Monday, August 29, 2016 at 8:30:23 AM Pacific Daylight Time

Subject: NZO Committee Meeting - SLRI Initiative
Date: Monday, August 29, 2016 at 8:27:51 AM Pacific Daylight Time
From: Peikert, Detlev H.
To: Ben Werner
CC: Detlev Peikert User
Attachments: image001.png, image002.png, image003.png, image004.png

Dear NZO Committee Members:

I'm writing in support of the SLRI initiative to create an ordinance that would facilitate experimental sustainable, human centered ecological design.

As a practicing architect I see a real need for an ordinance that allows and incentivizes projects, on a case by case basis, that demonstrate innovative design with measurable reductions of environmental impacts. It's a way for the City of Santa Barbara to make real progress in solving problems like our housing crisis, without damaging the environment by promoting the efficient use of resources and the overall goal of making the City more sustainable for future generations.

I see by reading the staff report that there are a number of obstacles to implementing the SLRI initiative. Given the importance of these ideas, I suggest that an ad hoc committee consisting of City staff, SLRI and professional members of the public be formed to work together to find ways to overcome the obstacles to implementation. I would be more than happy to volunteer my time to serve on such a committee.

Given the strong public support for this initiative, I'm hopeful that a way forward can be found and supported by your committee.

Sincerely,

Detlev Peikert, AIA

rrm design group

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August 29, 2016

New Zoning Ordinance Joint Committee
City of Santa Barbara
630 Garden Street
Santa Barbara, CA 93101

Re: Electric Vehicle Charging Station Requirements for Non-Residential Developments

New Zoning Ordinance Joint Committee Members,

Community Environmental Council is concerned that proposed changes for parking requirements in the City of Santa Barbara's New Zoning Ordinance (NZO) do not include rules for Electric Vehicle Charging Stations (EVCS).

The range of electric vehicles continues to increase as new advances in battery technology are made and electric vehicles become more affordable with each passing year. Consequently, there is increasing consumer interest and acceptance of plug-in electric vehicles. The 400,000-plus pre-orders for the Tesla Model 3 are a clear indicator of this growing demand for electric vehicles. By 2025, it is projected that nearly 15% of all new car sales in California will be plug-in electric vehicles.

More electric vehicles on our roads will increase the demand for publicly accessible electric vehicle charging. To prepare for this rise in demand, it is important that the City of Santa Barbara adopt codes and ordinances to ensure that future development will provide adequate access to electric vehicle charging stations

Many jurisdictions in California have already established such requirements. The City of Santa Monica's recently adopted zoning ordinance includes specific requirements for EVCSs. New non-residential developments in Santa Monica must provide one EVCS for every 24-49 parking spaces and two new EVCSs for every 50-99 parking spaces, with one additional EVCS for each additional 50 spaces.

Many municipalities are also requiring the installation of EVCS pre-wiring in new or substantially remodeled commercial and residential structures. CalGreen currently requires that 3% of spots in lots with 51+ spaces include pre-wiring for EVCS. However, the agency recently proposed a new rule that would require EVCS pre-wiring for 6% of parking spots, regardless of number of spaces.

We encourage the City of Santa Barbara to implement local requirements that mandate pre-wiring for EVCSs in new construction and in major remodeling. Ratios of EVCS pre-wiring "stub-outs" recommended in the forthcoming Central Coast Alternative Fuels Readiness Plan are included in the table below.

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TABLE 1: Pre-wiring Recommendations

BUILDING TYPE	% of PARKING SPACES
Multi-household residential	10% (1 min.)
Lodging	3% (1 min.)
Retail, eating and drinking establishment	1%
Office, medical	3% (1 min.)
Industrial	1%
Institutional, Municipal	3% (1 min.)
Recreational/Entertainment/Cultural	1%

Community Environmental Council also suggests that staff review updated accessibility requirements for EVCS in the updated California Building Code, which will take effect on January 1st, 2017. A table specifying the new accessibility requirements is included below:

TABLE 2: California Building Code Accessibility Requirements for EVCSs

Total number of EVCS at facility	Minimum number (by type) of EVCS required to comply with Section 11B-812 of the California Building Code		
	Van accessible	Standard accessible	Ambulatory
1 to 4	1	0	0
5 to 25	1*	1	0
26 to 50	1*	1*	1
51 to 75	1*	2*	2
76 to 100	1*	3*	3
101 and over	1, plus 1 over 300, or fraction thereof, over 100*	3, plus 1 over 60, or fraction thereof, over 100*	3, plus 1 over 50, or fraction thereof, over 100

* Must be designated as handicap parking space and comply with ADA requirements

Replacing conventional fossil-fuel powered automobiles with cleaner, more sustainable electric vehicles is essential to achieving state and local climate change goals. Incorporating progressive requirements for EVCS and pre-wiring at new non-residential developments into the NZO will help ensure that our City is doing its part to reduce greenhouse gas emissions, while also helping our community prepare for more electric vehicles on our roads.

Sincerely,

Cameron Gray
Energy Program Associate

Cc: Marck Aguilar, Project Planner, City of Santa Barbara – Community Development Dept.

Suggested Changes to Bring the NZO into conformance with the General Plan Sustainability and affordability policies

And set the stage for innovation to enable Santa Barbara to come out on top in the new world of water and resource management

Art Ludwig Aug 28th 2016

General Objective: Add regulatory tools to toolkit to enable state of the art innovative deep green buildings that best advance General Plan sustainability and affordability goals to be permitted (with the current, 1957-issue regulatory toolkit it is impossible to permit the best of such projects).

Specific requests:

1) **Please support staff to include every sustainability tool they can manage in the current work product**. This will reduce the embarrassment of having the GP policy and ZO implementation pulling in opposite directions.

2) Please support staff to do a follow-on work product for any key tools from #1 which were not able to make it into the current NZO revision.

3) **Include in this a mechanism that can account for actual quantitative project impacts**. This would not need to be applied to the middle 90% of projects, only the best and worst. This would:

a) provide a way for the city to protect itself from the worst few percent of projects. There is currently no way to reign in projects that game the system by checking all the boxes but externalize outsized costs onto society, such as those projects which abuse the AUD program by offering the least in benefit and the most in external costs.

b) enable the city to identify and facilitate the permitting of the few percent of projects that best advance general plan sustainability and affordability goals. These help with challenge of how to improve affordability and also quality of life citywide.

A specific test case for permitting a project that maximizes General Plan goals: After 35 years of R&D in conjunction with dozens of experts in the regulatory world and ecological building innovation, I have the technical capacity to build housing that I believe could have the best actual sustainability and long term affordability metrics of anything ever permitted in Santa Barbara. (I realize this is a big claim; I am available to answer questions and back it up. Larry Fay, our Director of Environmental Health, and Bill Kelley, the chief building official of Marin County are familiar with my work.)

We just bought a 720 ft2 house on an R3 lot at 627 W Ortega. It has approved plans for a ginormous duplex to fill the entire buildable envelope. Rather than do the easy thing—we could have this built and sold within the year—we would prefer to do the most challenging and rewarding project imaginable: build two tiny (footprint= 150-200 ft2) charming, high performance adobe garden cottage units to rent to people who don't own cars, with the rest of the lot garden/ habitat/ stormwater infiltration. The overall performance for General Plan objectives would top the charts; climate safe, low water use, low parking demand, low VMT, infiltration of 90% of the stormwater from an area 2x as big as our lot, a public bike tire pump up station and car-free living info kiosk, etc. etc.

This would offer permanent, inherent affordability without the usual downsides of density. While this vision would fulfill the objective of the GP and codes to the highest possible degree, it runs counter to the letter of the code on countless details large and small. The graphs that follow from my keynote presentation at the 2012 CBOAC give examples of quantitative performance metrics that the permitting process could take into account.

Graph explanations—

Deep Green VS. Standard development space utilization

Plan A—1 full parking space added to street by canceling driveway. No cars for the household whatsoever. *If Santa Barbara ever figures out that it would be much nicer with far fewer cars and streets that are convivial for walking and biking, this is what we'd like to do. Not proposed at this time.*
House cars: 0
On site car footprint: 0 ft2/ 0%
Off site net car footprint: -1 (one new parking space added to street, no parking spaces used)

Plan B—Make spaces for parking, but in the context of optimizing every aspect of land use: Three spots for shared cars, one tandem. (tandem parking doesn't matter if cars are shared and you have just as much right/ access to take the first car as the second).
House cars: 2 or 3 shared
On site car footprint: 300 ft2/ 5%
Off site net car footprint: -1 (assuming the average house uses the on street space in front of it and we don't through parking demand management and house culture)

Plan F—If we fail to convince the city that the city's goals and policies matter more than the letter of the rules, and end up having to sell this site to someone who will develop it conventionally. Three spots on site, no tandem parking. Extra cars on street.
House cars: 6 private (if culture not changed and each of three units is inhabited by two adults, each with a private car).
On site car footprint: 1200 ft2/ 25%
Off site net car footprint: +3 cars added.

Plan Z—Actual approved plans for this site that come with the house; two 3 bed duplexes, each with a two car garage. Easy approval, and ... almost the worst possible outcome on every high level policy objective other than Parking.
Blocks half the neighbors sun, high climate impact, high concrete, a bit over half the landscape area, much higher runoff, much worse runoff quality, much less connection to outdoors, higher energy use, less passive solar heating, much more landfill, starting with entire previous house, garage, landscape, mature fruit trees, and ending with almost the entire non-recyclable structure...etc. etc.

Total house cars: 4-6 private (if culture not changed and each bedroom has an adult, each with a car).
On site car footprint Paving + garage = car footprint: 2316 ft2/ 41% of lot area (!)Garage 986 ft2 or 30% of floor space(!!)
Off site net car footprint: +0 or 2 cars added.

Materials use

Pounds of materials used; LOG SCALE, high impact materials on Left, low impact materials on Right.

Safety

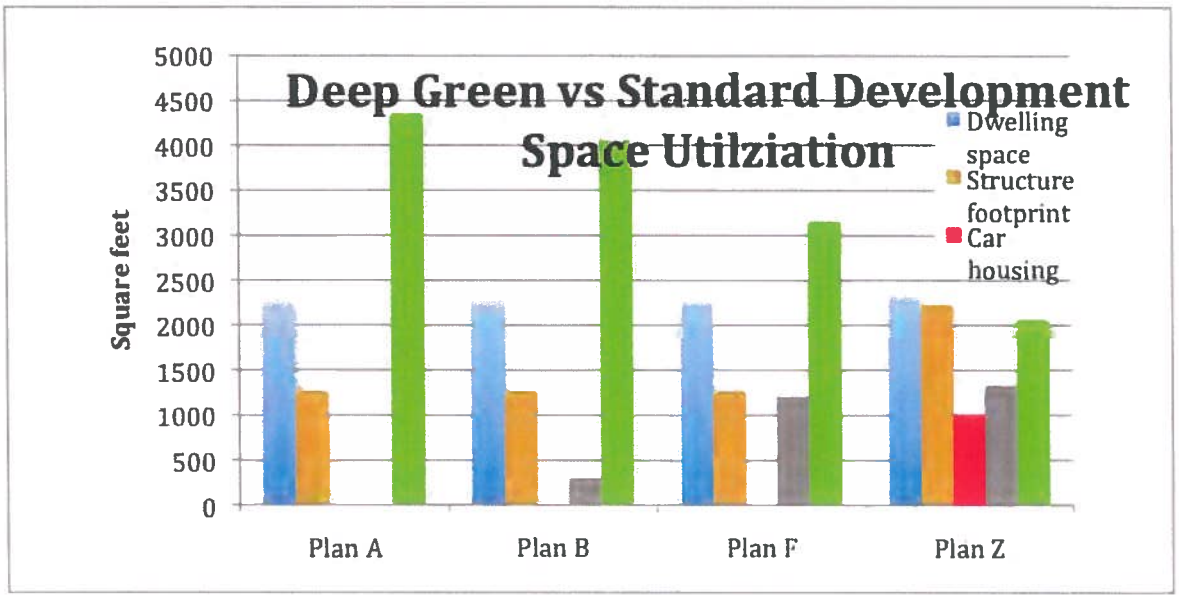
Estimated deaths per million people per year. For assumptions and calculations see http://oasisdesign.net/design/legalizesustainability/#safer

[Reverse side] Water Budget, Water Commons effects, Climate effects

House water budget without/ with best practices.

Net water balance with water commons; sum of withdrawls and additions.

Net carbon balance.



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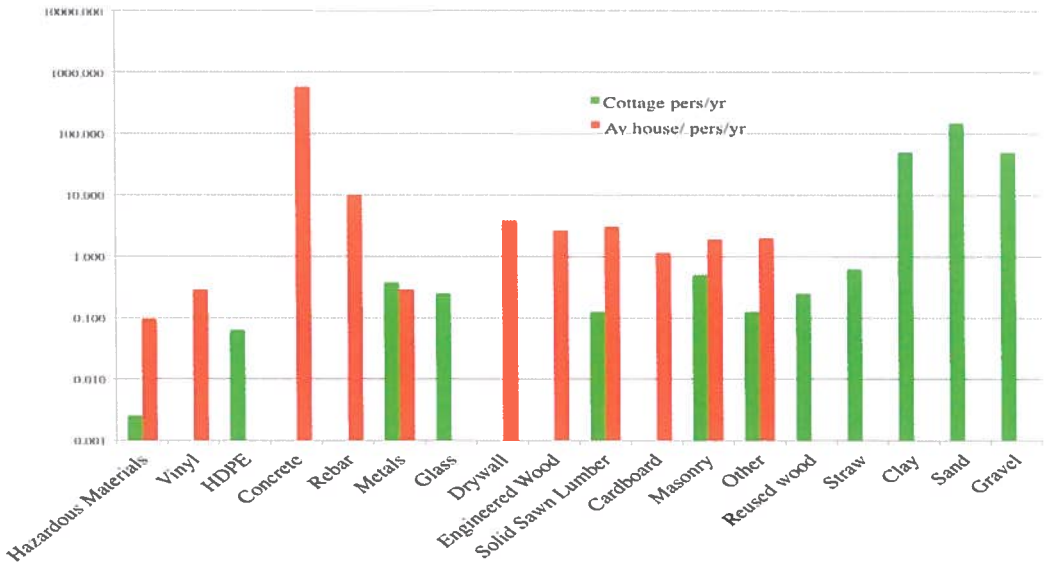

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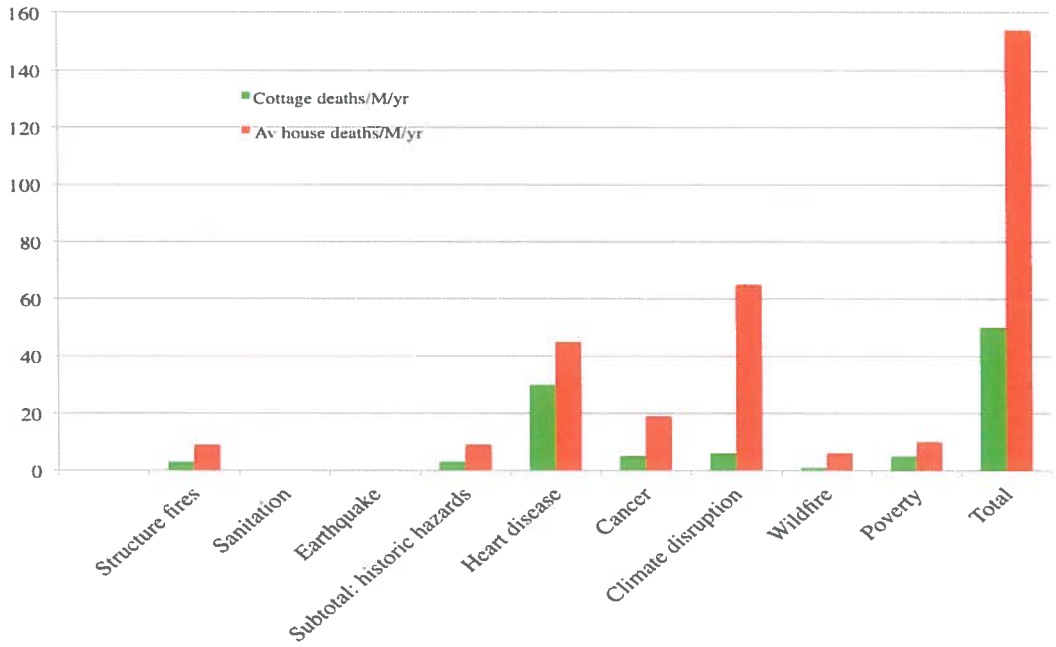

Residential water budget graphs,
before and after water makeover.