

Part 2
Planning and Finance

Light Rail Transit and Effective Land Use Planning: Portland, Sacramento, and San Diego

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The economic benefits of integrating effective land use planning with light rail transit (LRT) corridors are becoming increasingly obvious. Coupled with land use planning, opportunities for successful economic development greatly increase through careful corridor selection. Land use planning is more than just incidental to the transit corridor development process. Economic development can be a central goal of regional LRT corridor selection. Effective land use and LRT project coordination is beginning to change the shape of some North American metropolitan environments. Portland's leadership in regional transportation policy and land use planning philosophy is viewed as highly innovative, but other communities also are making creative efforts at effective land use and LRT coordination. Generally such efforts focus on two distinct types of development approaches: economic revitalization coupled with infill development along already developed corridors and newly developing areas within a region where LRT currently does not exist. North American cities that have undertaken land use programs in conjunction with contemporary light rail transit corridor development include San Diego, Sacramento, and Portland. In Portland, land use is the focal point and keystone of the region's planning strategy. Successful LRT corridor development and successful ridership levels ultimately can be optimized through regional coordination of land use planning by cities undertaking regional rail system development.

On the basis of a brief survey of three North American cities (through September 1991)—San Diego, Sacramento, and Portland—it appears that coordination of land use planning and light rail transit (LRT) varies greatly from region to region, even in locales with existing and expanding LRT systems. True LRT and land use integration appears most likely within a metropolitan area when regional-scale coordination efforts are undertaken.

SAN DIEGO

The San Diego area has recently undertaken a regional effort to increase development densities in transit corridors. Driven by air quality issues and traffic congestion, as well as urban sprawl, a problem solving regional approach has been taken to improve the transportation systems, air and water quality, and the overall quality of life in this southernmost region of the California sun belt. These desired improvements have led to numerous overlapping programs within San Diego, all designed to achieve the same goal—better quality of life. To

date these programs have not been coordinated on a regional level. The desire is to develop land and communities in a more compact fashion—urban design and planning that establishes an urban pattern and form—integrated with light rail transit facilities toward LRT corridors.

The California Air Resources Board directs all local air pollution control districts to gain compliance with the state's Clean Air Act. The regional Council of Governments is developing a transportation demand management program, focusing on reducing traffic congestion and reducing use of single occupancy vehicles during peak hours. The San Diego area currently has no parking management plan, but within two blocks of LRT stations, some degree of parking controls is necessary to achieve a coordinated response to the consolidation need brought about by the inclusion of LRT in the land development fabric. To reduce vehicle trips and length of trips, land use is increasingly seen as playing a major role.

To date efforts to promote transit-oriented development in the San Diego area have consisted of medium- to large-scale, mixed-use projects to encourage more transit trips and fewer auto trips. Examples of this approach include two significant projects developed integrally along and around the LRT system: the MTS/James R. Mills Building, a public-private partnership development (1) and One America Plaza, a wholly owned private development project (2).

MTS/James R. Mills Building

The MTS/James R. Mills Building is located at the Imperial and 12th Transfer Station and serves as a regional transportation center for downtown San Diego. It is located where three trolley lines and several major transit bus lines converge and includes a unique 10-story facility featuring a creative design spanning the trolley tracks. In this regard, it serves as a model development project for integrating LRT and commercial or office development. An impressive 15-story (233-foot) free-standing clock tower adds to the architectural presence of the building, combining to serve as a landmark and as a testament to the vision of the development team. A public-private partnership between the Starboard Development Corporation and the San Diego Regional Building Authority served as the development team. The Regional Building Authority was a joint powers agency that involved the county of San Diego and the Metropolitan Transit Development Board (MTDB).

As MTDB's Limber notes:

The use of fast-track, private sector design/build techniques to construct and fully furnish this turnkey project allowed occupancy just 14 months after ground breaking. The entire timeline from project conception to completion took less than 3-½ years. The \$35 million project was financed through the sale of \$43.6 million in tax exempt lease revenue bonds. (1)

Created by the state Legislature in 1975 and empowered to plan, construct, and operate mass transit guideways, MTDB was best known as a guideway development organization during its first 10 years. Because MTDB served as the policy setting and overall coordination agency for public transportation in San Diego's metropolitan area to perform near-term planning, Joint Development became an obvious evolutionary opportunity for the agency with the expansion of its light rail system. San Diego trolley started operating in 1981. In 1983 MTDB's Board of Directors acquired a 2.65-acre parcel for future use as a transfer station between the agency's south and east LRT lines. MTDB's goals for development of this site were (1) to develop a project that would be cost-effective for its own needs, and (2) to serve as a model for future private-sector participation in mixed-use projects at transit facilities. (MTDB acquired the Metropolitan Transit System in 1985.)

A team of expert consultants was called in to assist in the developer solicitation process, evaluate the proposals, and make recommendations on developer selection. In late 1985 a request for qualifications was issued, calling for developers to submit their qualifications to build an administrative office building of 40,000 ft² while maximizing additional office space for private occupancy and ground floor retail space to serve the building's occupants. On-site parking was also a design parameter. Through extensive local discussion, political negotiations, and development team input, the project scope had increased by spring 1987 to a 10-story, 180,000-ft² building with an adjacent parking garage and 15-story clock tower.

The architectural team was given explicit instructions by the MTDB directors "to design an edifice which did not look like just another office building." Civic pride and revitalization for the downtown skyline was their primary motivation. The project became a complete turnkey effort, with construction costs developed integrally among the architect, interior designer, and contractor. Revenues from the parking garage were dedicated to offset property management costs and projected operating expenses with any surplus offsetting the debt retirement payments of the county and MTDB. The project's successful implementation can be credited to close coordination among the developer, the construction manager, and the clients on all aspects of the design/build program.

A wonderful example of how the project became "a success through self-fulfilling prophecy" was given by Jack Limber, General Counsel, San Diego Metropolitan Transit Development Board, who wrote:

As construction progressed, a question arose as to where we would obtain a clock for the 15-story clock tower. Swiss Bank Corporation (which had secured the bond holders' interest with a letter of credit) shocked us with the announcement that they had arranged for the donation of a clock from Ebel of Switzerland. Presented as a gift to the citizens of San Diego, the clock has been valued at \$700,000 and exemplifies the special attention given to this project by Swiss

Bank Corporation. The tower, most appropriately, has now been dedicated the Ebel Clock Tower. (1)

Limber concluded that there were some lessons to be learned from this successful joint development project effort by MTDB. These included (1)

1. Choose the best team to develop a project concept—do not let the concept drive the selection.
2. Use a qualified local development team because their motivations to ensure a successful project will go far beyond their economic return on the transaction.
3. Set the project budget and schedule fairly, with recognition for changes.
4. Dare to dream and challenge others to implement those dreams as their own.

America Plaza

Located on the Bayside Line, an LRT loop within the Centre City area, America Plaza will likely become an important destination in the fabric of downtown San Diego. Its location can be considered the hub of all public transportation including trolley, bus, rail, and air (it is within a short drive of San Diego's airport). This, combined with its proximity to the waterfront and walking distance to hotels, retail, and services, will ensure the project's long-term success. Located just three blocks from San Diego Bay, the mixed use development is situated on 3 acres and will have three major components:

- A 34-story, 565,000-ft² office tower—1 America Plaza; construction cost is \$125 million.
- A 15-story, 272-room luxury all-suite hotel—a Guest Quarters Suite Hotel; estimated construction cost is \$42 million.
- A Transportation Arcade that will link the office and hotel buildings with its crescent-shaped, fully enclosed trolley station, which will connect the existing downtown trolley service and the Bayside Line, which opened in 1990. Also featured will be 42,000-ft² of retail and restaurant space. Estimated construction cost is \$4 million.

A four-level subterranean garage beneath the two-block project will provide 1,250 parking spaces.

America Plaza was sited and designed to take advantage of the downtown trolley service, the Bayside Line, and the bayfront. The project area overview prepared by the developer(s) clearly capitalizes on San Diego's marvelous qualities. Its climate, economy, and continued population growth remain attractive when compared nationally. Housing and employment trends will continue to increase more than national and state trends and will boast an average retail per capita income increase over the next 20 years of 40 percent, compared to 29 percent nationwide, according to Starboard Development Corporation (2).

SACRAMENTO

The Sacramento metropolitan area has undergone unprecedented growth over the last 20 years, resulting in greater

congestion on Sacramento's streets and highways. Innovative alternatives have been sought to improve the flow of both traffic and people. The Sacramento Regional Transit District has become increasingly aware of the potential benefits brought about by integration of land use and LRT system development. The following efforts have been undertaken since 1987 and include several responses by regional agencies to deal more effectively with the challenges arising from the interface between land use and LRT.

Coordination of Land Use and Transit

In 1987 the Sacramento Regional Transit District produced a brochure identifying some practical suggestions for a transit-supportive environment and community (3). The brochure was intended for developers, planners, designers, consultants, public officials, and interested citizens to outline the benefits of including public transit in their planning and development activities.

The brochure focused on answering some of the following questions about land use and transit:

1. Why coordinate land use and transit?
2. What are Regional Transit's land use policies?
3. What are the problems?
4. What can be done to alleviate the problems?
5. What are the benefits (to the developer, to local government and the community)?

Continuing with examples of land use/transit coordination, the brochure cites the need to incorporate public transit into land development projects, concluding with a section on development of design guidelines for bus and light rail facilities. These guidelines illustrate what developers and local governments generally need to consider in the project planning process for smooth transit service (3).

Transit-Oriented Development

The transit-oriented development (TOD) concept is a growth strategy intended to assist Sacramento County in implementing the guiding principles of the land use element of the 1991 county general plan update. These principles include the following:

- Maximizing the use of existing neighborhood urbanized areas;
- Reducing consumption of non-urban areas;
- Linking land use with transit;
- Reducing the number of auto trips and regional vehicle miles traveled;
- Reducing air pollutant emissions;
- Providing a diversity of housing types; and
- Designing the urban area efficiently.

Linking land use and transit will result in more efficient patterns of development that support a regional transit system and make significant progress in reducing traffic congestion and air pollutants. Transit-oriented development with mixed

land uses within a pedestrian-friendly area connected to transit allows for minimum environmental and social costs while providing for growth.

As described in *Transit-Oriented Development Design Guidelines*:

Transit-Oriented Developments are mixed use neighborhoods, between 20 and 160 acres in size, which are developed around a transit stop and core commercial area. The entire TOD site must be within an average one-fourth mile walking distance of a transit stop. Secondary Areas of lower density housing, schools, parks, and commercial and employment uses surround TODs for up to one mile biking distance. TODs must either be located on a segment of the Trunk Line Network (either a light rail or express bus line) or on a segment of the Feeder Bus Line Network within 10 minutes transit travel time from the Trunk Line Network. (4)

The guidelines document has ample illustrations that help communicate design parameters for all aspects of transit-oriented development. These include project siting and design, land uses, densities, streets and circulation, pedestrian and bicycle systems, transit stops, parking requirements, open space and parks, and relationship to surrounding land uses.

Comprehensive Land Use/Light Rail Transit Guidelines

Today the Sacramento Regional Transit District (SRTD) is preparing a more comprehensive perspective on LRT and land use coordination. The agency's position is that the county standards—although a fine effort at formulating design guidelines for developing areas of the community—will not suffice for SRTD's larger goals. These goals include (a) enhancing transit in central development areas to better serve greater numbers of the public; (b) establishing urban form with relevance to the light rail transit/land use relationship; and (c) developing site design standards that are pedestrian-friendly and are components of transit system development that can be as influential to the public's acceptance of the project as the system itself. These critical geographical areas are seen as essential for increasing transit service to serve large numbers of the public more effectively. SRTD believes that LRT has the effect of improving a transit system's creativity.

PORTLAND

The Portland metropolitan area first undertook regional-scale land use planning when Oregon's statewide land use planning goals were developed in 1973–1974. The state's Land Conservation and Development Commission approved the goals at the end of 1974. Every municipal, county, and regional jurisdiction in the state has had to comply with these statewide goals in implementing its own comprehensive land use plan.

The Transit Station Area Planning Program (TSAPP), initiated in 1980 by the Metropolitan Service District (the Portland area's elected regional government) and funded by the Tri-County Metropolitan Transportation District of Oregon (Tri-Met), was the area's first effort at coordinating regional land use planning relative to a specific transportation pro-

gram—the Banfield light rail project. With the region recognizing the importance of the relationship between land use planning, mass transit, and economic development, TSAPP became the first example in the United States of land use planning measures for a light rail corridor being implemented prior to the initiation of revenue service. Since that time, land use planning has become one of the primary reasons that the city of Portland's regional rail program has taken on a fairly aggressive schedule. The goal is to build five more LRT corridors to complete a seven-corridor regional system by the year 2010. Implemented simultaneously, regional LRT and regional land use planning can help shape the settlement patterns of a half million new residents projected for the region within the next 20 years.

Transit Station Area Planning Program

Between 1981 and 1982 planning for the Banfield light rail project in Portland focused on a 15.1-mi, 25-station light rail corridor to connect downtown Portland, East Multnomah County, and the city of Gresham to the east. In addition to providing the region with mass transit, one of the Banfield project's main objectives was to help shape development. Along the 5 1/2-mi East Burnside portion of the corridor, the county's planners had long wanted to use light rail for shaping growth. All three jurisdictions agreed that light rail could also be the tool for restructuring zoning codes and development practices even before the line became operational. To support the regional goal, Tri-Met spent \$1.2 million to achieve these planning and development objectives.

The area's regional government, the Metropolitan Service District (METRO) administered the Transit Station Area Planning Program (TSAPP) for all three jurisdictions and put in place a team of planners, architects, and economists. These jurisdictions each intended to create a new zoning framework for all land within each station area.

Ultimately the region has benefited from the TSAPP process in that new zoning ordinances and development policies were implemented prior to the construction of light rail. This action encouraged transit-oriented development during both the planning and construction processes. The region has seen more than \$800 million in both private and public development built, designed, or enter planning stages since the line opened in 1986. All this development is either adjacent to the line or within a block or two of the system. Transit-related design with a spirit of pedestrian activity has resulted in the Portland region, fostering higher density residential growth and higher intensity commercial development. Such an approach is seen as necessary for successful implementation of future light rail lines, adding to the initial successes of the Banfield project (called MAX in operation for Metropolitan Area Express) in the areas of both corridor design and transit-oriented land use planning.

Much of the transit-oriented development is "retrofit" development—fitting new, higher density projects into existing neighborhoods, or re-creating neighborhood structures where such an approach is feasible. In Portland the approach has been to place new light rail lines in existing, mostly developed corridors, optimizing development and revenue generation (5).

Central Beaverton Development Program

The Beaverton area began developing in the 1840s and the city of Beaverton was incorporated in 1893. Today Beaverton is a first-tier suburban community poised for additional development and redevelopment. The central Beaverton area is composed of the original Old Town with a regular grid system of streets and blocks. Around the turn of the century, this area had a trolley system that was removed in recent years. Today the Old Town area is surrounded by highway strip commercial, auto-oriented malls, multifamily residential, and industrial uses. The area is vibrant and active with streets and parking lots choked with vehicles. Because of congestion and the low-intensity development pattern, it is difficult to be a pedestrian there.

With the promise of light rail transit in central Beaverton (i.e., the Westside light rail corridor as an extension of the Banfield light rail project), the city has sought to maximize the integration of land use and transportation developments. The downtown development plan seeks to arrange land uses and circulation elements in a manner that takes full advantage of transit. LRT station areas will be surrounded primarily by multifamily residential and office uses with auxiliary retail. Additional retail outside the LRT station influence area is now and will continue to be served by auto. The area's high-tech electronics firms can be served directly by auto, LRT, or a shuttle from LRT. An extensive open space system featuring bike and pedestrian paths is planned on pedestrian streets and along stream corridors. The bike and pedestrian paths will allow people living, working, shopping, and visiting central Beaverton to access various land uses and LRT without private, individual vehicles.

The Beaverton community has worked for over 3 years to develop its downtown development plan to give the community direction for the next century. LRT will be a reality in central Beaverton towards the end of the 1990s. With the downtown development plan as a start, the community will continue to develop the regulatory environment that will take full advantage of LRT. Four major components comprise the draft downtown development plan:

1. A concise statement of design and development principles that can be used to plot and measure future public and private development actions (these objectives are an outgrowth of an initial vision workshop and subsequent meetings with the Central Beaverton Advisory Committee);
2. A downtown framework establishing the type and location of desired land uses; the network of roads, pedestrian ways, and transit facilities to serve these uses; the design concept for integrating these land uses; and transportation facilities to ensure a well-functioning and attractive downtown that will be a source of community pride;
3. More localized guidelines for the design and development of the subareas of central Beaverton to ensure that the intended role and design potential of these areas will be realized; and
4. An implementation program for attaining the goals of this study as well as identifying which actions deserve priority.

The draft plan established for the city of Beaverton is based upon the premise that the city wishes to make a series of

important decisions on behalf of a more positive, well-founded development future. These decisions include creating a major park downtown to serve future generations; combining local civic functions with cultural and community facilities into a centrally located civic center complex; allowing the downtown to become *the* major commercial center for the western portion of the Portland metropolitan area; and allowing the downtown to become a constantly functioning 7-day-a-week center for community life.

As of September 1991, the Beaverton City Council adopted the draft downtown development plan as submitted and included it as a significant element in the city's comprehensive land use plan (6).

Regional Rail Program

The city of Portland is assisting Tri-Met in developing a transportation planning framework for a regional rail system consisting of seven LRT corridors within the next 20 years. Five new corridors would be built in addition to the existing Banfield and Westside corridors. The city's primary purpose is to capture a large portion of the projected population increase of nearly 500,000 for the Portland metropolitan area over the next 20 years. The city would like to increase residential densities and employment centers within a quarter mile of each LRT station. At this time, the city is evaluating future corridor alignments regarding the need for zoning changes, identification of potential suburban activity centers, and associated public infrastructure improvements needed to support the plan. Future alignment studies and planning decisions include ridership projections and future employment and residential development opportunities along each corridor.

Regional Urban Growth Goals and Objectives

The Metropolitan Service District, the Portland area's metropolitan planning organization, is in the process of establishing regional urban growth goals and objectives. When combined with proposed bylaws for an ongoing regional policy advisory committee and a work plan for the next steps, the goals and objectives make up a package that the Urban Growth Management Plan Policy Advisory Committee will recommend to the Metro Council for adoption.

The goals and objectives, referred to as the RUGGOs, were prepared after an extensive public review process. The document begins with a background statement outlining challenges posed to the livability of the region by growth. A visionary statement about future citizen concerns sets the tone of the new regional goals established by Metro. The following examples represent some of the goals being considered:

Goal I is a procedural statement outlining the regional planning partnership needed to address growth issues. Significantly it calls for the creation of an ongoing citizen involvement program at Metro, the creation of a regional policy advisory committee to recommend to the Metro Council a course for regional planning, and the first written description of the process for functional planning in the metropolitan area. Functional plans each cover a single element of regional significance, such as solid waste, transportation, or water

quality, that, when adopted, would become binding on the localities in the metropolitan area.

Goal II concerns the broad area of urban form. It focuses on maintaining the livability of the urban region through the preservation of environmental quality, the coordination of the location of jobs, housing, and infrastructure, and the interrelationship of growth in one part of the region with growth (or the absence of growth) in another. Specific objectives relating to the natural environment, the built environment, and growth management and the urban growth boundary are also included.

The importance of Metro's RUGGOs work relative to LRT is that these goals and objectives are being developed concurrently with expansion of the regional rail program. Consequently regional urban growth goals and objectives will affect regional land use planning along light rail corridors, both in shaping urban form and increasing LRT patronage (7).

Region 2040

The purpose of Metro's Region 2040 project is to better understand the alternatives for accommodating the growth expected within the region in the next 50 years and the choices that may be involved. This project originated with a recommendation made as part of the process leading to the adoption of the RUGGOs. The Region 2040 project is intended to guide the testing and implementation of RUGGO concepts. Products from Region 2040 will include an explanation of the likely outcome of relying on existing transportation and land use plans to accommodate growth within the region; up to five additional regional transportation and land use development alternatives; and criteria with which to evaluate the alternatives. The project will strive to include participation from citizens, cities, and counties of the region, special districts, business and trade organizations, environmental organizations, Metro committees, and the Metro Council. The work is expected to be completed by December 1992 (8).

CONCLUSION

Based on this brief survey of three cities, it appears that coordination of land use planning and light rail transit varies greatly from region to region, even in locales with existing and expanding LRT systems. The state of the art of LRT and land use integration seems to range from large, high-quality mixed-use and institutional developments (e.g., San Diego) to coordination of state, regional, and local layers of opportunity within the LRT/land use sphere (e.g., Portland). The large-scale development exhibiting LRT and land use integration within a single project in San Diego, for example, must be viewed as building blocks within the larger evolution of regional urban form.

A single, 15-mile LRT line is de facto regional in nature, almost always passing through several communities and cities. The existing environmental characteristics and development character inherent in each community vary as a result of physiographic, geomorphic, and development era differences. Regional-scale thinking combined with application of the educational tools required to raise the public's level of awareness

about LRT and mass transit can stimulate the implementation of transit-supportive development.

Opportunity for true LRT and land use integration within a regional community (metropolitan area) appears to be greater when regional-scale coordination efforts are undertaken. Sacramento is turning toward regional scale land use/LRT coordination. Portland has established its RUGGOs and is beginning its Region 2040 planning process intended to establish both a vision and realistic goals for the Portland metropolitan area's evolving urban form into the next century. Regional goals and objectives can help structure a consistent framework for all involved in this process to gain a common understanding of the underlying principles involved in effective land use/LRT coordination within a developing, regional LRT system. Communities within a region can learn from each of these by participating in establishment and eventual acceptance of the regional program goals as their own. Then with local implementation of these parameters, development of specific, LRT-related community design efforts indigenous to a particular locale can be undertaken while fostering regional consistency and integrity of urban form.

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