

Growing the New American Economy

Public-private partnerships for the development of Transit Greenways, Advanced TODs, the national multimodal transportation system and jobs for all Americans

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Abstract

As the new Obama-Biden Administration begins to plan for the implementation of a stimulus plan to jump-start the economy and create new jobs by various tax cuts and spending programs, this panel of experts shows how a multimodal approach could enhance the infrastructure benefits expected from the infrastructure expenditures proposed. By proposing unique public-private partnerships in connection with new transit communities, immediate and long-term economic growth can be projected. Specific methods, applications and implications are presented and discussed, and a specific stimulus policy is recommended.

Among the common themes that urban studies in America share, two are critically important. One is the need to return to denser urban planning, which contributes to economic development and commerce, while facilitating a high quality of life, social and economic integration, and environmental sensitivity. The second is the need to mitigate traffic congestion that has persisted even with the continuing expansion of the road network. Negative and destructive consequences from traffic congestion include: environmental and global weather consequences, public health threats, and productivity losses.

By coordinating investments in mass transit with housing and mixed-use development at passenger rail station sites and transit stops, passenger rail and transit use will significantly increase. Only by providing for high quality pedestrian linkages to and within these new American transit communities and providing for enhanced opportunities for higher education and job training, will such communities substantially contribute in the near and long term to growth of the economy. Only with a proper concern for the impacts of such built environments, will the quality of life for residents and visitors be improved and sustainable natural environments preserved.

Merely rebuilding aging bridges, rail beds, and creating new highways will not solve our mobility, energy, and economic problems. A change from past transportation and community planning is necessary and a new integration of policy, political, and implementation efforts must evolve. Public-private partnerships leverage public investment and allow market-based economics to support synergies of interest. Substantial public investments in infrastructure serve as the catalyst. By focusing on pedestrian urban mobility, education and a decision to build a globally competitive multimodal transportation system, we can move people to employment through investment in infrastructure, growth in the economy, and predictable improvements in the quality of life.

The authors (26 individuals with expertise in community development, public finance, and public policy development) welcome opportunities to discuss these matters with national and state policy makers. The following article describes proposed tools for economic growth and the preferred community in the 21th Century and clearly defines these unique pedestrian-oriented, educationally-enhanced transit communities. The Author Resumé Statements, Endnotes and Appendices are available from Tom Gustafson on request at: tgiscis@aol.com or tgustafs@nova.edu.

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Public-private partnerships for the development of Transit Greenways, Advanced TODs, the national multimodal transportation system, and jobs for all Americans

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Introduction

Proposed Stimulus Policy: Federal funds provided by the American Recovery and Reinvestment Act should be collectively examined by state and local officials to determine if the infrastructure projects to be funded can be combined to provide for the development of transit greenways and to establish a public-private partnership plan for the development of Advanced TODs that will help to grow the new American economy.

President Barak Obama has clearly stated that one of his main goals is to determine how best to grow the American economy. The new administration and members of Congress are hard at work to timely frame such strategies. The stimulus package is one of three requirements the President has suggested he needs for a fully implemented economic recovery (the other two being getting the credit markets working again and fixing the collapsed housing market).

It is the intent of this paper to recommend the above **stimulus policy** in order to fund at least 12 transit greenway projects (\$624 million of stimulus projects that would need to be coordinated for this purpose by state and local officials) and to plan for at least 36 related pedestrian-oriented, educationally-enhanced, mixed-mode and mixed-use transit oriented developments within compact urban centers (Advanced TOD's) through the establishment of private-public partnerships. Transit greenway and Advanced TODs are comprehensively described in Sections 1, 2 and 3 below.

The 36 Advanced TODs plans would include ample structured parking and a request to authorize the use approximately \$3.9 billion in transportation trust funds when the Safe, Accountable, Flexible, and Efficient Transportation Act: A Legacy for Users (SAFETEA-LU) is reauthorized in October 2009². Such governmental funds would pay for the specialized infrastructure during the six year term of the new federal transportation act in partnership with real estate developers who would build with private sector funds the mixed-use facilities associated with these transit-related urban centers (\$7.8 billion).

This strategy will establish the financial basis for superior access to an emerging national multimodal transportation system and an exceptional platform for higher education and jobs training. The jobs created when building and operating these new American transit communities and associated business activities will grow the new American economy. Advanced TODs will help to alleviate the housing problems and provide the American banking institutions with very credit worthy projects.



All over Europe (in this case, Palma de Mallorca), typical public areas are special places within the urban fabric. Such places exist in America less frequently and that sours the public psyche in many ways. In the public spaces between the buildings of a sustainable urban environment, a community dialogue develops from the many intended, random and intermittent positive social inter-actions that frequently occur. Public wealth forms from the advancements of thought arising from such discussions. By adding higher education facilities to the mix along with state of the practice science parks components, the economy will grow with the expanding educated work force and the urban mobility arising from a multimodal transportation system linked to such places. Such a transportation and education policy when applied to the pending federal stimulus and transportation legislation will sustain our economic growth into the next century.

Section 1:

What America Needs Now

Real and sustainable economic growth can best be realized in the 21st Century by changing the way America builds and redevelops its communities. This can be best undertaken by building transit greenways for immediate economic stimulus and establishing public-private partnerships to plan and build Advanced TODs that become, over the next few years, the new American transit communities that grow the economy over the next 50 years.

What America needs right now is an immediate stimulant for the economy and specific near-term actions that will over time change the way America does business. It is also important to select stimulus strategies that will improve the productivity and skills of American workers over the longer term of our recovery and reinvestment in America given the economic constraints, challenges, and opportunities that confront us in the world today.³

Instead of determining what will immediately grow the economy, maybe a better question to answer is: How do we best grow a sustainable economy starting today?

When answering this question, it must be recognized that some strategies need to start small and be allowed time to bloom. After planting a small seed, it must be given continuing support so that the concept can grow to sufficient size to impact the new American economy.

Both short-term and long-term economic growth should be pursued with equal vigor, especially when a single strategy accomplishes both goals.

21st Century Infrastructure:

It is obvious to international travelers that America has been losing its infrastructure advantage over other developed countries. This is true not only in terms of the quality and adequacy of American roads and bridges that defined the 20th Century, but also in the infrastructure which defines the 21st Century. For example, multimodal

transportation systems, fiber optic connectivity, access to mass data storage, space-based communications, sustainable power and resilient energy distribution networks are considered important parts of any 21st Century community infrastructure.⁴ While American technology and expertise in these areas is advanced, we have no solid claim to consistent and superior installations of such 21st Century infrastructure across America.

To grow the economy, it is therefore important to establish federal policies and directives that provide for a selection of infrastructure projects that not only produce immediate jobs, but also help America remain competitive in the global marketplace. Such policy directives should recognize that typical 20th Century infrastructure projects may not be the best way to produce sustained growth in the economy and good jobs for all Americans. It must also be acknowledged that the costs and time to repair our old and install our new infrastructure will be very long and involve many years of focused planning and construction. Finally, it must be recognized that America can not afford to repair its 20th or 21st Century infrastructure until it finds a way to grow the economy right now and continue economic growth for the foreseeable future.

As fully discussed below, given such an infrastructure decision matrix, it is fair to conclude that transit greenways and Advanced TODs are the best way to grow the new American economy in the near term as well as for the next 50 years. It is the best way to begin to build the 21st Century infrastructure we will need as part of the long-term economic recovery and reinvestment in America.

New American Transit Communities:

These new pedestrian-oriented, educationally-enhanced, transit communities need to empower and inspire people to improve their productivity, while reducing consumption. They must be diverse and culturally exciting communities largely free of crime. They must also constitute ideal healthy walking environments, provide significant higher education and job training opportunities, and improve our quality of life.⁵ They must have the capacity to sustain themselves and grow for the next 50 years.

To secure America's continuing prosperity, these new or redeveloped **Jane Jacobs'**⁶ **inspired American transit communities** must be located adjacent to transit stops and passenger rail stations as:

- A compact arrangement of mixed-use buildings positioned around narrow and linked parking structures and pedestrian areas that initially occupy a 20 acre urban center site. These mixed-use buildings line the perimeter of the parking structures (liner buildings) and provide appealing store fronts facing the traffic-

calmed streets⁷ that circulate cars into and out of the parking structures and the mixed-mode streets⁸ that lead pedestrians to carfree plazas and courtyards⁹.

- Specialized multi-use greenways or linear parks (transit greenways¹⁰) that radiate outwardly to form large-scale pedestrian-oriented environments that access significant suburban destinations located within a two mile radius of the urban center using narrow gauge rail parking shuttles or similar vehicles.¹¹
- Components of the state of the practice science parks and easily accessible opportunities for higher education and job training within the urban center.

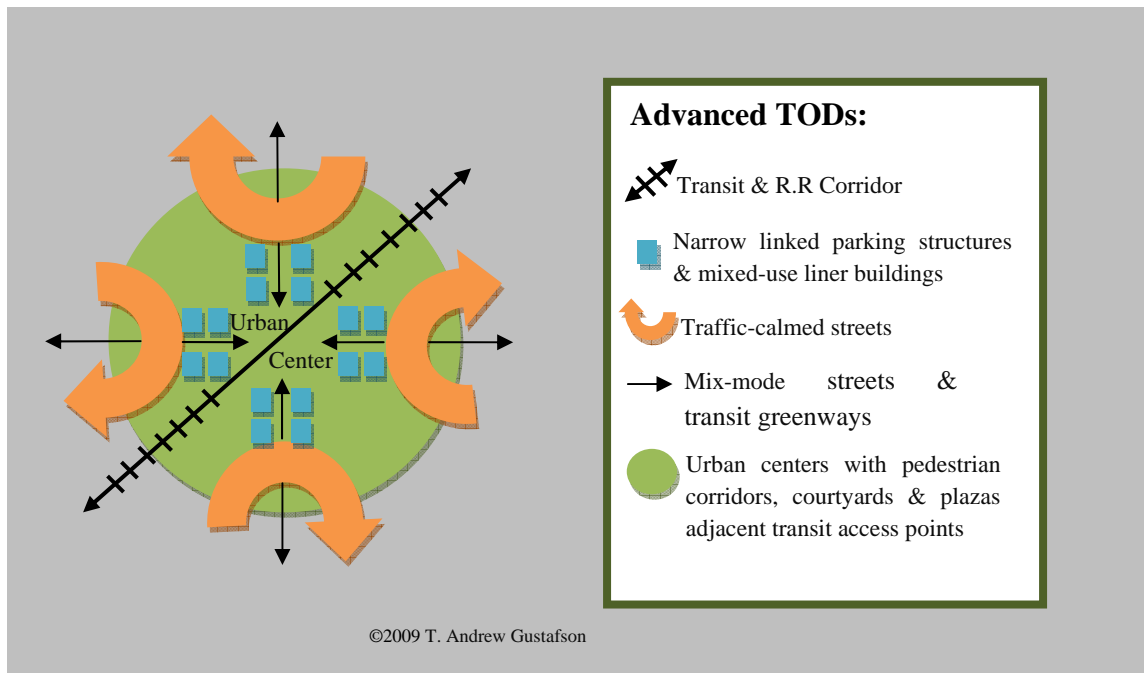
This new urban center and transit greenway complex provides large-scale pedestrian access to support a much larger multimodal transportation system than we currently possess. They would be built by organizing public-private partnerships to supply the required construction and operating funds (e.g., two-thirds private sources, one-third governmental grants). Such arrangements would fully use available market forces to develop these new American transit communities (see *Public-Private Partnerships Funding* subsection at page 20).

Some experts in urban planning will suggest that much has been written on the subject of transit communities and that there is nothing further to add to this discussion. A careful reading of the materials to follow will suggest otherwise. This paper provides unique descriptions of what should be built and discusses innovative ways for federal, state and local governments to partner with the private sector to grow small infrastructure investments in American communities into much larger engines of the American economy.

With a grand vision of the future for American productivity and prosperity, we will need a clear national policy that empowers the states, local communities, and the business sector to make the right local decisions and collectively impact the nation. Each American community needs to be asked to build one project at a time and find the right mix of development, education, job training, and mobility that will grow the economy today and in future generations.

We can recover from the current economic crisis best by having many communities collectively engage with the business sector in the community building and redevelopment until these initial efforts grow the many new American transit communities we will need over the next 50 years.

As depicted by the image below, the proper foundation for sustainable economic growth will require America to commit to the use of transit greenways and public-private partnerships that will build and operate a complex of pedestrian-oriented, educationally-enhanced, mixed-mode and mixed-use, transit oriented development within a compact urban center that effectively link our highway system to a national multimodal transportation system.¹² Referenced as Advanced TODs, they represent the next generation of transit oriented development.



This diagram depicts how cars and trucks would drive to, but not through, these very compact urban centers. After arriving via traffic-calmed streets or otherwise, cars would proceed to or through the narrow and linked parking structures and would exit from a different parking structure linked to the first and depart the urban center via a traffic-calmed street or otherwise. This allows for superior pedestrian access to the transit stops and train stations provided via the traffic-calmed streets, transit greenways, mixed-mode streets, and carfree pedestrian corridors, courtyards and plazas. These transit greenways would extend outwardly from the urban center to provide linkages to significant destinations using narrow gauge rail parking shuttles or similar transit greenway vehicles. Narrow and linked parking structures with mixed-use liner buildings along their perimeters would frame the traffic-calmed streets, mixed-mode streets and carfree pedestrian areas to provide ideal walking conditions to the transit stops and train stations within the urban centers.

This change in community building should be undertaken immediately through the provisions of the American Recovery and Reinvestment Act slated for enactment in February 2009 and through the reauthorization of the SAFETEA-LU when enacted next October 2009.

This paper will explain why sustained economic growth can best be structured through the establishment of public-private partnerships that could build these new American transit communities.

As infrastructure projects to stimulate the economy are selected and built, thought should be given to the degree that the stimulus projects:

- Collectively produce **4 million or more new jobs**
- Produce a sustainable growing economy that can retire the national debt
- Provide for a means to measure success
- Identify project managers that can be held accountable for performance¹³

Building the essential infrastructural components of these new American transit communities will provide economic growth that can be immediately realized and that will be continued over the next 50 years or more.



Place Jacques-Cartier is a plaza located in the historic section of Montreal at the entrance to the Old Port of Montreal. While committed to pedestrian use in the summer, it retains its street and wide sidewalk configuration for automotive use during the rest of the year. The street hosts many artists, kiosks, and facilities to provide various commodities and services in response to their needs. Small cobblestone side streets, with one-way slowly moving traffic and parallel parking, extend outwardly from the square providing Montreal residents and visitors with access to many other stores, restaurants, offices, and residences. This multiple use of the same outdoor space is frequently used in Europe so the same public square is used for marketing in the morning, lunch in the afternoon, and festivals in the evening. In this case, the plaza reverts to street origins each year as summer comes to a close, the winter chill drives away the customers, and the need to move goods overcomes the urge to keep the Place Jacques-Cartier free from traffic. This bifurcated use space for pedestrians and traffic can also be seen where delivery trucks use pedestrian and mixed-mode streets before 8:00 AM for deliveries and then give way to pedestrians as they make their way to work for the day. The Yamato Road Tri-Rail Station Development Proposal makes use of this strategy with two mixed-mode streets that arrive at the central pedestrian only-plaza adjacent the Tri-Rail Station. These corridors are carfree areas during the day and evening to bring people to the plaza and they are designed to be used by delivery trucks each morning for the residents and businesses within the Advanced TOD. See page 14.

Section 2:

A Case for Advanced TODs and Transit Greenways

Americans will need infrastructure changes to grow the economy in the 21st Century and the education and skills required for a well paid workforce. Projects organized to build transit greenways and Advanced TODs, which support large-scale pedestrian-access to a functioning multimodal system of transportation for an educationally engaged urban populace, will provide that change.

City building is not as well understood as town planning by many professionals in the field. While America has internationally renowned architects, engineers, landscape architects, and planners, our cities fall short when compared to world-class European and Asian cities. More and more, the very best quality of life, productivity, and mobility is found elsewhere. We dare not allow the phrase “No longer available in America” to be applied to modern necessities and conveniences of our cities.

Many informed urban planners and transportation planning experts now point to sustainable, livable or transit oriented design communities as a way to rebuild American urban centers. They suggest that we can best reduce traffic congestion and its adverse impacts and costs by driving less and using alternate modes of transport more.

The issue is significant given the estimated cost of congestion in 2003 was \$69.5 billion per year using data from 2001 obtained from 75 of the Nation’s large urban areas. In 2007 (using data from 2005) that cost estimate grew to \$78 billion per year. This corresponds to 3.5 billion hours of delay and 5.7 billion gallons of excess fuel consumed in 2001 and 4.2 billion lost hours and 2.9 billion gallons of wasted fuel in 2005.¹⁴

In addition, a continued reliance on the car and truck for most movement in America has many other significant and probably more costly impacts (e.g., air quality, the environment, traffic mortality rates, health care, and global weather); costs that should no longer be borne by the American people. Certainly America, with its substantial transportation trust fund, could easily afford to build communities that have all these sustainable, livable and transit accessible qualities and built-in cost avoidances.

What is missing to change the American condition is a clearly announced transportation plan by the U.S. President to implement what has recently been discovered about successful transit oriented design communities. What is missing so far is the will to rid America of its wasteful ways that make any economic progress hard to comprehend.

Without an expression by President Obama that he wishes to pursue an objective that involves building new American transit communities no change will occur. Without a change in direction, the ongoing and automatic expenditure of most of the transportation trust funds on roads and bridges as they have been built for the last 50 years will continue. The adverse consequences of continuing 55 year-old transportation policies will be significant; the American economy will not grow in the short-term or long-term.

Without a change in the kind of infrastructure we build and that defines our communities, there can be no rapid or cost effective change in the skill sets of most Americans that must now compete in the global work force.

While America's transportation trust funds are currently used to build roads, bridges, and transit systems, existing laws allow for the funding of all the components that make up transit greenways and Advanced TODs. With no affirmative policy statement to do otherwise, roads, bridges, and transit expenditures will continue year after year based upon national policy established over fifty-five years ago by President Dwight D. Eisenhower (as to the Interstate Highway System) and over 45 years ago by President John F. Kennedy (as to urban mass transit).

Efforts to establish multimodal transportation system requirements have been weakly expressed in federal law and policy and certainly no federal law or statement has yet directed the United States to make major investments to build transit greenways or Advanced TODs (or similar TOD-related improvements).¹⁵ This represents a half century of American policy silence and continuation of the status quo, while Europe and Asia progressed beyond road building and spent the last 45 years developing their soon to be completed multinational multimodal transportation system.¹⁶

Starting with a discussion about transit oriented design or development (TODs),¹⁷ the following will present a case for transit greenways and public-private partnerships that develop Advanced TODs as a way to build our cities, grow the new American economy, and effectively connect America to the current fragments of our nascent multimodal transportation system. It will be further suggested that the customer base for the current Amtrak, regional passenger rail service, metropolitan fixed-guideway transit, and bus transit, can by this means be expanded to justify and help pay for a fully implemented

national multimodal system, including the necessary implementation of high speed rail service.

TODs:

Advocates for TODs and public transit frequently suggest both transit systems and TODs are important to the American economy.¹⁸ There is general agreement in the public transit community that TODs will significantly improve pedestrian and bicycle access to transit. Encouraging transit ridership and the use of other modes of transport, reducing automotive trips, and generating non-farebox revenue for transit systems are suggested outcomes with the establishment of TODs.

With TODs, people move through dense, mixed-use development within a ¼ to ½ mile walking distance from a train station or transit stop.¹⁹ This represents ample opportunity for retail and cultural activities to blossom over a relatively large urbanized area of ¼ square mile to one square mile or approximately 16 to 64 city blocks.²⁰ TODs require high quality transit and train systems that transport people from one TOD to the next and therefore allows a higher quality of life without complete dependence upon the car for mobility and survival. TODs greatly reduce the need for driving and the burning of fossil fuels. TODs provide to active citizenry a rich mix of housing, shopping, work, and transportation options to satisfy their specific needs.

Within a TOD: buildings are located much nearer the streets; less private and more public space exists; and, small blocks, narrow streets, wider sidewalks, street trees and lights are present. Lower parking ratios, shared parking, parking behind buildings and on-street parallel parking are typical. TODs tend to generate higher property values and revenue for the public and private sector. A TOD may be a single or group of buildings or a multiple block district where people are actively walking from one destination to the next from early morning to late in the night. For this reason, the public areas are safer and customers are provided to transit at both peak and off-peak hours.²¹

It must be recognized that people coming from suburban areas to urban centers need many places where they can park their cars and walk: without fear from oncoming traffic; without annoyance from excessive noise and unpleasant smells; without the heat of the day or the discomfort that arises from cold, windy or wet conditions. There must be light, landscaping, open doors and windows, well-behaved people and mixed-modes of transport to extend the walk or ride to any destination. It must also be understood that the very presence of young people who are pursuing higher education and job training represent, at a molecular level,²² the lubricant that prevents such dense communities

from becoming slums and distressed properties over time (properties that are worn out so that it no longer functions well in economic terms due to physical and social decay).



This photograph of a mixed-mode street in Amsterdam, the Netherlands has been provided by John Zacharias, Professor and Director of Urban Studies at the Department of Geography, Planning & Environment, Faculty of Arts and Science, Concordia University. It depicts the walking conditions that have beneficial transportation impacts described by his 1999 ITE Journal article (*The Amsterdam Experiment in Mixing Pedestrians, Trams, and Bicycles*). Improvements to this urban form should be the mission of the American development community during the next decade assuming the federal stimulus and transportation funds are provided to support such efforts.

ADVANCED TODS:

Given the complexity of urban needs, the value of a strategy that would focus on the relatively simple efforts to first build transit greenways, and to thereafter fund the transportation components of a more compact, multidimensional, and cost efficient TODs (an Advanced TOD)²³ should become more obvious. Transit greenways and planning for Advanced TODs would likely meet federal policy and criteria established to identify stimulus projects (immediate or near term jobs and economic growth). These transit greenway and Advanced TOD projects will quickly grow the size and value as a new American transit community.

Advocates who are independently seeking increased federal funding for traditional road and bridge infrastructure, pedestrian-oriented livable communities, for educational enhancements and career training, or for transit and passenger rail systems, including high speed rail systems, should coordinate their efforts in support of such stimulus funded transit greenways.²⁴ A motivation for such joint efforts comes from the fact that traffic-calmed streets, mixed-mode streets, pedestrian-oriented corridors, courtyards and plazas, and narrow and linked parking structures are very useful to transit systems (due

to an expected increased customer base), they are very kind to the environment and they can be built by the same contractors who historically built our roads and bridges.

Advanced TODs are distinguishable from TOD descriptions in current literature due to several unique components (transit greenways, narrow gauge rail parking shuttles or similar transit greenway vehicles, abundant structured parking, carfree mixed-use urban centers, plazas, corridors, courtyards and mixed mode-streets and education and trade school uses). These narrow easy to build infrastructure projects can all be funded through either the coordination of stimulus projects or by transportation trust funds associated with the reauthorization of the SAFETEA-LU legislation. Even higher education and trade schools can be funded through a thoughtful use of Advanced TOD funding strategies.

Advanced TODs can be developed by the following steps:

1. The listing of “ready to go” projects identified by state and local governments throughout the nation represent useful but isolated improvements that are not likely to rise to the level of improvements that will stimulate or sustain a growing economy. When road, bridge, landscape, streetscape, sidewalk, parking, transit stop and train station improvements are organized for a *single collective use*, however, they can be very useful. In the case where such funds are used to build transit greenways and plan for Advanced TODs, these projects that will grow the economy. Improving the fundamental pedestrian conditions in the urbanize site at or adjacent transit stops and train stations can induce large-scale pedestrian movements that support enhanced transit access and growth in the economy. Such economic growth can be accurately projected based upon the understanding of values associated with properly developed cities and their role in the economy.²⁵ Such stimulus and transportation projects, when properly organized, are but components of the transit greenway projects and Advanced TODs.
2. Advanced TODs should include facilities that specifically provide enhanced opportunities for higher education and job training. Affordable student housing, classrooms and lecture halls should be built as part of the civic and entertainment fabric of the Advanced TODs. Cultural and social events, markets or restaurants, consistent with student interests, should be included in specific Advanced TODs proposals.
3. Advanced TODs, when positioned along a regional transit or rail corridor, need to collectively include components of the state of the practice science parks as evidenced by case studies of successful international science parks.²⁶

4. Advanced TODs and transit greenways should link within an urban center and outwardly to the broader community and major destinations that provide opportunities for work and job training. Trade schools that are established within such communities prepare the populace with skills needed within the Advanced TODs and broader community. These jobs may involve: computer and technology services; culinary arts; craftsmanship; the fine arts; facility/systems operations and maintenance; medical services; office and administrative work; child care and after school programs; construction, plumbing and electrical trades; retail services; and all the other trades that are required in the modern world.
5. Road and bridge improvements are part of the mix, but should not dominate the transportation expenditures. Instead of taking a position responsive to either traditional bias or any of the several industry-led interest groups (roads and bridges versus transit expenditures), transit greenways, narrow and linked parking structures, mixed-mode streets, pedestrian corridors and carfree plazas should be built to improve existing TODs or build new Advanced TODs. By these means traffic congestion is mitigated (most car trips become multimodal trips) without building new roads or widening the road network. Such a strategy is already authorized by federal law and can be implemented through the approvals of the U.S. Department of Transportation Secretary.²⁷ Such a policy will keep the road construction industry busy at what they do best (building transportation-related structures), while filling the trains and other elements of a multimodal transportation system with paying customers.

Through close attention to development details, transit greenways and Advanced TODs can cause large numbers of people to walk longer than typical distances (beyond the expected ¼ mile or ½ mile walk). The urban center, with its many destinations responsive to the daily needs of the traveling public, holds larger numbers of people than expected who congregate in the plazas before they become transit and train customers.

While traditional TODs require a commitment of many hundreds of millions of dollars to retrofit larger urban centers for pedestrian movements and many years of community planning, small compact Advanced TODs (20 acres or so in size that cost somewhere in the \$300 million range) will be easier and less expensive to implement. In addition, assuming Advanced TOD budgets will involve more private funding than governmental, transportation trust funds available when SAFETEA-LU expires September 30, 2009 can be newly authorized to pay for the transportation infrastructure-related costs of Advanced TODs (estimated to be about one-third of total cost of an Advanced TOD).²⁸



The Yamato Road Tri-Rail Station Development Proposal (YRTSDP), as originally conceived, provided for 1731 parking spaces, 90,000 square feet of office space, 75,000 square feet of hotel use (150 rooms), 240,000 square feet of residential use including work force housing (total housing was to be 198 units), and 55,000 square feet of retail on nine acres of land. Two large pedestrian-oriented mixed-mode streets, a pedestrian corridor, and a courtyard all filter pedestrians from the cars and adjoining mixed-use liner buildings to the central plaza that is developed to hold the attention of the pedestrians until the train arrives every twenty minutes or less. At this time, the siding tracks that allow for two stopped trains to board passengers and leave the main two tracks clear for Amtrak, freight trains, and express trains from Orlando to Miami have not been factored into the site plan. In discussions with the City of Boca Raton it is clear there is a desire by some of the City Council members and City Manager to reduce the density and mass of the project and move some of the parking structures eastward as shown in the YRTSDP 2.0 at Appendix 8. The South Florida Regional Transportation Authority (SFRTA) Board has voted to approve the proposal and expressed continuing interest with the proposed developer to explore with the City of Boca Raton suggestions contained in the YRTSDP 2.0 documents. Either plan would assume six miles of transit greenways costing about \$16 million dollars to construct with the installation of a 30 inch gauge rail parking shuttle vehicle that would connect this advanced TOD with nearby major destinations (Florida Atlantic University Boca Raton campus, the FAU Research & Development Park, the old IBM site now identified as the Boca Corporate Center & Campus, the Arvida Park of Commerce, and the Commerce Center Shops).

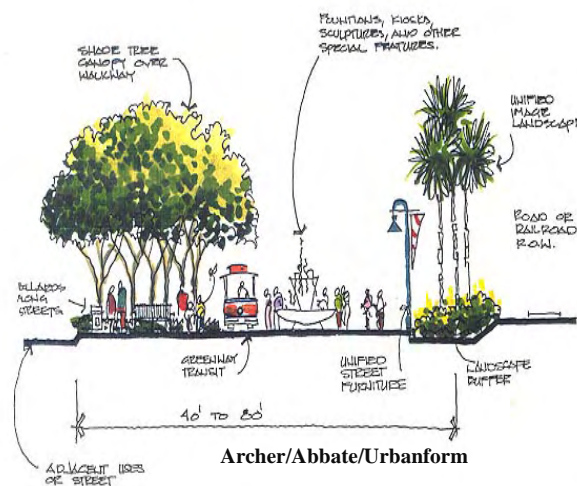
Advanced TODs should be developed in many urban and intercity locations where the job market is most challenging. These new American transit communities will be able to grow over time and continue to provide good jobs as more parking structures and related infrastructure is approved to be built adjacent the transit greenways using transportation trust funds and developers are identified who will build the related mixed-use liner buildings and destination buildings. This growth pattern will ideally occur in more or less concentric rings outwardly from the original 20 acre Advanced TOD development site.

These very livable communities will over time function as intermodal systems for a globally competitive national multimodal transportation system *and* as an instrument for

the financial, educational, physical, emotional, societal and cultural advancement of all Americans in a New Inventive Age.²⁹

TRANSIT GREENWAYS:

Transit greenways³⁰ are linear parks (wide sidewalks with lighting, landscaping, hardscaping and the like) that provide space for walking, bicycling, and small specially designed pedestrian-oriented transit vehicles. They have a tremendous capacity for the movement of people in large numbers.³¹



While working on a project to improve Sunrise Boulevard in Fort Lauderdale, FL. in 1997, the idea to propose a greenway corridor that was also a transit corridor was born based upon the need to seek significant funding (*Building the Urban Greenway: Greenway Transit Corridors for Multimodal Use*). It was thought that there would be more money available for a transit greenway corridor than was available for a greenway corridor. In the ensuing 12 years, communities around the county have sought transit greenway funding, several have secured funding, but none have been built. By adding a transit greenway as a part of advanced TODs, significant benefits arise and multimodal transportation and economic growth in the 21st Century becomes possible. By linking destinations to multiple modes of transportation and well-designed, educationally-enriched, pedestrian-oriented urban centers, a new community paradigm will arise.

Transit greenways are relatively inexpensive (at \$6 million per mile or less when compared to \$50 to \$100 million dollars per mile for traditional light rail installations) and transit greenway projects can be quickly undertaken using federal stimulus funds before the Advanced TODs are built. These transit greenways will assure immediate improvements in the customer base of transit, passenger trains, and other elements of the multimodal system and will form the DNA from whence the Advanced TODs will be born and grow.

Transit greenways, extending outwardly within a two mile radius, provide linkages to major suburban destinations. The number of transit customers, with an easy walk and ride to the Advanced TOD and related transit stops and train stations, will thereby increase. In addition, the transit greenway will provide a basis to grow the Advanced TODs outwardly of their original boundaries through long-term development strategies

that place narrow and linked parking structures, mixed-mode streets, pedestrian corridors, liner buildings, plazas and courtyards adjacent the transit greenways. The road grid used in typical American cities and suburbs would be incrementally redeveloped into traffic-calmed streets that lead to and away from the narrowed parking structures and Advanced TODs. These evolved roadways would thereby be rebuilt over time to go to, but not through, the expanding urban centers.³²

Transit greenways become the mixed-mode streets of an Advanced TOD once the initial Advanced TOD (built on 20 acres site or less), grows outwardly through the use of transportation trust funds to build Advanced TOD infrastructure while the private sector builds the mixed-use liner buildings that surround the parking structures that are privately funded and built. The liner buildings face the plazas, pedestrian corridors, mixed-mode streets, and traffic-calmed streets, so that the large-scale pedestrian movements are supported and encouraged in order to cause a significant increase in transit access to occur.

This represents a less expensive and better way to improve access to the transit stops and train stations and provides a basis for new jobs that operate the transit greenway and narrow gauge rail parking shuttle vehicles. More significantly, many more jobs arise from the continued urban center growth and the economy will grow as this sustainable urban center expands.

As transit greenways enter an urban center and become mixed-mode streets, they tend to converge at the plazas that front the regional transit stops and train stations. As large numbers of pedestrians converge at that one location, they “gather” at the transit stop or train station and increase passenger rail ridership.

These thousands of pedestrians that surge into the plaza are temporarily held in place, not only by the physical beauty of the public space (architecture, streetscaping, landscaping, store windows, sidewalk cafes and vendors, and urban adapted wildlife), but also because a properly designed and positioned plaza becomes an attractive social center in its own right. It becomes “a place for dialogue and discussion, meetings and greetings, for shared experiences and forming bonds...This significant conversation and dialogue...creates community. [By such means, a plaza can become]...a powerful context for socialization, acculturation, and democratization of society”.³³

Such transit greenway and Advanced TOD strategies will likely cause:

- Significant increases to the quality and size of transit access
- Social integration
- Reduction in traffic congestion and related air quality problems

- Inexpensive alternatives to housing, mobility and educational needs

With air quality improvements and more quality time with family and friends, significant health improvements can be projected. Property values in the well-managed urban centers will increase and it would be expected that there will be an overall increase in the reliability, redundancy, resiliency of the existing elements of America's multimodal transportation system (e.g., Amtrak, regional passenger rail service, metropolitan fixed-guideway transit, and bus transit). These air quality improvements, increases in property values, quality time not wasted in traffic, and other transit greenway and Advanced TOD benefits will accompany the general improvement to social conditions and economic growth.

More specifically, for every \$260,000 of stimulus funding spent on transit greenways, one permanent transit greenway operations and maintenance job (about four sustainable jobs for every million dollars of transit greenway stimulus funding) will be created in 2009. In addition, there will be many more jobs that will arise from the growth in and inherent benefits to the community that such infrastructure will cause.³⁴ Many more construction and community based jobs will be created due to development and growth of the Advanced TODs using SAFETEA-LU funding when authorized in October 2009.³⁵

These results can be assured when stimulus and transportation funds are programmed to:

- Start with an affordable network of transit greenways that extend from underperforming transit stops and train stations³⁶
- Spread transit greenway funding to 12 locations across America with a requirement that local communities involved develop a plan for Advanced TODs that would improve properties adjacent the transit stops and train stations assuming at least 20 acres of development per site
- Assume a funding request for 36 Advanced TODs that would seek federal transportation trust funds for the parking structures, traffic-calmed streets, mixed-mode streets, corridors, plazas, and parking shuttle transit greenway systems for consideration during the reauthorization of SAFETEA-LU
- Require a public-private partnership³⁷ for the development and operation of all transit greenway and Advanced TOD components (publically owned assets built and operated by the private sector for a fair fee and with bonuses provided for growing property values or some other element of the economy beyond expectations)
- Plan to grow 36 Advanced TODs outwardly along the perimeter of the transit greenway system over the next 50 years

We suggest the federal government launch a coordinated national funding policy directing stimulus infrastructure projects including streets, bridges, sidewalks, landscaping, transit stops, and train stations be built to represent all the components of a system of transit greenways.

The policy would require local communities who develop transit greenway projects, to plan for the development of the many components of one or more Advanced TODs. The Advanced TODs would be built in part using federal funds provided in October 2009 with the reauthorization of SAFETEA-LU. The Advanced TOD components would include: an expanded transit greenway network, narrow gauge rail parking shuttles, narrow and linked parking structures, mixed-mode streets, pedestrian corridors and carfree plazas. This built environment would frame educationally-enhanced pedestrian-oriented communities containing components of the state of the practice science parks.



In Zurich, Switzerland all trams operate on a meter gauge track (there is a one meter separation between tracks). The vehicles are narrower than American transit by several feet and therefore the trams represent less of a threat to passengers as they walk the street before entering the vehicles. 65% of the people commuting within the city do so by public transit. With one of the world's highest standards of living, Zurich's citizens choose transit because it is convenient and because the intermittent walking experience is enjoyable. The Zurich meter-gauge tram system was built at a fraction of the cost of standard gauge systems or subways. It links to a national and European multimodal transportation system by pedestrian movements at transit stations.

It is fully expected that many opportunities will arise to improve the qualities and expand the reach of an **Advanced TOD and related transit greenways**. By these means, transit and passenger train systems connected to ports and airports will represent a fully optimized multimodal system of transport **providing the mobility and social integration essential for economic growth**.

Such transit greenway infrastructure stimulus will not be limited to short-term economic impacts of borrowed federal funds and it will involve, through Advanced TODs, a significant involvement by private capital. Initial transit greenway stimulus projects will

spawn far larger and economically significant Advanced TODs and will therefore help to establish a proper foundation for long-term economic growth and job opportunities for all Americans. By way of these mobility improvements and academically-enhanced livable community environments, Americans will prosper again.

These Advanced TODs and transit greenway networks will have immediate positive impacts on the local economy as jobs are immediately created and filled and supplies are immediately required and delivered for “ready to go” projects. There will be no short-term adverse economic impact due to construction disruptions. Much of the transit greenway will be constructed at night or within warehouses equipped for purposes of fabricating the narrow gauge vehicles and rail assemblies.

Positive long-term impacts on the new American economy are expected when Advanced TODs are built and stores, offices, residential units and businesses are occupied. Such Advanced TODs will also provide a long-term foundation for economic growth through the establishment of a mobile educated populace in very livable communities.

The benefits that arise from transit greenway projects and Advanced TODs should put any possible transit greenway project high on the list of stimulus projects. It is recognized, however, that any transit greenway implementation must become established not by any federal earmark process, but instead by the statement of public policy such as:

Proposed Stimulus Policy: Federal funds provided by the American Recovery and Reinvestment Act should be collectively examined by state and local officials to determine if the infrastructure projects to be funded can be combined to provide for the development of transit greenways and to establish a plan for the development of Advanced TODs that will help to grow the new American economy.

By first providing stimulus funds for coordinated transit greenway projects, the federal government can request or require local planning for Advanced TODs that would arrange with the development community for funding matched in part through the SAFETEA-LU reauthorization legislation scheduled for reenactment by October 2009 (assume one-third of total funding is governmental and that two-thirds of total funding is from the private sector).

A properly organized public-private partnership can be used to achieve the full array of expected transportation, social, and economic benefits derived from Advanced TODs and transit greenways and the specifics of such arrangements are explored below.

Section 3 will further discuss the specific transit greenway characteristics and strategies in greater detail and will examine how the critical elements can be established over time.

PUBIC-PRIVATE PARTNERSHIP FUNDING:

Public-private partnerships can develop and manage these new American transit communities and regional or high speed rail transit corridors with private sector efficiencies and well-stated public policy-oriented performance requirements that clearly define the expected outcomes from the governmental services contract.

The Advanced TODs must integrate as a single pedestrian-oriented operating system transit greenway and mixed-mode street walking environments, narrow and linked parking structures and the superior access via pedestrian plazas, courtyards and corridors to train stations and transit stops that receive and discharge frequent, clean, and on time regional passenger rail vehicles. Higher education and job training must be incorporated into the pedestrian-oriented public space and building purposes. Public-private partnerships, when such outcomes are clearly agreed upon, can best manage the complex relationships between the transportation and land development elements of a successful multimodal transportation system.

The parking structure, transit greenway, plaza, mixed-mode streets, and traffic-calmed streets infrastructure improvements need to be matched with mixed-use liner buildings that are privately developed, but built so that all the components of an Advanced TOD can be coordinated. Densely built properties will over time become undesirable, distressed, and crime ridden, unless long-term management is in place to maintain the high quality public space, maximize the revenues and achieve other benefits of such new American transit communities.

Transit and passenger rail service, when operated as a stand alone entity, will always lack the ridership to assure its financial survival even if operated professionally and therefore it can never really help grow the economy when operating independently of the communities it links.

To start moving in the right direction, federal funding available in February 2009 from the stimulus legislation should be used for the initial transit greenway projects. At least 12 prototype transit greenways projects can be developed to provide the proper foundation for 36 educationally-enhanced, urbanized transit communities. Based upon estimates developed for various proposed transit greenways, assume for every eight miles of transit greenway, \$52 million³⁸ will be spent so that 12 transit greenways would cost \$624 million dollars. Such transit greenway projects are easily and quickly installed

as simple pedestrian improvements (landscaping, hardscape installation, wider sidewalk, plazas and minor street alterations).

Additional federal funds becoming available in October 2009 by way of the reauthorization of SAFETEA-LU (federal transportation trust funds authorization legislation) can be used to build the structured parking, plazas, mixed-mode streets, and other pedestrian-oriented components of this new American transit community.

Expected funding for Advanced TODs would be approximately \$326 million per 20 acre sized Advanced TOD or \$11.736 billion for 36 Advanced TODs.³⁹ Approximately one-third of the expected Advanced TOD costs would likely be spent on parking structures, plazas, mixed-mode streets and further transit greenway improvements (about \$3.9 billion in transportation trust funds over a five year term) and two-thirds of the expected Advanced TOD costs would likely be spent using private sectors funds (\$7.8 billion) on mixed-use liner and various destination buildings from private development funds (except as to already programmed public use buildings such a libraries, museums, schools, medical facilities, civic centers, or other government buildings appropriate for the area).

These two federally funded efforts (right now stimulus funds and longer term transportation trust funds to be spent over a six year time frame beginning October 2009) will help to grow the new American economy when components of an Advanced TOD include state of the practice science parks and platforms for higher educational and job training.

To accomplish economic growth through the specified transit community development strategies, transit greenway and Advanced TODs need be specifically mentioned in federal policy documents as expected outcomes or in the language of the American Recovery and Reinvestment Act. Specific mention of public-private partnerships and the parameters of these agreements can wait until SAFETEA-LU reauthorization legislation is being discussed, but it is safe to say such public-private agreements should provide at least the following:

- Performance-based measurements need to include:
 - i) ***Operational conditions*** (on-time arrivals, clean and well maintained equipment and facilities, customer satisfaction, successful capital expansions);
 - ii) ***Economic measurements of success*** (passenger revenues, property values, job growth, gross sales, gross income and the distribution of income levels); and,
 - iii) ***Social indicators*** (crime statistics, high school and college graduation percentages, low birth weight babies, homelessness).

- Management of passenger rail service and Advanced TOD operations would require long-term coordination through an agreement that pays management for expected performance and rewards management for performance above expectations.
- Recognition that the government service being sought is the effective and efficient combining of transportation services with Advanced TOD development and long-term operations.

Such public-private partnerships can be directed to help America grow and prosper, not just run trains and develop residential and commercial properties; profits from such efforts must be structured so they are highest when the entire system of mobility and community building works best and achieves all identified objectives: economic growth, mobility, and social and educational advancement. By these means, government and private assets can be properly managed and used to grow the new American economy.

Such policy or law references would hopefully recognize that as the newly built American transit communities interact with higher education and trade schools, they will support the development of the knowledge and skills important to the people of America and the world. With deeper knowledge and greater skills, Americans will be able to compete well in global economies. In this way, America will grow and prosper in a New Inventive Age that will span the 21st Century.⁴⁰

Over time, improvements to this urban form (transit greenways and Advanced TODs) will be discovered. As lessons from the *Preferred Community Development in the 21st Century* are learned in the United States, they will pass to other nations, cities and towns around the globe.⁴¹

Given the funding that will shortly be committed to infrastructure improvements in the American Recovery and Reinvestment Act (some projects will likely be configured as improvements to streets, bridges and an assortment of streetscape, transit, landscape, sidewalk, and transit improvements), some time should be spent determining if any of these projects should be coordinated and organized to fund transit greenways to be built within the next 12 months. Stimulus bill language and U.S. Department of Transportation policies should be crafted requiring planning efforts to be undertaken for Advanced TODs to be built within the next three to five years by way of public-private partnerships.

Such coordination between stimulus projects and transportation trust funds will optimize federal, state and local governmental efforts to grow the economy in partnership with the private sector through the development of retail, office, child care, medical, residential, financial, entertainment, higher education and trade school uses within these new

American transit communities. For this reason, Advanced TODs associated with existing or soon to be implemented passenger rail systems should be favored and prioritized by way of federal policy stated within the American Recovery and Reinvestment Act and related documents.

Further, preparations must begin now to determine where additional Advanced TODs and transit greenways should be planned and funded as part of the SAFETEA-LU reauthorizations scheduled for October 1, 2009. While the development of transit greenways and Advanced TODs may not be the only way to grow the economy, they fit very well within the stated goals expressed by the President and as further articulated in the recently published “The Job Impact of the American Recovery and Reinvestment Plan (January 9, 2009).

By development of such transportation improvements and educationally-enhanced and pedestrian-oriented intermodal communities, jobs across a diverse population will be created and sustained by a growing economy that will continue well after the stimulus is enacted and new federal transportation trust fund expenditures are authorized. Such strategies have been well understood in Europe and Asia for over 45 years.

To make the correct national policy decisions, there needs to be a full appreciation of what European and Asian nations have accomplished in the last half century and how transit greenways and Advanced TODs would substantially improve access to a globally competitive multimodal transportation system within the United States. Such policy goals and strategies need to be a specific component of America’s economic recovery given the fact that these transit greenway and Advanced TOD projects can be quickly implemented at many strategic locations in major cities with significant transit and passenger rail systems and within the jurisdictional authority of community redevelopment agencies or other local government structures that can use local taxes, assessments, and tax increment financing tools.⁴²

In the alternative, America can continue down the path it has followed for the last 50 years. It can continue to build the infrastructure of the 20th Century and ignore the progress being made in Europe and Asia to develop national and international multimodal transportation systems with large-scale pedestrian accessible transit stops and train stations and state of the practice science parks. It can continue to fall further behind its European and Asian economic competitors.

Americans may want to continue to love their cars, even when the rest of the world knows these cars will not love us back. This love affair with the car and focus of road

and bridge constructions, may in fact be the reason America finds itself in a difficult position today; a world power with a very large, but not very sustainable, economy.



International Making Cities Livable



Strasbourg is the capital city of the Alsace region and the 7th largest city in France. Major European institutions such as the European Union Parliament, the Council of Europe and the European Human Rights Court have made their headquarters in Strasbourg. In 1994 the tram system lines A and D of their tram system, Lines B and C were opened in 2000 and line E was opened in 2007. The total length of the tram system is 55 km (34 miles). It was built with the intent to enhance pedestrian movement, improve the quality of life and grow the economy. What is still quiet startling were their statements at the time they planned and developed their multimodal systems: *“In Strasbourg, we have opted for sustainable development. Our ‘utopian objective’ is to reconcile economic and social development with the well-being of our environment. A coherent transport policy is an essential pre-requisite for achieving our objective. Strasbourg Conurbation [the government of the Strasbourg region] wishes to share its experience in the field of transportation with other cities. The urban transportation structure is the result of a directive policy aiming to strike a new balance between the various means of transport.”* In the 15 years since they have undertaken this less space-consuming development strategy that would ensure the mobility of persons as well as goods, Strasbourg has been able to achieve remarkable continuing economic successes. The Strasbourg Conurbation has extended the pedestrian zones, reorganized the road network and embellished urban space to promote intermodality involving the train and provide users a real alternative to the automobile.

See: <http://www.eaue.de/winuwd/76.htm> and <http://www.investir-strasbourg.com/index.php/en/>.

If the Obama-Biden Administration is to be a catalyst for change, then the opportunity to change America for the better is within its grasp. It may not be wise to further increase the national debt by stimulating the U.S. economy of the 20th Century when there exists an option to build communities that will grow the economy in the 21st Century.

Maybe when we look at what other countries and cities have done to grow their economies, we will look at: Ireland; Strasbourg, France; Montreal, Canada; or, the Savannah School of Art and Design and its impact on the City of Savannah, GA. Maybe we should ask: What was done in Ireland, Strasbourg, Montreal or Savannah to grow their economy? How did they use higher education, multimodal transportation, and innovation to leap over obstacles and find their way forward by producing much more and learning to consume only what they could afford? What systems of transportation are being pursued in Europe and Asia?



Europe and Asian countries (Japan, China, South Korea, and Taiwan) are more than 45 years ahead of America in the development of a fully operational multimodal system of rail, air, road and water-borne transport. To walk in the pedestrian cities of Europe and some of the emerging Asian countries, is to be free of the car and free of the suburbs that have made all of us content, dumber and crazier than our ancestors. Europe has cities with hundreds or thousands of years of culture, architecture, and an extended walking infrastructure that creates human-supportive built environments that surpass the world. Europeans seem to be healthier and enjoy life more. How competitive will America be when all those lines on the map link? In 2004, Jane Jacobs published her last book, *Dark Age Ahead*. She suggested five pillars of society were in jeopardy: the nuclear family or community, representative government, education, science, and taxes. She asked: Would Americans adapt and return to vigor or continue down a path to decay? She concluded that it could turn out either way. Americans voted for change; change is needed now.

No one will likely be there to bail out America should the economy worsens and **therefore we need to get the economy back on track right away. We need to do it right the first time**; moving in all the right directions with a high level of expertise. The best strategies lie in using the stimulus to start the journey and finish it off with the full capacities of the transportation trust fund during the next several decades while these funds are still available to pay for a national multimodal transportation system.

For those advocates in the transportation industry that do not wish any such changes in transportation policy, they should consider where America will next go to pay its debts should the economy not grow after spending nearly a trillion dollars on stimulating the economy. The transportation trust fund created to build the Interstate Highway System may not be as relevant to the 21st Century as it was to the 20th Century.

It could easily be used, therefore, to balance future budgets instead of building roads and bridges should the American economy continue to falter. If transit greenways and the many road-like components of Advanced TODs can be built and grow the economy, we will never be faced with such a terrible choice requiring us to use that national infrastructure nest egg for ready cash in hard times. Further, the use of transportation funds for these Advanced TOD and transit greenways purposes would be very relevant to the 21st Century American needs and therefore less likely to be removed from infrastructure use.

Such a transit greenway and advanced TOD public policy will help Americans to consistently produce more than they consume and to refrain from borrowing more money than they can repay in the future. In this way, the Obama-Biden Administration can provide a change in leadership that will grow the American economy and preserve the transportation trust fund for future generations.

By the submittal of this paper, the Obama-Biden Administration is requested to consider these recommendations to improve pedestrian, transit, passenger rail, and TOD strategies before completing the stimulus package and while preparing for the October 2009 reauthorization of federal transportation funding that will direct federal transportation for the next six years.

We suggest that this transit greenway and Advanced TOD approach is the best way to go to immediately stimulate economic growth and to establish a sound basis for sustainable economic growth in the future. With a sustained economic growth, America can afford to pay for its infrastructure and other needs as necessary for our economic future and to maintain an American way of life.



<http://en.wikipedia.org/wiki/File:AsiaHSR.png>

Since 1945 Japan has led the way in the development of a national high speed rail system that links its major cities. Japan's Tōkaidō Shinkansen is the world's busiest high-speed rail line. It carries 375,000 passengers a day and has transported more passengers than all other high speed lines in the world combined. The Shinkansen serves as both a long-distance transport system and as a commuter service for workers in metropolitan areas. China holds the record for the fastest maximum operating speed of any segment of any high speed rail line in the world (217 mph) and its Beijing-Tianjin Intercity Rail line went into operation last August 2008. There are now six high speed rail countries in the world that have the capacity to manufacture and install high speed rail trains (e.g., Japan, Germany, France, Italy, Spain, and South Korea). The United States currently lacks this capacity. Canada, Brazil, India, Pakistan, Saudi Arabia, Malaysia-Singapore, Algeria, and Egypt are now examining its high speed rail options. Israel is building a high speed rail link between Tel Aviv and Jerusalem that is expected to be completed in 2015. Vietnam is building a high speed rail link between Hanoi and Ho Chi Minh City that will be built by 2013 and fully operational by 2025. Argentina and Morocco have selected Alstom (they built the TGV system in France) to construct high speed rail lines in the next decade. Iran had signed an agreement with Germany for a maglev system and have two high speed rail lines under construction, but work has been put on hold due to the countries deepening financial difficulties.

Section 3:

The Preferred Community Development in the 21st Century

To prosper and retain our quality of life, Americans must agree to build sustainable communities that reinforce productive and creative behaviors and which also support all modern means of transport. Preferred community development recognizes the value of walking and daily random and intermittent social interactions that keep us healthy and helps us to invent solutions for all the challenges we face every day. Enlightened leadership should recognize that: “Intellectual property is the gold of the 21st Century and it should be the fundamental policy of the United States to make sure that everyone has a pick.”⁴³

Given the existence of other high tech economies in the world,⁴⁴ near-term and long-term sustainable economic growth requires:

- An educated populace
- An environmental and climate policy that is science directed
- Laws to protect employees from injuries and to provide affordable health insurance and reasonable unemployment compensation.
- A low corporate and capital gains tax rate
- A rebuilding of our urban centers and the transportation systems so that they are best suited to provide reliable and efficient mobility and economic growth.

This paper is not attempting to address the many needed improvements of America’s educational system, our health care requirements,⁴⁵ employment laws, environmental protection, or tax policy. Instead, it explores how to achieve a new American prosperity through innovative community building efforts undertaken during the post high-tech economy⁴⁶ in what should be a New Inventive Age.⁴⁷ In a short *Introduction to [TheNewCommunityParadigm](#)*, attached to this paper as Appendix 1, an attempt was made several years ago to describe the type of community (an Advanced TOD) that would result from these community building activities.⁴⁸

By undertaking a process of sustainable, mixed-use, pedestrian-oriented “community building”,⁴⁹ Americans will become highly productive, mobile, and culturally fulfilled. When supported by fully integrated multimodal transportation policies,⁵⁰ new American

transit communities can develop superior urban living conditions within the context of the higher education and career pursuits. In these walking urban environments and at the colleges, universities, and trade school facilities embedded within these “built environments”,⁵¹ critical and creative thinking and job skills important in the global marketplace would become commonplace.⁵² Americans would become highly productive, mobile and culturally fulfilled. People will tend to stay healthy and think more clearly and innovatively when they are frequently and systemically engaged in large-scale walking. Frequent intended, random, and intermittent social discourse and other thoughtful interactions inherent in such large-scale walking environments will occur.⁵³

As suggested in this paper, a fair and equitable continued performance-based public-private partnerships would be useful in order to build these multimodal linked communities, new passenger rail components of the multimodal system and transit greenway systems. Government funded infrastructure (transit greenways, narrow gauge rail parking shuttles, traffic-calmed streets, mixed-mode streets, narrow linked parking structures, pedestrian corridors and plazas) will be needed to help properly frame the associated private sector mixed-use developments built adjacent to transportation system components.

Within such urban environments, nearly all Americans will more likely freely choose to produce more and consume in a responsible, sustainable way.⁵⁴ Further, due to the coordinated efforts with higher education and trade schools, a more egalitarian American culture will evolve. This has been shown to naturally arise from a well-formed curriculum of higher education.⁵⁵ In addition, where mixed-use environments at higher densities are developed to include social and income integration, disadvantaged people benefit from living in mixed-income communities, especially when education takes place in many different settings (libraries, Wi-Fi plazas, and other elements of an Advanced TOD).⁵⁶

It is expected that over time productivity will substantially increase, crime will dramatically decrease, energy will be conserved and healthy lifestyles will be more typical. The economic and social conditions of daily life will significantly improve and the wide variety of financially rewarding intellectual pursuits will become normal.⁵⁷ When these new communities are developed, the adverse individual and collective human impacts on the environment, global weather and the quality of life enjoyed by others will reduce.⁵⁸ These benefits arise from historically well established mechanisms inherent to well planned and operated cities and urban centers.⁵⁹



In Vienna, Austria, small plazas routinely locate next to small trams operated throughout the city and to outlying communities. Such places allow humans to nest, rest, feed, and socialize (similar to the ecological needs of urban adapted wildlife to seek environments where they can “nest, rest, breed, and feed”). When they have completed their lunch, frequent tram service take these city dwellers to the other locations as the need arise. Urban mobility is assured via such tram systems, the nearby mostly underground parking facilities, and pedestrian areas that facilitate short or longer walks to the desired destinations. These plazas are routine in Europe and Asia and rare within the United States.

As part of these stimulus plan discussions, it should be recognized that to improve the American economy, a far greater number of Americans need to be graduating from high schools, trade schools, and universities. Students who graduate from these institutions need to possess the knowledge, expertise, and learning skills necessary to succeed in today’s economy. College education, career training and related living expenses must be affordable to all who show the willingness to master these academic subjects and 21st Century job skills. In addition, living conditions and travel opportunities must stimulate original and creative thinking through a variety of distinctive urban and other experiences.

In addition, in any well managed country early childhood development needs to be enhanced through supportive federal and state programs. All children will be given a helping hand (a loving one as well).⁶⁰ The hope and goals of this nation should always be that children can choose a productive life through higher education and job training.

To accomplish these educational missions, colleges, universities and trade schools need to be expanded into communities located at and adjacent to train stations and fixed transit stops. Locating educational and student housing opportunities at transit stations interspersed with workforce housing and market rate housing tends to improve mobility and social interactions of these very productive citizens. These improvements include: the linkages between the working community; training for careers and jobs; and, the social cohesion and crime prevention through environmental design strategies important to more densely developed urban areas.

Collectively, these urban improvements will reduce crime through the design of the “built environment” so that many eyes are focused on the street and a community awareness of what is normal and correct is well established by local residents. Such urban design strategies are sometime referenced as “crime prevention through environmental design” (CPTED).⁶¹

In this way, the pedestrians and the active student population will constitute the many well recognized customers, friends, family members or other welcomed community visitors. Criminal activities or other undesirable actions are quickly recognized and prevented through reports to police or a more informal citizen warning to “Behave yourself!” or “Tone it down, young man!”. Within the state laws of Florida, there is statutory support for such “safe neighborhood” efforts that should have a positive financial impact on the feasibility and sustainability of any proposed Advanced TOD project.⁶²

These educationally-anchored transit community development efforts should be undertaken within the context of community-based, pedestrian-oriented, mixed-use intermodal facilities developed as Advanced TODs. These Advanced TODs and associated transit greenways can be built in part with existing federal transportation funds authorized for that purpose (i.e., Fringe and Corridor Parking Facilities at 23USC137; Transportation, Community, and System Preservation Program; Small Starts; FTA TOD Joint Development projects; Congestion Mitigation and Air Quality; 49USC5307 Transit Capital projects; Livable Communities projects; or, other intermodal funding strategies).

Some transit systems can be expanded into existing universities, colleges and trade schools. In such cases the urbanized mixed-use and pedestrian-oriented communities for large-scale transit access would need to be built on such university or school campuses. In either case, by establishing public-private development partnerships,⁶³ parking in narrow and linked parking structures⁶⁴ and walking areas positioned adjacent the mixed-use liner buildings and significant community destinations. Such parking is positioned at

the rear of the buildings and mixed-mode streets and pedestrian plazas are positioned at the front or side entrances of the mixed-use or destination buildings.⁶⁵

Advanced TODs with the education, job training and transit greenways components should be viewed as **sustainable engines for economic development** that will help link America within the context of an efficient national multimodal transportation system. They have been the subject of study at several South Florida locations and are ready along with the associated transit greenways for near-term development.⁶⁶

An Advanced TOD would have many, but not necessarily all, of the characteristics of a state of the practice research and science park.⁶⁷ In the several locations along the train system route, they would collectively need to have all of these characteristics.

In Jack Pinkowski's *State of the Practice Opportunities for the St. Lucie County Research and Education Park: Research and Science Parks for Economic Development* (2005) report, he identified 12 factors critical for the success of science parks when they are examined around the world. They were:

- A business incubator
- University partnerships
- A collaborative alliance and partnership between business, academic and public resources
- A culture of innovation
- Industry clusters
- Appealing quality of life and cultural facilities
- Research and innovation embedded with commercial activities in the community design
- Transportation multimodal networks
- Supportive institutions
- Proximity to flexible space
- Technology infrastructure
- A community of practice that contributes to the dynamic development of knowledge

Further, Dr. Pinkowski observes that success for research parks is generally defined in economic terms, such as the number of companies started, the number of jobs created, and the growth of the property values. These same measurements could be used in a public-private partnership to define desired results from the combination of a well-built and professionally operated passenger railroad or transit service, well-built and maintained Advanced TODs, and well-integrated and successful strategies to integrate higher education and trade school opportunities into the fabric of the Advanced TODs. Payment for such governmental services could be appropriately agreed upon based upon meeting the minimum operational, economic and social performance requirements and to provide for bonus payments based upon exceeding such expectations.

Under the terms of a carefully written agreement, this rich Advanced TOD environment of thoughtful people, creative thinkers and subject experts need to be well-managed so there can freely exchange ideas and engage in discourse that leads to invention and new ideas to benefit themselves and mankind.

Advanced TODs located within community redevelopment districts, community development districts or other similar local governmental structures that have access to tax increment financing, property taxes and property assessments are ideal locations for such transit related community development and redevelopment. With tax increment financing induced through near-term stimulus funding and longer term transportation funding, local property taxes and assessment revenues, quickly funded and developed sustainable Advanced TODs are possible.

By way of Florida's safe neighborhood district, property taxes, assessments or tax increment financing can be used so that all funding tools for transit greenway and Advanced TODs construction and operations can be leveraged with stimulus and transportation funds for long-term growth.



The attached image was created in 2004 as a part of a Park West planning effort undertaken for the Miami CRA. It depicts how an alley, long ago used for a freight railroad stur track, could have been changed into a mixed-mode street. A transit greenway proposal was first suggested as an amenity for a proposed Miami baseball stadium when it was proposed at Park West. Now that the proposed Florida Marlins Baseball Stadium has been located at the Orange Bowl site, a similar transit greenway application could be placed there. Further, similar proposals in Miami-Dade county were developed as the FIU CIS Conceptual Plan Project and the 107th Avenue Pedestrian Transit Greenway Corridor for the City of Sweetwater and these planning strategies could be applied to the Dolphin Stadium at the terminus of the planned North Corridor Metrorail Extension. See: Appendix 7 and the [MIAMI AT MIDNIGHT](#) report at endnote 67.

State transportation laws should be reviewed for other opportunities to plan for and build transit greenways and Advanced TODs. For example, in Florida there would be more than adequate support for such efforts given the provisions of the Florida Public Transit Act (Florida Statutes, Chapter 341) and the Florida Strategic Intermodal System (F.S. 339.61 et. al.).

These Advanced TODs would systemically cause large numbers of people (calculated as hundreds of thousands of people per day per Appendix 2) to walk longer than typical distances (one or more miles with the assistance of transit greenway vehicles) and access public transportation in larger than typical numbers (likely to be a three fold or more increase in transit use when compared to current American experience).⁶⁸ Systemic community patterns and strategies necessary to achieve these desired results will require close attention. The results will likely be remarkable in terms of sustained economic growth (due to frequent intended, random, and intermittent positive social and intellectual interactions). The customer base for transit and passenger trains will substantially increase during the 18 hours a day operational schedule (where the vehicles are full of customers) and therefore transit systems operate without ongoing operating subsidies.

Within these urbanized areas where Advanced TODs are located, the development methods and priorities must change to provide more attention to the organizational and architectural details in the spaces between buildings. Given current attention to details that is typically undertaken when developing the buildings and providing for their interior design, this shift of focus will require much more attention to the spaces where people walk between buildings. In traffic-calmed streets, mixed-mode streets, pedestrian corridors, courtyards and plazas, the components of an “outdoor” living room must be present. This focus on outdoor urban conditions requires an environment that protects the pedestrian from the rain, wind, sun, heat, and cold when they are walking to or adjacent to all buildings within the Advanced TODs.

This is accomplished by continuous building forms positioned adjacent to the pedestrian areas that provide shelter from adverse climatic conditions. Through the use of strategically located landscape canopies and the building mass, entries, arcades, passages, awnings, roof overhangs, and other building features, a continuous cover when needed and “open to the sky” environments when desired is available. When properly developed as outdoor living rooms, such public places within the Advanced TODs provide “micro-climates”⁶⁹ that allow a pedestrian to change the environmental conditions based upon where they stand, walk, shop or sit.

These micro-climates help to extend the typical walk by providing a variety of conditions at different times of the day that appeal to the needs of different pedestrians (some want to cool off, while others want heat from the direct sun). These pedestrian environments include buildings that open to the streets and provide for the needs of daily life. These conditions stimulate the five human senses and help to steer pedestrians to desired transit stations and other destinations.

These preferred community environments provide open access to building interiors, shading, seating arrangements, fountains, art, and lighting to “furnish” this public outdoor living room and establish a superior level of comfort, interest, use and safety to pedestrians. In addition, narrow gauge rail parking shuttles, similar human-scale pedestrian-oriented vehicles, or other mechanical devices are embedded into the walking corridors to extend the typical walking range of pedestrians outwardly one to two miles from the urban center.



Buildings open to the street where food, clothing, and other fragrant or colorful items for sale are displayed and easily at hand. People in the mixed-mode streets and the pedestrian corridors, courtyards, and plazas of an Advanced TOD will shop and wait for transit vehicles arriving at frequent and regular intervals. People will not walk where there is nothing to stimulate the five senses; where they are not well protected from the elements; where there is no purpose served; and, where it feels unsafe or uncomfortable. Activities that entertain attract. Items that cause fear trigger an urge to flee.

These transit greenways should be developed outwardly from the Advanced TODs as wide (30 feet or so), well-lit, and attractively landscaped sidewalks or linear parks. As multimodal corridors, they provide a route for small fixed-guideway trams (transit greenway vehicles initially configured as narrow gauge rail parking shuttles) to major suburban or other destinations (and their related parking spaces) within a one to two mile radius.

Over time, as additional mixed-use and destination buildings are developed on both sides of the transit greenway, the Advanced TOD perimeters will grow and better

provide support for high quality, productive, law abiding, and interesting lifestyles. Highly efficient and effective intermodal transfers from cars to transit and passenger rail systems (which in turn connect with air and water-borne modes of transport) will result.

These Advanced TODs include the use of very specifically built components:

- Very narrow and linked structural parking structures developed within or adjacent to such mixed-use and major destination buildings
- Small transit greenway vehicles or parking shuttles that run to or through such buildings within mixed-mode streets and along transit greenways
- Pedestrian areas and plazas that dominate these urbanized town and city centers and intuitively lead large numbers of potential customers to train stations and transit stops
- Traffic-calmed streets that run to, but not through, the urban centers
- Transit greenways outward of the urban center that link with suburban destination within a two mile radius and transform into mixed-mode streets as they enter the urban center and continuous building faces are established (liner buildings or destinations buildings) on both sides of the corridor

Properly built Advanced TODs and transit greenways are likely to produce very large numbers of passengers to such transit and passenger rail systems (potentially hundreds and thousands of people every time the transit vehicle or train stops for passengers) so that fully integrated multimodal transportation systems can become financially feasible in the United States. In circumstances where transit demand is high, finding the trains and transit vehicles that can load and unload such large numbers will not be a problem.⁷⁰

Roadways that calm car traffic as they approach these urbanized centers, tend to run to, but not through, the well-planned Advanced TODs. These roadways provide transit access and terminate at very narrow linked structured parking facilities. These same roadways reappear as cars exit at another narrow structured parking facility that, by connecting traffic aisles or otherwise, is linked to the first entry parking structure.

In this way, car and truck traffic can enter and depart the urban centers without causing traffic congestion on the local roadway network or interfering with or discouraging large scale pedestrian movements. Further, in such a built environment, most car trips become multimodal trips and include both walking and transit trip segments.

This strategy of traffic flow (car and truck movement to, but not through the urban center) will intrinsically motivate the residents and visitors of these communities to use their cars less frequently and for shorter trips. By treating each Advanced TOD as a car

or truck trip destination and supporting large-scale pedestrian movement, there will be a greater tendency to rely upon the community for consumer goods and services. Energy requirements are thereby reduced without a sense that mobility has been compromised or that one's quality of life has diminished. Freight is delivered by rail or truck at off-peak hours in easily accessible loading docks.

These Advanced TODs and transit greenway systems are built with American materials and supplies, are operated with American produced fuels and sustainable energy sources, and provide an employment base for the necessary operational components of such innovative intermodal and livable community systems. Transit greenways construction projects will not disrupt the major highways and business districts because they represent a coordinated series of smaller projects (streetscape, sidewalk, landscape, lighting, plaza surfacing, road resurfacing, bicycle lanes built to fit narrow gauge rail vehicle widths, transit stop or train station improvements) that can largely be built in evening or at other non-peak hours. Even Advanced TODs are not as disruptive as major transportation projects in that they can be built in localized phases off the highway or rail system.

Transit greenway and Advanced TODs will be easier to construct as multiple low impact projects within urban settings without disturbing ongoing businesses. They will avoid the unintended consequence of losses in the local economy arising from disruptions that occur when undertaking large-scale construction projects. These transit greenway and Advanced TOD projects will not be isolated small infrastructure improvements that lack any continuing positive economic impact.

These urbanized spaces become more beautiful, interesting, safe, useful, satisfying, efficient, convenient, and comfortable as one approaches the train station or transit stops. Vendors at the street level timely meet every need of the traveling public. The spaces between buildings are increasingly attractive to the five senses⁷¹ given the perceptual range of each human sensory organ.

If you want to improve society and its economic conditions, build beautiful places for people to walk in the cities where all adverse conditions are mitigated and strong reasons exist to stimulate the walking impulse.

People walk when the built environments support that behavior.

When people walk, society improves.

Summary and Conclusion

Economic development and stability in the United States can be stimulated into existence through the expenditure of new federal dollars on infrastructure projects throughout the nation. However, as Jane Jacobs has explained, the wealth of nations rests largely upon the productivity of its cities. This observation should cause Americans to question if the federal stimulus funds being proposed have been properly directed so as to grow the new American economy.

This paper suggests such directions should come from President Barack Obama in the form of a proposed stimulus plan policy stated as follows:

Federal funds provided by the American Recovery and Reinvestment Act should be collectively examined by state and local officials to determine if the infrastructure projects to be funded can be combined to provide for the development of transit greenways and to establish a plan for the development of Advanced TODs that would help to grow the new American economy.

To grow a sustaining economy it is necessary to develop Advanced TODs that are:

- Educationally anchored
- Pedestrian-oriented
- Components of a state of the practice science park
- Linked to:
 - i) transit greenways and transit greenway vehicles;
 - ii) transit stops;
 - iii) passenger rail stations;
 - iv) significant destinations within a two mile radius;
 - v) higher education and trade schools; and,
 - vi) the current highway system

When American cities develop the components of Advanced TODs in the spaces between buildings, new American transit communities will grow in size and value. These engines of economic growth will provide exceptional mobility via links with the highway system and the many local and distant significant destinations via transit greenways and a national multimodal transportation system. American cities that build such intermodal communities will prosper. Their tax base will rise. People who live there will find meaningful work and the economy will grow faster than the national debt.

When states and local governments expend the funds obtained through the American Recovery and Reinvestment Act, the preferred policy to embrace is:

- All stimulus projects in a given area shall be grouped together whenever possible as a coordinated effort to build transit greenways and plan for Advanced TODs
- Advanced TODs should be planned as public-private partnerships that will make requests for the use transportation trust funds to build the necessary Advanced TODs infrastructure and will receive funding approvals with the reauthorization of SAFETEA-LU. The private sector will handle mixed-use development costs. About one-third of the total costs will be paid by transportation trust funds and used for necessary infrastructure and two-thirds of the total costs will be paid by other sources and used for the mixed-use development and destination buildings and facilities.
- State and local transportation trust funds will be used to expand transit and passenger rail services as significant passenger counts occur that warrant such expenditures. It is expected that such passenger increases will occur as transit greenways and Advanced TODs are built. With these new transportation expenditures, America will be able to fully implement a national multimodal transportation system.

As a type of intermodal system, these Advanced TODs and transit greenways will provide for very large scale intermodal transfers within very productive, economically-sustainable, mixed-use community environments. If 12 transit greenway projects were launched through stimulus funds by coordinating about \$624 million dollars of infrastructure projects and 36 Advanced TODs could be planned at this time to be implemented through the reauthorization of SAFETEA-LU, immediate and sustained economic growth could be projected.

Building 36 of these Advanced TODs throughout the nation would use \$3.9 billion of transportation trust funds and \$7.8 billion in private funding, but it would begin a much bigger recurring growth pattern as the compact Advanced TODs and transit greenway system evolve over time to grow American cities and help to fuel the new American economy for the next 50 years.

In Florida and elsewhere, specific transit greenway projects using narrow gauge rail parking shuttles along a transit greenway corridor can be programmed as federally supported near-term economic stimulus initiatives along with the Advanced TODs that can be funded through the reauthorization of the SAFETEA-LU. By these means, an array of infrastructure projects can be coordinated within the context of the best livable community strategies and a long-term federal commitment to a world-competitive national multimodal transportation system.

Such initiatives can provide to all American communities the opportunity to build new American transit communities and grow the new American economy throughout the 21st Century. Improving our urban infrastructure in this way means we will not have to short change future generations with a national debt larger than the economy.

By growing the new American economy, we will therefore grow hope and, with it, our long-term national prosperity and security.



The Orlando Railroad Depot at Church Street Station is Orlando's historic railroad station that will be revitalized with the final approvals for SunRail: the Central Florida Commuter Rail Service. When these approvals are granted this year, SunRail will operate between Kissimmee and Deland with stops at 3 locations near downtown Orlando (Orlando Health/Amtrak Station, Church Street Station, and Lynx Central Station) that are the subject of an Orlando Downtown Parking Shuttle (ODPS) Transit Greenway proposal shown at Appendix 8. The proposal would link most major downtown destinations (Orlando Events Center, Citrus Bowl, and the Orlando Performing Arts Center), medical facilities, schools, office buildings and retail establishments) and require 8 miles of transit greenways to be installed and operated. See: <http://www.sunrail.com/>. The ODPS Transit Greenway proposal consists of: i) 30 pound rail to be configured as 30 inch narrow gauge (NGR) track; ii) 615,000 square feet of decorative sidewalk; iii) 14 powered parking shuttle NGR tram vehicles and 24 ultra-low floor, unpowered, parking shuttle NGR tram trailer vehicles to expand passenger carrying capacity; and, iv) maintenance facilities and equipment. The total estimated costs for this proposal is \$52 million dollars and it would produce just from the transit greenway efforts the following jobs: i) 98 new jobs to fabricate the parking shuttle, install track and construct or reconstruct the sidewalk; and, ii) 180 new jobs once the system is completed in order to operate and maintain the ODPS Transit Greenway. Operating costs within a four year term will be fully paid by users of the system. The ODPS Transit Greenway will support three Advanced TODs that will be developed as 1188 residential units (market rate, workforce, and rent assisted), 1,380,000 square feet of retail, office and hotel use, and up to 10,000 parking spaces. Developed at a cost approximating \$1.5 billion dollars, the three Advanced TODs will be built over a five year or more term as a public-private partnership.