



February 2, 2009

Adams County Planning Department

Dear Planning Department:

I am a Professor in City and Regional Planning at the University of California, Berkeley with a considerable interest in Transit Oriented Development (TOD). This is topic I have studied, lectured, advised, and written extensively on over the past two decades. I also serve on the Advisory Board of The TOD Group, providing advice related to land-use and transportation planning issues, including benchmarks necessary to support economically viable and sustainable TODs.

Professor John Renne, Managing Director of The TOD Group, has shared with me the Clear Creek Valley TOD Plan, an element of the County Comprehensive Plan. First of all, I applaud the Adams County Planning Department and its Board for aggressively pursuing TOD, arguably the most sustainable and widely accepted form of smart growth. Your proposal to cluster compact, mixed-use, and ped-friendly development in Clear Creek Valley has merits in its own right but also contributes to the larger regional vision of sustainable growth as embodied in DRCOG's *Metro Vision 2020*. The aggressive expansion of light-rail services in the Denver region provides tremendous opportunities for county planning entities like yours to channel future growth in and around planned rail stops to the benefit not only local residents and business but also the region at large.

Years of research has established that among the most important factors to the formation of successful TODs – in terms of both ridership and economic vitality – is density. It's not just a play on words that "mass transit needs mass". A body of research has established that gross densities of at least 20 units per acre, which typically translates into net densities of 30 to 40 units per net acre, are needed to economically justify rail investments. Portland, Oregon's TriMet, for example, has set minimum density thresholds of 30 units per net acre, without any cap, for development within 1/8 mile of light-rail stations. Portland is without question America's best example to date of planning and building economically successful and financially viable TODs around light-rail stations thus it provides, in my view, the best benchmark available for setting density thresholds in and around light-rail stations.

A common reaction to the prospect of higher densities is that they contribute to worsening traffic congestion at nearby intersections. While traffic densities rise with urban densities, they do so at a diminishing rate. Moreover, in transit-served districts,

residents, workers, and shoppers have alternative means – notably viable public transit – for avoiding the congestion. Stated another way, transit ridership rates rise exponentially with urban densities: 30 units per net acre will generate more than twice as many transit trips per 1000 square feet as 15 units per net acre. Indeed, research based on point elasticities suggests a doubling of net densities in such settings will increase ridership by a factor of 2.3.

Much of the ridership bonus from increasing densities in and around TODs comes from self-selection. For lifestyle reasons, increasing numbers of households (drawn particularly from young professionals and empty-nesters) are willing to pay more per square foot for smaller units in comparable settings that are well-served by transit: whether to reduce the stress of commuting, enjoy easy access to cultural venues and entertainment districts, or to be in a less car-dependent settings. Often, urban design treatments and public amenities (e.g., civic spaces, street art, attractive streetscaping) are used to soften perceptions of density. The marketplace for such environments is growing. The Center for TOD estimates that upwards of one-third of newly formed households in metropolitan areas like greater Denver are receptive to living in TODs. Studies show that upon moving into TODs, such individuals act upon their lifestyle preferences by riding transit far more often than typical suburban residents and in many instances, shedding car ownership. My own research shows that around 40 percent of the ridership bonus attributable to TODs comes from self-selection. The key point is the market is producing increasing numbers of households that want living space that is in a vibrant, rail-served community, and will pay more for less for such opportunities. Such households effectively trade off higher housing costs at higher densities for lower transportation costs (including owning fewer cars).

I recently completed a Transit Cooperative Research Program study (TCRP H-27A) that found that vehicle trip generation rates of those living in suburban TODs of Portland, San Francisco Bay Area, and metropolitan Washington were 49% below the norm (based on Institute of Transportation Engineer trip generation rates). Moreover, a follow-up study I am directing shows that parking generation rates of TODs are around 20 percent below ITE standards. Over-providing parking in TODs not only waste valuable real estate but also drives up housing prices (particularly for podium, tuck-under parking) and creates environmental costs from the larger footprint of impervious surface. Unbundling parking provision from development is one sensible way to allow parking supplies to be adjusted to market demand. Marrying TOD with carsharing provides another viable means to reduce parking's footprint in and around TOD. My research on carsharing in the Bay Area showed that within 3 years, 30 percent of participants shedded one more more cars. For projects near rail stations, even larger shares of car-sharers sold off a car.

To ensure successful transit investments and to leverage financially viable TODs, it is vital that planning entities like yours take a longer range perspective. While higher densities might produce some near-term problems with spot congestion, in the long term they form the building blocks to a successful regional transit network that relieve ambient congestion levels and improve environmental conditions. In the case of the

Denver region, as the light-rail network expands, settings like Adams County will reap the spillover and synergistic benefits that come from transit services that provide enhanced regional coverage and accessibility. Putting larger shares of your future growth in and around rail stops will pay off even more as the region's transit network expands.

Besides density, striking a viable balance of mixed-use development is also essential to a successful TOD. Mixing housing with retail and offices not only boosts ridership (on the order of 5 to 10 percent, based on my own research), but also allows for increased internal capture: movements that would otherwise be private automobile over longer distances instead occur within the mixed-use project by foot. The beauty of mixed-use development is it adds vitality to a project by populating the development many hours of the day, seven days week. This helps to keep trains full and if done throughout a region, ensure efficient, bi-directional travel flows. Moreover, mixed-use development allows for shared parking – upwards of 20% in some settings – which further economizes on land and development costs.

In close, I strongly urge you to refrain from the all-too-common practice of under-zoning and over-parking your TOD plan. In keeping with unfolding market forces and lifestyle preferences, Adams County should strongly consider the flexing of zoning regulations and design standards to allow considerably higher densities and a more mixed-use portfolio of activities in the Clear Creek Valley TOD Plan. This will ensure not only a more successful development economically, but one that also yields broader societal benefits expressed in less car dependence, cleaner air, and the resourceful use of land and open space.

Sincerely,

A handwritten signature in blue ink that reads "Robert Cervero". The signature is written in a cursive, flowing style.

Robert Cervero,
Professor of City and Regional Planning
Director, Institute of Urban and Regional Development