \(NO2\)](#) and [ground-level ozone](#), the chief component of smog.

margot.roosevelt@latimes.com

## Living near a motorway hikes your risk of dying after a heart attack

By [Daily Mail Reporter](#)

**PUBLISHED:** 10:18 EST, 8 May 2012 | **UPDATED:** 01:48 EST, 9 May 2012

<http://www.dailymail.co.uk/health/article-2141330/Living-near-motorway-hikes-risk-dying-heart-attack.html#ixzz2EM4jT4o5>

Living close to a major road poses a significant risk to heart attack survivors, a study has found. Researchers found heart attack survivors living less than 100 metres from a carriageway had a 27 per cent higher risk of death within 10 years than survivors living at least 1,000 metres away.

The team from Beth Israel Deaconess Medical Center in Boston added that the risk receded to 13 per cent for those living between 200 and 1,000-metres from the traffic. Lead author Dr Murray Mittleman said: 'Living close to a highway is associated with adverse cardiovascular outcomes in those with underlying cardiac disease. 'Besides air pollution, exposure to noise could be a possible mechanism underlying this association.'

The study of more than 3,500 heart attack survivors in 64 medical centres recorded 1,071 deaths over 10 years. Of that total, 63 per cent of the patients died of cardiovascular disease, 12 percent died of cancer and four per cent died from respiratory disease. Researchers analysed factors such as personal, clinical and neighborhood-level characteristics such as income and education.

Dr Mittleman said: 'People with lower levels of education and income are more likely to live in communities closer to a major roadway, so they are bearing a larger burden of the risk associated with exposure than people with more resources.'

In a study published earlier this year, a team led by Dr Mittleman found air pollution, even at levels generally considered safe by federal regulations, increases the risk of stroke by 34 per cent. Exposure to ambient fine particulate matter, generally from vehicle traffic, was associated with a significantly higher risk of ischemic strokes on days when the EPA's air quality index for particulate matter was yellow instead of green.

These finding provide new evidence that long-term exposure to roadways is associated with an increased risk of death in patients with underlying cardiovascular disease. Writing in the latest edition of *Circulation* 'Clinicians need to educate their patients on the risks posed by particulate matter pollution and encourage patients with cardiovascular disease to avoid unnecessary exposure to traffic,' said Dr Mittleman.

'On a public policy level, city planners should consider locating housing developments away from the most heavily trafficked roadways.' Dan Costa from the U.S Environmental Protection Agency, said: 'This study adds to the growing knowledge linking roadways and traffic to health problems, even death, especially among those with pre-existent disease - in this case a previous heart attack.'

## Proximity to freeways increases autism risk, study finds

*More research is needed, but the report suggests air pollution could be a factor.*

December 16, 2010 | By Shari Roan, Los Angeles Times

Children born to mothers who live close to freeways have twice the risk of autism, researchers reported Thursday. The study, its authors say, adds to evidence suggesting that certain environmental exposures could play a role in causing the disorder in some children.

"This study isn't saying exposure to air pollution or exposure to traffic causes autism," said Heather Volk, lead author of the paper and a researcher at the Saban Research Institute of Children's Hospital Los Angeles. "But it could be one of the factors that are contributing to its increase."

Reported cases of autism cases increased by 57% between 2002 and 2006, according to the Centers for Disease Control and Prevention, although professionals still debate whether rates have actually risen or a greater proportion of autistic children is being diagnosed. An estimated 1 in 110 children is diagnosed with autism today. There is no cure, although research has shown that various therapies can mitigate some symptoms, especially if begun early in life.

In the current study, published online in the journal *Environmental Health Perspectives*, researchers looked at 304 children with autism and, for comparison, 259 children who were developing normally. The children, between the ages of 24 months and 60 months at the start of the study, lived in communities around Los Angeles, San Francisco and Sacramento.

Each family was evaluated in person, and all of the children received developmental assessments. Researchers collected data on where each child's mother lived during pregnancy and at the time of birth, and the proximity of the homes to a major road or freeway.

Children living about 1,000 feet from a freeway at birth — about 10% of the sample — had a two-fold increase in autism risk. The link held up even after researchers controlled for other factors that may influence development, such as ethnicity, parental education, maternal age and exposure to tobacco smoke.

The study did not find a link between autism development and proximity to a major road, as opposed to a freeway. That may be due to the type and quantity of chemicals dispersed on freeways compared with major roads, Volk said. In Los Angeles, some freeways carry more than 300,000 vehicles daily.

Gayle Windham, chief of the epidemiology surveillance unit with the California Department of Health Services Environmental Investigations Branch, said the study did not directly implicate air pollution as a risk factor for autism because it did not have a way of measuring how much pollution the mothers were exposed to during pregnancy. "They are using a proxy measure for air pollution, which is distance to a freeway," she said. "But you still don't know how much time the women spent at home or working or commuting." Windham was not involved in the study. Windham was the lead author of a 2006 study, also published in *Environmental Health Perspectives*, that found that children with autism were about 50% more likely to have a birth residence in an area with hazardous air pollutants. The study was based on air pollution data from the Environmental Protection Agency that was matched to birth records in the San Francisco Bay Area.

Research like this suggests environmental factors need more attention, said Clara Lajonchere, vice president of clinical programs for the advocacy group Autism Speaks. Lajonchere was not involved in the study.

"The implication could be very far reaching in terms of prevention and public health concerns," Lajonchere said. "I think it's pretty well established that genes play a huge role in autism. But there is something going on beyond genetics."

Chronic exposure to air pollution during pregnancy is thought to have physical effects on the fetus. High levels of carbon monoxide, nitrogen dioxide and particulate matter have been linked to a higher risk of preterm birth and low birth weight. Chemicals such as ozone, sulfur dioxide and polycyclic aromatic hydrocarbons, or PAHs, have also been identified as harmful to a developing fetus.

"We know there are some chemicals in air pollution coming from diesel exhaust that might be a good forerunner to look at," Volk said. "But right now we really don't know what it is about air pollution that is associated with autism."

Families residing close to freeways may have to wait for more research before scientists can issue advice or recommendations on what to do about this potential risk, Volk said. For one thing, this study requires replication, she said. In addition, future studies will attempt to identify the level of exposure to particular pollutants.

[shari.roan@latimes.com](mailto:shari.roan@latimes.com)

Study Focus	Findings	Citation	URL
Autism	<p><b>OBJECTIVES:</b> We examined the association between autism and proximity of residence to freeways and major roadways during pregnancy and near the time of delivery, as a surrogate for air pollution exposure.</p> <p><b>METHODS:</b> Data were from 304 autism cases and 259 typically developing controls enrolled in the Childhood Autism Risks from Genetics and the Environment (CHARGE) study. The mother's address recorded on the birth certificate and trimester-specific addresses derived from a residential history obtained by questionnaire were geocoded, and measures of distance to freeways and major roads were calculated using ArcGIS software. Logistic regression models compared residential proximity to freeways and major roads for autism cases and typically developing controls.</p> <p><b>RESULTS:</b> Adjusting for socio-demographic factors and maternal smoking, maternal residence at the time of delivery was more likely to be near a freeway (<math>\leq 309</math> m) for cases than for controls (odds ratio (OR)=1.86; 95% confidence interval (CI), 1.04-3.45). Autism was also associated with residential proximity to a freeway during the third trimester (OR=2.22; CI, 1.16-4.42). After adjustment for socioeconomic and sociodemographic characteristics, these associations were unchanged. Living near other major roads at birth was not associated with autism.</p> <p><b>CONCLUSIONS:</b> Living near a freeway was associated with autism. Examination of associations with measured air pollutants is needed. We examined data from five double-blind randomized trials that assessed effects of various treatments on the change in CIMT. The trials were conducted in the Los Angeles area. Spatial models and land-use data were used to estimate the home outdoor mean concentration of particulate matter up to 2.5 micrometer in diameter (PM2.5), and to classify residence by proximity to traffic-related pollution (within 100 m of highways). PM2.5 and traffic proximity were positively associated with CIMT progression. Adjusted coefficients were larger than crude associations, not sensitive to modelling specifications, and statistically significant for highway proximity while of borderline significance for PM2.5 (<math>P = 0.08</math>). Annual CIMT progression among those living within 100 m of a highway was accelerated (5.5 micrometers/yr [95%CI: 0.13-10.79; <math>p = 0.04</math>]) or more than twice the population mean progression. For PM2.5, coefficients were positive as well, reaching statistical significance in the socially disadvantaged; in subjects reporting lipid lowering treatment at baseline; among participants receiving on-trial treatments; and among the pool of four out of the five trials.</p>	<p>Volk HE, Hertz-Picciotto J, Delwiche L, Lurmann F, McConnell R. Residential Proximity to Freeways and Autism in the CHARGE Study. <i>Environmental Health Perspectives</i>. 2010. Epub Ahead of Print. <a href="http://www.ncbi.nlm.nih.gov/pubmed/21156395">http://www.ncbi.nlm.nih.gov/pubmed/21156395</a></p>	
Cardiovascular Disease	<p><b>Conclusions:</b> Consistent with cross-sectional findings and animal studies, this is the first study to report an association between exposure to air pollution and the progression of atherosclerosis – indicated with CIMT change – in humans. Ostensibly, our results suggest that air pollution may contribute to the acceleration of cardiovascular disease development – the main causes of morbidity and mortality in many countries. However, the heterogeneity of the volunteering populations across the five trials, the limited sample size within trials and other relevant subgroups, and the fact that some key findings reached statistical significance in subgroups rather than the sample precludes generalizations to the general population.</p>	<p>Künzli N, Jerrett M, Garcia-Esteban R, Basagaña X, Beckermann B, et al. (2010) Ambient Air Pollution and the Progression of Atherosclerosis in Adults. <i>PLoS ONE</i> 5(2): e9096. doi:10.1371/journal.pone.0009096</p>	<p><a href="http://archinte.jamanetwork.com/article.aspx?articleid=1108717">http://archinte.jamanetwork.com/article.aspx?articleid=1108717</a></p>
Childhood Asthma	<p>A study in Erie County, New York (excluding the city of Buffalo) found that children living in neighborhoods with heavy truck traffic within 200 meters of their homes had increased risks of asthma hospitalization. The study examined hospital admission for asthma amongst children ages 0-14, and residential proximity to roads with heavy traffic.</p>	<p>Lin, Munsie, Hwang, Fitzgerald, and Cayo. (2002). Childhood Asthma Hospitalization and Residential Exposure to State Route Traffic. <i>Environmental Research</i>, Section A, Vol. 88, pp. 73-81.</p>	
Childhood Asthma	<p>A study of nearly 10,000 children in England found that wheezing illness, including asthma, was more likely with increasing proximity of a child's home to main roads. The risk was greatest for children living within 90 meters of the road.</p>	<p>Venn et al. (2001) Living Near A Main Road and the Risk of Wheezing Illness in Children. <i>American Journal of Respiratory and Critical Care Medicine</i>, Vol. 164, pp 2177-2180.</p>	
Childhood Asthma	<p>A study of 1,068 Dutch children found that asthma, wheeze, cough, and runny nose were significantly more common in children living within 100 meters of freeways. Increasing density of truck traffic was also associated with significantly higher asthma levels - particularly in girls.</p>	<p>van Vliet et al. (1997). Motor exhaust and chronic respiratory symptoms in children living near freeways. <i>Environmental Research</i>, 74:112-132.</p>	
Childhood Asthma, Respiratory illnesses	<p>This cohort study found that two year old children who are exposed to higher levels of traffic-related air pollution are more likely to have self-reported respiratory illnesses, including wheezing, ear/nose/throat infections, and reporting of physician-diagnosed asthma, flu or serious cold.</p>	<p>Edwards, J., S. Walters, et al. (1994). Hospital admissions for asthma in preschool children: relationship to major roads in Birmingham, United Kingdom. <i>Archives of Environmental Health</i>, 49(4): 223-7.</p>	
Childhood Asthma, school proximity	<p>A European study determined that exposure to traffic-related air pollution, 'in particular diesel exhaust particles', may lead to reduced lung function in children living near major motorways.</p>	<p>Brauer et al. (2002). Air Pollution from Traffic and the Development of Respiratory Infections and Allergic and Allergic Symptoms in Children. <i>Am J Respiratory and Critical Care Medicine</i>, Vol. 166 pp 1092-1098.</p>	
Childhood Lung Development	<p>The most comprehensive study of urban toxic air pollution ever undertaken shows that motor vehicles and other mobile sources of air pollution are the predominant source of cancer-causing air pollutants in Southern California. Overall, the study showed that motor vehicles and other mobile sources accounted for about 90% of the cancer risk from toxic air pollution, most of which is from diesel soot (70% of the cancer risk). Industries and other stationary sources accounted for the remaining 10%. The study showed that the highest risk is in urban areas where there is heavy traffic and high concentrations of population and industry.</p>	<p>Speizer, F. E. and B. G. Ferris, Jr. (1973). Exposure to automobile exhaust. I. Prevalence of respiratory symptoms and disease. <i>Archives of Environmental Health</i>, 28(6): 313-8.</p>	
Motor vehicle emissions dominate cancer risk	<p>A 2000 Denver study showed that children living within 250 yards of streets or highways with 20,000 vehicles per day are six times more likely to develop all types of cancer and eight times more likely to get leukemia. The study looked at associations between traffic density, power lines, and all childhood cancers with measurements obtained in 1979 and 1990. It found a weak association from power lines, but a strong association with highways. It suggested that benzene pollution might be the cancer promoter causing the problem.</p>	<p>(1997). Motor vehicle exhaust and chronic respiratory symptoms in children living near freeways. <i>Environmental Research</i>, 74(2): 122-32.</p>	
Pediatric Cancers, Leukemia	<p>Researchers observed an approximately 10-20% increase in the risk of premature birth and low birth weight for infants born to women living near high traffic areas in Los Angeles County. In particular, the researchers found that for each one part per million increase in annual average carbon monoxide concentrations where the women lived, there was a 19% and 11% increase in risk for low birth weight and premature births, respectively.</p>	<p>Brunekeef B, Janssen NA, de Hartog J, Harssema H, Knape M, van Vliet P. (1997). "Air pollution from truck traffic and lung function in children living near motor-ways." <i>Epidemiology</i>, 8(3):298-303.</p>	
Premature Birth, Low weight babies	<p>South Coast Air Quality Management District, Multiple Air Toxics Exposure Study-II, March 2000.</p>	<p>Pearson et al. (2000). Distance-weighted traffic density in proximity to a home is a risk factor for leukemia and other childhood cancers. <i>Journal of Air and Waste Management Association</i> 50:175-180.</p>	

Premature Death	<p>Dutch researchers looked at the effects of long-term exposure to traffic-related air pollutants on 5,000 adults. They found that people who lived near a main road were almost twice as likely to die from heart or lung disease and 1.4 times as likely to die from any cause compared with those who lived in less-trafficked areas. Researchers say these results are similar to those seen in previous US studies on the effects of long-term exposure to traffic-related air pollution. The authors say traffic emissions contain many pollutants that might be responsible for the health risks, such as ultrafine particles, diesel soot, and nitrogen oxides, which have been linked to cardiovascular and respiratory problems.</p> <p>Studies conducted in the vicinity of Interstates 405 and 710 in Southern California found that the number of ultrafine particles in the air was approximately 25 times more concentrated near the freeways and that pollution levels gradually decrease back to normal (background) levels around 300 meters, or 980 feet, downwind from the freeway. The researchers note that motor vehicles are the most significant source of ultrafine particles, which have been linked to increases in mortality and morbidity. Recent research concludes that ultrafine particles are more toxic than larger particles with the same chemical composition. Moreover, the researchers found considerably higher concentrations of carbon monoxide pollution near the freeways.</p> <p>Freeway-related air pollution and its harmful health risks have been observed in recent research in the environmental-health sciences. In this study we investigate the impact of freeway and arterial-road air pollution on vulnerable populations—for example, the poor, minorities, children, and the elderly—whose housing options are limited. Because many mobile-source emissions decay rapidly with distance, approaching background concentrations at 330 ft from the freeway, populations living near limited access roads are most at risk from exposure. Furthermore, microscale air monitoring systems are rarely in place at these locations in the United States. In this research we will define freeway air-pollution sheds with the aid of a geographic information system analysis and determine populations that may be at risk from exposure to mobile-source pollutants in two West Coast metropolitan areas (Seattle and Portland). Finally, we discuss policy options, planning implications, and mitigation measures, including an assessment of air-quality monitoring needs and land-use prescriptions.</p>
Premature Death	<p>Hoek, Brunekreef, Goldbohn, Fischer, van den Brandt. (2002). Association between mortality and indicators of traffic-related air pollution in the Netherlands: a cohort study. <i>Lancet</i>, 360 (9341): 1203-9.</p> <p>Zhu, Hinds, Kim, Sioutas. Concentration and size distribution of ultrafine particles near a major highway. <i>Journal of the Air and Waste Management Association</i>, September 2002. Zhu, Hinds, Kim, Shen, Sioutas. Study of ultrafine particles near a major highway with heavy-duty diesel traffic. <i>Atmospheric Environment</i>, 36(2002), 4323-4335.</p>
Vulnerable populations	<p>Bae C-H C, Sandlin G, Bassok A, Kim S, 2007, "The exposure of disadvantaged populations in freeway air-pollution sheds: a case study of the Seattle and Portland regions" <i>Environment and Planning B: Planning and Design</i> 34(1) 154 – 170</p> <p><a href="http://www.envplan.com/abstract.cgi?id=b32124">http://www.envplan.com/abstract.cgi?id=b32124</a></p>