

Communities By Design, a
nonprofit 501c(3) training and education
organization, in cooperation with the
City of Redwood City,
is pleased to present:

The Forum *at Redwood City*

A CONTINUING CONVERSATION ON CITY DESIGN



GREEN MOBILITY :

Ten Easy Steps to Ease Congestion, Earn Money, and Solve Global Climate Change

2008-09 SEASON: FORUM #5
THURSDAY, FEBRUARY 5, 2009
LITTLE FOX THEATER
2209 BROADWAY
REDWOOD CITY
6:00 P.M. - 7:45 P.M.

On February 5, 2009, the City of Redwood City and the nonprofit "Communities by Design" held the fifth presentation of the 2008-2009 Forum season. **Jeffrey Tumlin**, Principal and Multimodal/Transit Oriented Development Practice Leader at Nelson\Nygaard in San Francisco, discussed ten easy steps to ease congestion, earn money, and solve global climate change in his presentation on "Green Mobility."

Mr. Tumlin began his talk by explaining how transportation should support individual and collective goals by striking a balance between mobility and accessibility transportation objectives. He claimed that streets should serve functions beyond mobility considering they average one-third of the land area in cities and are more used for recreation than park systems. With transportation emissions alone contributing to 40-50% of our carbon dioxide (CO₂) emissions, Mr. Tumlin made the case that our transportation decisions have serious implications on our efforts to curb global warming. He described ten steps that could make a significant impact in reducing CO₂ emissions and achieving green mobility.

Ten steps to green mobility:

1. Measure what matters
2. Make CEQA work
3. Levy impact fees
4. Fix the models
5. Manage travel demand
6. Price it right
7. Manage and price parking
8. Recreate the grid
9. Prioritize non-motorized travel
10. Make public transit work

Step 1 – Measure what Matters

Conventional transportation planning does not promote a balanced transportation system. Some of the shortcomings of the traditional, engineer-driven measures include failing to assess the overall transportation network, creating a vehicular bias that reduces total transportation efficiency and effectiveness, optimizing transportation for cars while worsening street performance for transit, and lacking a mechanism to balance competing modes.

Rather than using mobility-focused performance measures like vehicle level of service (LOS), which measures efficiency from the point of view of the vehicle, Mr. Tumlin proposed taking into consideration broader, more humanistic measures, including the transportation system's role in fostering economic development, quality of life, social justice, and ecological sustainability. These measures of the three "E's" (economy, environment and equity) have been applied by the Bay Area Metropolitan Transportation Commission and the Cities of Seattle, WA and Santa Monica, CA. Another more important measure for the motorist is standard deviation from average speed. Mr.

Mr. Tumlin recommends that we eliminate vehicle delay as a measure and instead look at person delay. Also, per capita vehicle miles travelled (VMT) is a much more appropriate measurement than total VMT.

"A person driving alone in an SUV – as measured in LOS – is 40 times more important than a person riding a bus."

-Jeffrey Tumlin

Step 2 – Make CEQA Work for Environmental Quality

The California Environmental Quality Act (CEQA) guidelines force planning to be done for the worst-case scenario in terms of impact to the environment, and the worst case scenario for development under CEQA is development in downtowns. Rather than promoting infill development, CEQA conventions encourage reduced project density and in effect increase

"CEQA is the greatest single obstacle to smart growth and the greatest single promoter of sprawl."

-Jeffrey Tumlin

trip rates per capita. According to Mr. Tumlin, CEQA not a planning tool – it is a legal disclosure document – and it should be reformed to encourage rather than discourage transit supported development.

Step 3 – Levy Appropriate Impact Fees

While impact fees are powerful tools for encouraging good development and supporting smart growth improvements, if levied inappropriately they can support more auto-dependent growth. Appropriate impact fees should discourage vehicle trips and create mode shifts so transportation demand can be created in a more sustainable way.

Step 4 - Fix the Travel Demand Models

In conventional four-step travel demand modeling, routes are assigned based on trip distribution. Trip distribution is a function of mode choice, and mode choice is dependent on trip generation. The conventional four-step travel demand modeling system is problematic because it often excludes non-motorized modes, does not account for population or employment density, misses variables that may influence travel decisions, and does not account for the primary

"We don't need Manhattan-style density to have an enormous impact on our CO₂ emissions."

-Jeffrey Tumlin

causes of congestion. Mr. Tumlin advocates that the four-step model should be adjusted to account for the 5-D's: density (residential), distance (from transit), diversity (mix of land uses/activities), destination (accessibility), and design (pedestrian and transit orientation).

Step 5 – Manage Transportation Demand

Transportation demand should be managed to reduce vehicle trips by providing incentives to use other modes. Universal transit pass programs which tax people for transit passes whether they will use the passes or not offer a psychological incentive for people to use something that is provided to them for free.

“Congestion is not some external problem that evolves. Congestion is our choice.”

-Jeffrey Tumlin

Another method of managing transportation demand is selling or leasing parking spaces, or unbundling the costs, in high density developments. Unbundling the costs of parking treats parking spaces as an independent good and gives the tenant the option to pay for the cost of parking. Other methods include cash out programs for businesses, residential car-sharing programs, and establishing Transportation Management Associations and Transportation Improvement Districts.

Step 6 – Price it Right

“We can never eliminate congestion. All we can do is to move congestion around.”

-Jeffrey Tumlin

Peak period pricing should be incorporated in the transportation sector to make the transportation system more efficient. When demand exceeds supply, prices for using the transportation system should increase to compensate for the extra congestion. While the US has adopted the concept of

high-occupancy toll (HOT) lanes in places such as Orange County, CA and San Diego, CA that allow people to pay for less congestion, Mr. Tumlin cited full congestion pricing as being a more effective long term approach to managing vehicular trip costs, such as practiced in London, England and Stockholm, Sweden.

Step 7 – Manage Parking

According to Mr. Tumlin, the reason we charge for parking is to make our merchants more successful and to improve residents' quality of life. Rather than forcing developers to build more parking than the free market would want, parking management strategies should be mandated or incentivized to reduce parking demand and parking impacts. These strategies include: pricing, unbundling, car-sharing, EcoPasses, shared parking, structured parking, stacked parking/parking lifts, and designing parking spaces in ways to minimize parking in active areas. Additionally, minimum parking requirements should be eliminated to allow for market-based parking supply, as has been done in cities such as San Francisco, CA, Eugene, OR, and Seattle, WA.

Step 8 – Recreate the Grid

While freeways allow transportation to proceed at higher speeds for long travel distances, their capacity is limited by ramps, they don't always increase network capacity, and they interrupt the city street grid. The original street grid offers

“More skinny streets are always better than fewer, wider streets.”

-Jeffrey Tumlin

many advantages over wider fewer streets and highways, and should be recreated in place of urban freeways as has been done in Seattle, WA, Portland, OR, and San Francisco, CA.

Step 9 – Prioritize Non-Motorized Travel

Non-motorized travel should be prioritized through context-sensitive design that focuses on creating livable streets and prioritizing pedestrian and bicycle safety. Mr. Tumlin sees this as “designing streets as playgrounds that still accommodate cars as guests.” By narrowing lanes, designing streets with street trees, and including on-street parking, livable streets can accommodate the car but not to the exclusion of other modes of transportation. Special paving patterns can emphasize pedestrian rights-of-way without interfering with vehicular

“Streets are the place where democracy works.”

-Jeffrey Tumlin

“Accommodating bicycles in a carbon-neutral future becomes increasingly important.”

-Jeffrey Tumlin

circulation. Traffic barriers and traffic calming devices can allow for better shared use of the streets. Streets can also be prioritized for bikes with bike boxes, separated bicycle facilities, or by connecting low-traffic-volume streets to create bicycle boulevards.

Step 10 – Make Public Transit Work

According to Mr. Tumlin, the most important factor in how people make their travel choices is travel time. Better transportation planning needs to make public transit work by following the same ingredients for success as any other transportation mode, focusing resources to reduce travel times, ensure reliability, and make it a dignified mode of transportation. Travel time can be reduced can be done by providing transit with dedicated rights-of-way, minimizing the number of stops for major transit corridors, maximizing amounts of service in high density corridors, and offering express services.

In conclusion, Mr. Tumlin reminded the audience that in a world where we are going to be forced to reduce our CO₂ emissions, we need to take transportation very seriously. He concedes that this absolutely involves changing human behavior. But if transportation planning is reformed to take into consideration his ten steps, VMT could be cut by 50% or more in new development and 20-30% in existing development. Significant savings, with significant results.

“One of the most important factors of civilizing our cities is accommodating the car at lower speeds.”

-Jeffrey Tumlin