

Cities21



Cities21 Comments re Redwood City General Plan Update (July 27, 2009 Genl Plan draft version)

Introduction

1. The large new Saltworks development on very sensitive waterfront land should only be approved if the development provides major new national benefit. Understanding that Peninsula smart growth and transit oriented development is ineffective because it results in auto-centered growth, the General Plan should adopt an appropriate new Guiding Principle: "Understanding that Peninsula smart growth best practices are ineffective, pioneer major new smart growth innovations to reduce driving by 50% per capita per each of {new residents, new workers, and existing east-of-101 workers} to meet AB32 and SB375 SCS."

Smart growth TOD doesn't work well enough in Redwood City, Palo Alto, Mountain View, etc. Peninsula Caltrain TOD dramatically underperforms compared to East Bay BART TOD. Mixed use South Bay TOD housing is so desirable that high driving commuters "crowd out" green commuters in the battle to reside next to Caltrain. Per "Travel Characteristics of TOD in California" (Caltrans funded research authored by Lund, Cervero, and Willson), residential TOD by East Bay BART stations produces 40% transit commute mode share (and 50% auto share). Residential TOD by South Bay Caltrain commuter rail stations produces only 17% transit mode share (and 80% auto share). Thus, South Bay TOD, while outperforming adjacent non-TOD (5% or less transit mode share), is still very auto-centered. Hence we need to improve upon smart growth for suburbs via new innovations. The "Travel Characteristics" study found that suburban VTA LRT TOD was substantially less effective than Caltrain TOD. According to Congress for New Urbanism founder Peter Calthorpe, LRT TOD is "TOD without the T."

2. Kudos for including story-format "optimistic perspectives" in the introduction. These help to convey the complexities of the general plan in a readable format. Peter Schwartz (author: Art of the Long View) explains that 80% of U.S. high school students are pessimistic about the future. If we don't change this pessimism into optimism, then the bleak future will be a self-fulfilling prophecy. Schwartz's advice was to develop inspirational scenarios for the future to combat this pessimism. Rand's Martin Wachs argues that there are challenges with explaining complex transportation / land use / urban design sustainability policies. "Societies do not do well with complexity. We need to find a way of reducing our discussion to manageable components, just as we need to find ways of enacting policies through manageable steps and workable components." Story-form visions targeted for a broad audience provide a way for non-experts to digest a series of interrelated, complex policies where a typical dry General Plan fails.

Please consider modifying the perspectives to encompass a more aggressive vision for sustainability. One of the outputs from the U.S. Environmental Protection Agency's "Transforming Office Parks into Transit Villages" study is a story-format vision for more aggressive 2020 Peninsula sustainability.

ABSTRACT: A "story-format" roadmap is provided to reduce per-capita energy consumption by 50%. The roadmap provides an integrated vision combining: multimodal transit, ridesharing, demand management, land use, market forces, policy, technology, and paradigm re-thinking. Changing away from an auto-centered, petroleum-based lifestyle represents a lifestyle change, but not a sacrifice.

Web and GPS cell phones help create a "comprehensive new mobility" system to make green transportation seamless and hassle-free. "Paid smart parking" reduces solo commuting by 25%. "Low Miles residential communities" foster green culture, where residents help each other to reduce carbon dioxide. This

green culture is created using the same powerful sociological marketing principles that drive consumer society. Housing preference policies are used to select new residents who will travel less and use green transportation. Two-car families sell one car. As the real-estate gradually changes, asphalt-dominated superblocks are transformed into walkable, New Urbanist locales. Walking, biking, electric scooters, and Personal Rapid Transit enable more than 50% of trips (commute, errands, recreation, etc.) to be made without driving alone. Cities can be transformed into huge transit villages of two square miles or more. Through this simple step-by-step plan, you'll save money, shed pounds, meet neighbors, hang out in more lively places, and pay lower taxes.

Full paper: http://www.cities21.org/TRB_Efficient_Edge_Cities_4.pdf.

3. The Sustainability subsection of the Introduction should include aggressive, quantified goals. Given AB32 and SB375 SCS, the time for empty rhetoric is past.

Housing Element

1. Regarding the subsection "1999-2006 RHNA," ABAG's requests for very low income, low income, and moderate income go far beyond typical inclusionary zoning. In addition, the ability to finance subsidized affordable housing in CA is at an all-time low as the credit markets have not yet recovered. In order to increase affordable housing production, please consider:

1A) SPUR's (The San Francisco Planning and Urban Research Institute) Affordable by Design report explains one strategy to develop a higher percentage of affordable housing – without public subsidy. SPUR's vision is for 5-story, 65' tall, wood-frame construction over podium parking. For San Francisco, the ambitious plan is to split the DUs (dwelling units) as follows: 60% market rate, 40% moderate affordable at 133% or 150% of area median income (AMI). This is a re-definition of "moderate" to a pricier level than the traditional 120% AMI moderate definition, but it is also more realistic. The vision is for 800 square foot (sf) two-bedroom for-sale condos as workforce housing, priced at \$450,000. Vigorous residential car trip reduction is a key part of making the economics work – less parking really matters. 5-story wood-frame construction requires fire code modification, as undertaken by San Diego and Seattle. SPUR also argues that maximum density zoning should be modified to encourage more, smaller DUs.

1B) In San Francisco, tiny new 250 square foot condos selling for \$279,000 have 100% affordable DUs. See: <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2008/08/24/BUTM12GQMI.DTL>

2. Because of the importance of AB32, SB375 SCS and sustainability, please consider adding a new subsection to the Housing Element:

Section title: Carbon Reducing Housing Preference

For new apartments and condos, Carbon Reducing Housing Preference (CRHP) selects residents with fewer cars who will drive less. CRHP is the most cost-effective residential auto trip reduction policy in suburbia and results in the largest commute mode shift change away from solo commuting. Palo Alto pioneered CRHP for the nation, via first application at Stanford West Apartments. Commute driving at Stanford West is a tiny fraction of the average Palo Alto resident. CRHP saves 3 tons of CO2 per home per year. Redwood City has recently pioneered this policy for the 800-condo market rate Peninsula Park project. Peninsula Park has one scheme of four preference tiers under consideration:

- Households that have no adult members who commute.
- Incoming households where all employed adults agree to commute to work via commute alternatives 80% of the time.
- Incoming households where one employed adult agrees to commute to work via commute alternatives 80% of the time.
- Incoming households with one adult member with a 4.0 mile or shorter commute.

Such climate protecting discrimination is legal under the Fair Housing Act. Details:
<http://www.cities21.org/workerHsng.htm>

Built Environment: Circulation

1. Within the Public Transit Section, under Bus and Shuttle Transit, then under Streetcar, the "pro-streetcar" statements in this section are not accurate. Please add more "balance" to this section. Here are some facts:

Typical streetcars provide an average speed of 7-12 mph for local-stop service (6.5 mph from a separate analysis) - jogging speed. Streetcars are further slowed by long waiting. Headways are 13 minutes during peak hour in Portland. Streetcar speed is often exceeded by ordinary local-stop bus services. One clear speed-and-reliability benefit of the bus is intrinsic to the technology: Buses have the physical ability to go around obstructions that occur in their lane, while the streetcar is stuck behind them. (see: <http://www.humantransit.org/2009/07/streetcars-an-inconvenient-truth.html> , http://web.cecs.pdx.edu/~monserec/courses/urbantrans/projects/9A_presentation_2007.ppt , http://portlandtransport.com/archives/2005/07/how_fast_is_tha.html).

It is unsettling to see a "city planning leap of faith" ("a desire named streetcar") being made to argue that 79,000-population suburban Redwood City will have the same streetcar experience as 537,000-population urban Portland. Like San Francisco, Portland is a major transit-served urban center with many downtown jobs. In contrast, Redwood City is 27 miles from both downtown San Jose and San Francisco. It would seem more analogous to consider the experience of Peninsula suburban VTA light rail as the predictor for Redwood City streetcar experience. VTA light rail has the nation's worst financial performance, with fare box receipts covering less than 14% of operating costs. VTA light rail provides only 1/3 the ridership per system mile as does Portland MAX light rail, another good indication that Redwood City isn't Portland. VTA LRT-served Santa Clara County transit commute mode split is only 5%, again indicating the great challenge with attracting peninsula residents/workers to jogging-speed transit. (See: http://en.wikipedia.org/wiki/Santa_Clara_Valley_Transportation_Authority , <http://21stcenturyurbansolutions.wordpress.com/2009/07/27/bay-area-transit-efficiency-how-bart-caltrain-vta-light-rail-and-muni-metro-stack-up/> , MTC/RIDES 2005 Commute Profile: http://www.mtc.ca.gov/library/commute_profile/commuteprofile_2005.pdf)

2. Please consider adding a PRT section to the Public Transit Section, under Bus and Shuttle Transit

PRT (personal rapid transit) is an electric, 100-mpg-equivalent, elevated transit system with many four-person vehicles. First deployments are scheduled for a) London Heathrow Airport in Spring 2010, to serve Heathrow's new Terminal 5 and b) Masdar ecocity. Working as circulator transit for office parks, airports, universities, and other major activity centers, PRT is faster than a car. In these applications, PRT makes carpooling, Caltrain, samTrans bus, and HSR more effective, by solving the "last mile problem." PRT also enables longer bike commutes and shopping trips. A three-minute animation of ULtra PRT: <http://www.ultraprt.com/>. Peer-reviewed market research for two other Bay Area transit-served major job centers, Palo Alto's Stanford Research Park (SRP) and Pleasanton's Hacienda Business Park, forecasts a PRT-induced commuting mode reduction from more than 80% single occupancy vehicle (SOV) down to 45% SOV. In these two studies, carpooling increased to more than 30% and Caltrain transit increased beyond 15%. PRT systems are being actively pursued for San Jose Airport, Santa Cruz, Alameda Point, and Virginia.

"All the advantages of New Urbanism - its compact land saving density, its walkable mix of uses, and its integrated range of housing opportunities - would be supported and amplified by a circulation system that offers fundamentally different choices in mobility and access. Smart Growth and new Urbanism have begun the work of redefining America's twenty-first century development paradigms. Now it is time to redefine the circulation armature that supports them. It is short sighted to think that significant changes in land-use and regional structure can be realized without fundamentally reordering our circulation system. We've been developing TOD without the T for far too long. PRT is the T." - Peter Calthorpe, co-founder, Congress for New Urbanism.

The PRT system should be part of the SamTrans/Caltrain transit system, with seamless fare box/fare gate integration.

PRT Benefits for Redwood City:

- For the Saltworks project to capture the imagination of Redwood City Council and voters (and to avoid the slings of FORC and Save The Bay), the project will surely need to be exceedingly green and truly unique. PRT may be the easiest way to bring this about. Given state law AB32 and the SB375 Sustainable Communities Strategy, it can be argued that all new residential development in Redwood City should generate one-half of the annual per capita miles of driving by existing residents. PRT may be the most cost-effective tool to reduce per capita automobile driving. For South Bay transit-oriented housing right next to a mixed-use Caltrain station, transit commute mode share is only 17%. These places are still "auto-centered." For Saltworks, because of large wait times, slow journey times, the conventional transit "transfer penalty," shuttle buses or conventional rail transit from Saltworks should be expected to generate a low transit commute mode share.
- From the RC Saltworks web: *"Our goal is to make the Saltworks a **showcase of environmental protection**. Currently, more than 40,000 out-of-town commuters drive into Redwood City to work every day. Many of these commuters drive from two or more counties away adding significantly to traffic congestion on freeways and bridges. A major goal of the 50/50 Plan is to get many of these commuters off the roads and out of their cars by providing them with a local place to live. Planning experts say this will dramatically reduce traffic and greenhouse gas emissions from cars."*
- Pleasant, fast, car-free travel from homes to downtown Redwood City restaurants and night life. No searching for parking on busy evenings. Encourages residents to spend their money downtown.
- Provides more residents with easy, fast access to the Saltworks sports fields, parks, and natural spaces.
- Maximizes Redwood City Caltrain ridership. Should Caltrain be electrified, PRT complements this increased service level. Should Redwood City "win" a HSR station, PRT will maximize HSR ridership. Should the Dumbarton Rail project proceed, PRT will maximize Dumbarton Rail ridership. Increases ridership on many samTrans buses serving Redwood City: 271, 274, ..., 397 plus express buses. Enables "half-bike, half-PRT trips."
- PRT is naturally built in phases and can grow and adapt to match the changes in Redwood City as the Downtown Precise Plan, Stanford expansion, and Saltworks projects unfold over the next 25 years. No other transportation technology can flexibly grow with Redwood City.
- Allows for a reduced number of parking spaces, saving Stanford and Saltworks \$50,000 per structured parking space saved. Allows for shared parking between offices and residential development, as these two uses are countercyclical. Saving on expensive parking spaces improves the attractiveness of Redwood City real-estate and increases opportunities to develop affordable housing for teachers, nurses, police, and firefighters.
- 120 years ago, electric rail transit was a brand new technology, providing faster, better, and cheaper local transit than the alternatives. Starting in 1888, electric rail transit changed the way cities were built. By 1905, the East Bay's Key System was the world's largest system. Likewise, PRT is a brand new technology, providing faster, better, and cheaper transit than current alternatives. Conventional local transit serves narrow strips at a slow pace. Non-stop, faster-than-a-car PRT serves two-dimensional areas. Cities are two-dimensional areas, not narrow strips. A PRT system can put 45,000 Redwood City residents and workers within a 300 meter walk of a PRT station; conventional local transit will serve only a small fraction of that many people. At the Congress for New Urbanism 2005 Conference, Peter Calthorpe said, *"One of my pet peeves is that we've been dealing with 19th Century transit technology. We can do better. We can have ultra light elevated transit systems with lightweight vehicles. Because the vehicles are lighter, the system will use less energy. If you think about what you'd want from the ideal transit technology, it's PRT: a) stations right where you are, within walking distance, b) no waiting."*
- Highways such as Highway 101 tend to split cities in half, whereas PRT will narrow the distance between the west and east sides of Redwood City.

PRT is faster than a car from Pacific Shores to downtown Caltrain station (3.5 miles):

- PRT: 8 minutes
- Driving in light traffic: 12 minutes measured 1PM, Thurs August 27, 2009. Google Maps yields 9 minutes.
- Driving in heavy traffic: 18 minutes

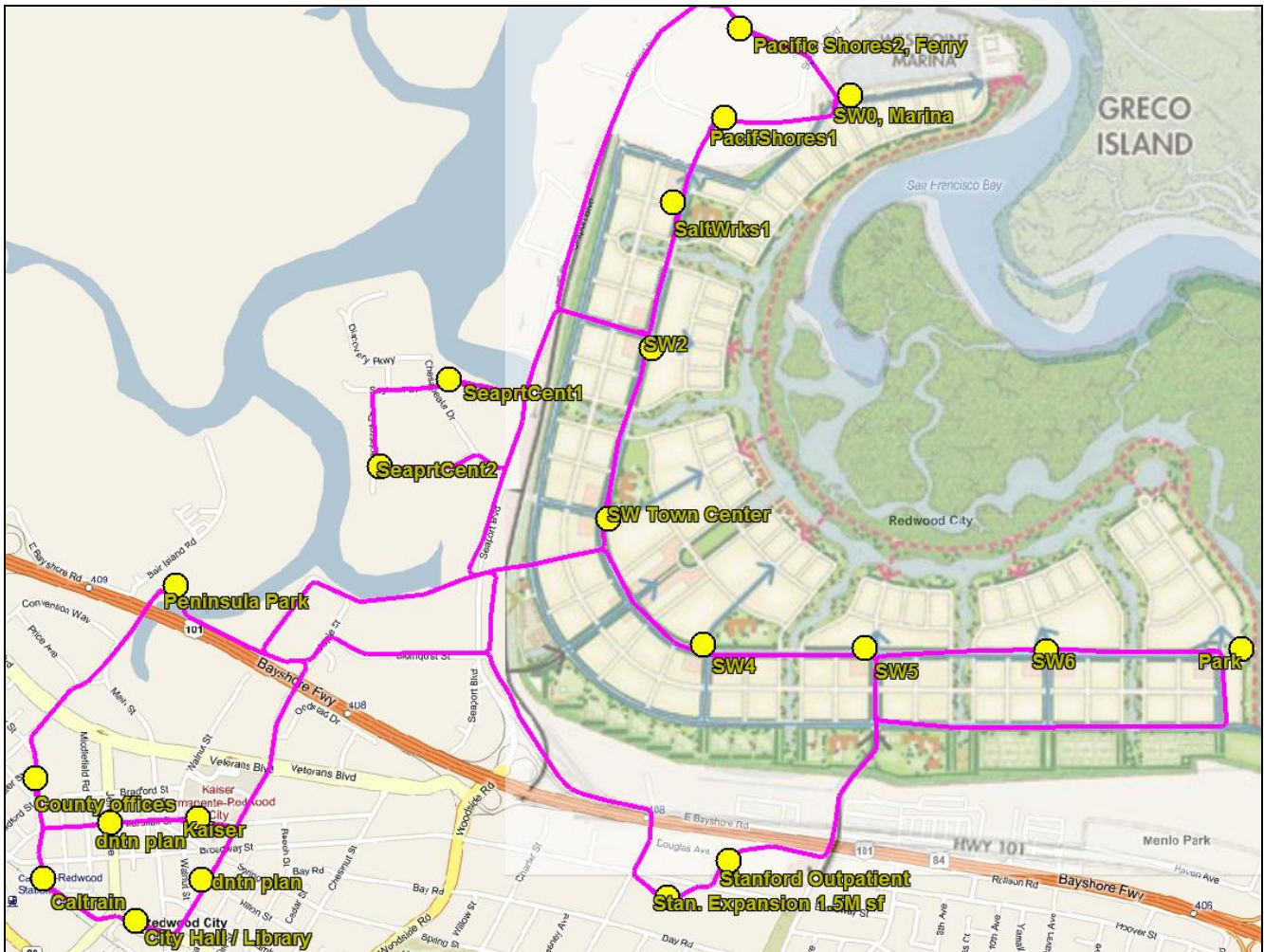
- Streetcar: 36 minutes (6.5 min average wait at Pac Shores, 13.8 min 2.3 mi trip @ 8 min/per mile, 6.5 min average wait at Broadway/Chestnut, 9.6 min 1.2 mi trip @ 8 min/per mile to Caltrain)

PRT is faster than a car from Stanford Outpatient (450 Broadway) to downtown Caltrain station (3.0 miles):

- PRT trip: 30 second wait plus 4 minute trip time: 4:30 trip time.
- Google maps driving time (with no traffic): 7 minutes. Heavy traffic will double this trip time to 14 minutes.
- Shuttle bus with lots of stops and light traffic: 5 minute average wait (with 10 minute headways) + 14 minutes drive time = 19 minutes
- Streetcar trip: 30.5 minutes: 6.5 minute wait (with 13 minute headways) + 24 minute streetcar trip (3.0 miles @ 8 minutes per mile)

Some early RC PRT alignment sketches with cost estimates can be found at:

<http://www.ultraprt.com/redwoodcityPRT.htm> , such as:



3. For the Transportation Demand Management Section, TROs and traditional major employer TDM have not been shown to be effective for suburban job centers such as Seaport Center and Pacific Shores. Given AB32, please consider taking a more innovative approach by introducing parking charges at such workplaces. MTC claims that this is the “holy grail of trip reduction.” Charges can result in 23% VMT reduction. There is a complicated way to pioneer parking charges in a manner that is revenue-neutral (or even positive) to major employers and that won’t cause a political uprising:

TITLE: \$2 Daily Workplace Parking Charge + \$4 Cashout

ABSTRACT: This driving reduction pricing policy offers the same large VMT/CO2 reduction as a \$6 per gallon gas tax increase (or changing workplace parking from free to \$6 per day), without causing a popular uprising.

Past efforts to convert free workplace parking to charged or cashout have not flourished. This new scheme begins with \$0.25/day charge and \$1/day cashout. Charges/cashout increase over time to \$2/\$4 as other companies adopt the scheme, addressing the previous recruiting/retention objection. Trust-based, self-reporting enables very low-cost implementation, addressing the previous cost objection. The scheme is marketed to workers as a climate-protecting measure. Potential U.S. commute VMT savings is 23%, reducing 51.7M tons CO2/year. Compared to past efforts, this scheme uses a) collective, phased action to overcome the Tragedy of the Commons, b) simultaneous charge and cashout, c) trust-based reporting, and d) monetization of saved parking spaces. A company that voluntarily implements this scheme risks productivity-reducing internal employee strife between climate protectors and climate skeptics. To address this objection, a "least-worse alternative" state-level meta-strategy is proposed.

This policy research is informed by behavioral psychologists, listserv sounding boards including transp-tdm, and advocacy to nine large Silicon Valley employers. A web-based employee survey was developed to understand qualitative issues associated with the scheme. The survey presented the scheme as a policy debate, with pros and cons, asking respondents for short essay responses. The 55 responses: a) identified special cases in need of clarification and b) provided colorful and useful comments from the extreme ends of the response spectrum.

Full paper: http://www.cities21.org/TRB_Paid_Parking2.pdf

4. Please consider adding a Peak Oil Plan section because there is a significant chance of a sharp, substantial increase in gas prices by 2030. Such a price rise will hit low-income communities especially hard.

For an overview of Peak Oil, please see: http://en.wikipedia.org/wiki/Peak_oil
Berkeley's Peak oil resolution: <http://postcarboncities.net/node/2194>

RC should prepare a "quick implementation disaster plan" to increase SOV alternatives in the case of a rapid increase in gas prices. RC should develop and prioritize the Top 20 actions to during a Peak Oil induced gas price shock, and train staff and partners to implement the plan. Potential emergency solutions include: increased ridesharing, increased telecommuting, compressed work weeks, "ecodriving," and reduced highway speed limits.

In the UK, Robert Noland has conducted research on immediate steps to take during an oil supply emergency. The RC Peak Oil plan should review this and other research. An executive summary of the research can be found at: <http://www.iea.org/textbase/npsum/SavingOilSUM.pdf>. The study includes recommendations such as:

- * Policies to increase ridesharing
- * Driving ban to prohibit individuals from driving every other day, based on odd/even licence plate scheme.
- * Encourage telecommuting and prepare by ensuring sufficient residential internet bandwidth
- * Compress the work week (fewer but longer workdays)
- * "Ecodriving" - (teach more efficient driving styles)
- * Reduce highway speed limit to 50 mph

To add to this UK research, basic solutions such as increasing biking and walking should be added.