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Integrated Corridor Planning: Lessons Learned

DRAFT Case studies of the successes and challenges to integrative corridor planning in the United States

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ACKNOWLEDGEMENTS

Southwest Corridor Plan project managers

Tony Mendoza, Metro

Malu Wilkinson, Metro

Karen Withrow, Metro

Jamie Snook, Metro

Authors

Colin Rowan, Metro

Aaron Brown, Metro

Crista Gardner, Metro

Reviewers

Southwest Corridor Project Team Leaders Ben Bryant, City of Tualatin; Dennis Egner, City of Lake Oswego; John Gillam, City of Portland; Judith Gray, City of Tigard; Julia Hajduk, City of Sherwood; Talia Jacobson, ODOT; Steve L. Kelley, Washington County; Art Pearce, City of Portland; Alice Rouyer, City of Tualatin; Tyler Ryerson, City of Beaverton; Karen Schilling, Multnomah County; Lainie Smith, ODOT; Jay Sugnet, City of Portland; Morgan Tracy, City of Portland; Dave Unsworth, TriMet

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INTRODUCTION

This report offers an analysis of relevant comprehensive transit projects that are being planned, built or have been recently completed around the United States. Presented as case studies, these projects represent innovative efforts related to land use, transit-oriented development, environmental considerations and accessibility. The focus of the analyses is on various approaches to the integration of land use, transit, and the varying forms of environmental, community and political involvement and organization.

These case studies highlight key lessons to be learned; provide an introduction to the project; identify key political and stakeholders, actors and issues; planning background; and key internet links and contact information.

Analyses draw upon Robert Cevero's useful definitions of successful transit systems in *The Transit Metropolis.* These lessons include the importance of well-articulated clear visions of the future, the need for metropolitan institutions to efficiently engage in proactive planning, and the importance of strong political and planning leadership in order to develop transit solutions. Cevero writes that the details can work out in many different ways but what is important is a visionary, flexible approach that takes regional realities and priorities into account. The examples found in this review represent a spectrum of political and regional environments that demand adaptive land use, environmental and transit planning.

The case studies analyze the integrated projects through the lens of regional and federal values for quality of life. Metro's six desired outcomes for communities throughout the Portland metropolitan region were adopted by the Metro Council in 2010 as part of the region's growth management policies. The desired outcomes are:

- Vibrant communities: People live, work and play in vibrant communities where their everyday needs are easily accessible.
- Economic prosperity: Current and future residents benefit from the region's sustained economic competitiveness and prosperity.
- Safe and reliable transportation: People have safe and reliable transportation choices that enhance their quality of life.
- Leadership on climate change: The region is a leader in minimizing contributions to global warming.
- Clean air and water: Current and future generations enjoy clean air, clean water and healthy ecosystems.
- Equity: The benefits and burdens of growth and change are distributed equitably.

The federal Department of Transportation, Environmental Protection Agency and the Department of Housing and Urban Development's joint memorandum on livability principles articulate federal goals for coordinated, integrative, policy and planning. The federal principles are similar and supportive of the Metro desired outcomes. These six principles state that housing, transportation and environmental goals should:

1. Provide more transportation choices.
2. Promote equitable, affordable housing.
3. Enhance economic competitiveness.
4. Support existing communities.
5. Coordinate policies and leverage investment.
6. Value communities and neighborhoods.

Each case study examines what desired outcomes were communicated by the jurisdictions, planning agencies and politicians. The analysis is fit to the regional and federal goals that incorporate housing, environmental and transportation. For systems that have been built the case studies explain the unique planning and political context and determine the success of the integrated approach.

Current examples of integrative high capacity transit and land use planning incorporate various goals and planning processes; a few instruments that have been successfully integrated and utilized to support transit system development are:

- **Integrative and innovative planning procedures**. Cross-departmental, cross-jurisdictional.
- **New funding mechanisms** including tax increment financing, infrastructure banks, tax allocation districts and property tax freezes.
- Prioritized transit-oriented **zoning overlays**.
- Utilization of transit station **typologies** to direct development and to help articulate local visions for station communities.
- **Community involvement**.
- **Health Impact Assessments**.
- **Incorporation of pathways for pedestrians and bicyclists**.
- **Environmental improvements, stormwater management, and green streets** principles integrated into the projects. Incorporation of green space adjacent and accessed through the service.
- **Ballot referendums**: the voters' willingness to tax themselves specifically for the development of transit infrastructure, often at a regional scale.

CASE STUDIES

Atlanta, GA: Atlanta BeltLine

Key Features

- Atlanta's BeltLine is leveraging public investment (**Tax Increment Financing**, along with Federal Small Starts and other grants) with private philanthropy to create a radial greenway corridor, complete with a streetcar, around the city.
- The BeltLine has a comprehensive plan that **helps each neighborhood on the corridor consider parks, trails, affordable housing, schools, brownfield remediation, historic preservation, public art and transit services** in their respective redevelopment strategies.
- The project relies heavily on Tax Increment Financing (TIF) sourced from Atlanta City Council, Atlanta Public Schools and Fulton County; $1.7b of $2.8b project. Transit components will also rely on some federal funds for acquisition of rail ROW for eventual transit service.
- The Atlanta BeltLine was **one of the first projects to conduct a comprehensive Health Impact Assessment (HIA)** in the United States.

Project Introduction

Inspired by a Master's Thesis by Georgia Tech Graduate Student Ryan Gravel, the Atlanta Beltline is a loop of historic railroad right-of-way (ROW) that encircles downtown and midtown Atlanta, two to four miles from the central core. The project features 22 miles of "pedestrian-friendly rail" and 33 miles of trail networks, and when completed will increase Atlanta's green space by nearly 40%. The master plan includes provisions and considerations for economic development, infrastructure construction and transportation enhancement along the route, and assigns political power to local communities to plan for local neighborhood improvements near the BeltLine.

Political Context: actors and issues

Atlanta Beltline, Inc. (ABI) formed by the **Atlanta Development Authority,** is tasked with planning and executing implementation of the Atlanta BeltLine. The entity reports progress to the Atlanta City Council, Atlanta Public Schools and to Fulton County, the three taxing authorities that authorized BeltLine Tax Allocation District (TAD) in 2005.

The TAD will freeze the property tax base within the district, with funds diverted from the City of Atlanta, Fulton County and Atlanta Public Schools to redevelopment projects (namely acquisition of greenspace, land, and trails).

TAD is expected to generate $1.7b of the $2.8b budget, "Using future tax funds to pay for investment in the BeltLine now." Federal funds are expected to help with the ROW acquisition, transit aspects of the project, but are less than 10% of the expected 25 year cost of the project.

The **Atlanta BeltLine Partnership (ABLP)** is the nonprofit organization which solicits philanthropic donations for the project from businesses, neighborhoods, faith organizations, and other entities whose interests are innately tied to the success of the revival of these inner-city neighborhoods. ABLP has raised $35.7m toward their goal of $60m private charitable donation, started in 2007. Business leaders from Cox Enterprises, Turner Broadcasting, H. J. Russell and Company and Weeks Robinson properties co-chair the campaign.

$240m of the TAD funds will create 5600 units of affordable housing; the ABI founded the BeltLine Affordable Housing Advisory Board (BAHAB) to help coordinate implementation of the units.

Project Planning Background

The BeltLine is a thoroughly comprehensive plan that brings multiple groups together, helping each neighborhood on the route to plan for parks, trails, affordable housing, schools, brownfield remediation, historical preservation, public art and transit services in their respective communities' redevelopment. The adjacent neighborhoods to the 22-mile trail are delineated into ten subareas; each of these neighborhood zones have development nodes, concepts, and many have community land trusts and comprehensive plans for extensive rezoning and redevelopment.

The Atlanta BeltLine's plan for development of park amenities and facilities is far-reaching. In addition to the extensive network of trails that connect to nearby roads and neighborhoods, the BeltLine features several keystone parks, such as The Historic Fourth Ward Park, a thirty-acre greenspace complete with everything from a stormwater-retaining pond to a skate park. In total, the project will connect forty of Atlanta's parks with 1200 acres of new greenspace.

The Atlanta Beltline was one of the first transit projects in the US to conduct a Health Impact Assessment, which helped public officials consider issues related to public health as part of the decision making process. The report focused largely on the beneficial impacts of the provisions of safe recreation amenities and reduction of pollutants through increased usage of biking, walking and public transportation.

The Atlanta BeltLine has been particularly successful in developing active, engaged communications and relations with the public at large. The ABI has been aggressive in publicizing the completion of many of the parks, trails, and neighborhood centers that ultimately make up the project at large

The BeltLine includes workforce development initiatives. 2010 saw the graduation of the first class of the BeltLine's Greenspace Job Training, which helps local citizens find jobs in the maintenance of the BeltLine facilities. Another section of the BeltLine will subsidize housing near the facility for public safety officers under the condition that they spend time in the park facilities, thereby simultaneously providing safety and building community. These sorts of integrated, cross-sector collaborative solutions to complicated problems epitomize the project.

Contact and Additional Information

Internet links:
Official website of Atlanta BeltLine: http://www.beltline.org/

Health Impact Assessment of Atlanta BeltLine: http://smartech.gatech.edu/handle/1853/19226

"The Country's Most Ambitious Smart Growth Project" – Kaid Benfield http://www.theatlantic.com/life/archive/2011/07/the-countrys-most-ambitious-smart-growth-project/242549/

Atlanta Land Trusts:
http://www.beltline.org/Portals/26/PDF/Affordable%20Housing/Atlanta%20Land%20Trust%20Collaborative%20Summary.pdf

Ryan Gravel's original 1999 thesis that inspired the Atlanta BeltLine
http://smartech.gatech.edu/handle/1853/7400

Contacts:
Andy Cotugno, Metro
Joel Schoening, Metro
Patrick Sweeney, Atlanta Streetcar Manager (former PBOT employee)

Baltimore, Maryland: Maryland Transit Administration Baltimore Red Line Project

Key Features

- In 2008 the innovative **Community Compact** was defined. A series of guiding principles and objectives for the community involvement, education, design and construction of the project. Seventy community groups and organizations signed the document.
- Strong State support through Governor O'Malley's leadership and State of Maryland programs that support transit-oriented development has moved the project ahead.
- In December 2008 Baltimore City Department of Transportation and Baltimore City Health Department issued the **Baltimore Red Line Transit Project Health Impact**

Assessment. This full HIA considers the long-range health impacts and benefits the transit project will provide to residents.

- Seventeen different **Station Area Advisory Committees** have been formed; they represent the 19 proposed station areas along the line and ensure that the process is inclusive of all interested parties. The creation of the SAACs is one of the core goals of the Community Compact.

Project Introduction

The proposed MTA Baltimore Red Line is a 14-mile east-west light rail transit line. About 10 miles will be surface light rail, about four miles will be in a tunnel and almost one mile will be aerial moving over highways, ramps and a freight rail yard. Projected daily ridership in 2030 is 60,000 rides per day. The line will connect a number of housing, business, recreational and medical service centers. The Red Line will also make connections to the MARC Commuter Rail system, linking it to the greater Baltimore and Washington D.C. regions. In 2009 Governor O'Malley announced that the locally preferred alternative is a light rail alignment; heavy rail and BRT were under consideration. The LPA is projected to cost $1.8b, the light rail will run in a tunnel through downtown, along a below grade highway right of way and along the waterfront. Still in the planning stages, the project has been granted federal approval to enter the preliminary engineering phase. Construction is estimated to begin in 2015. Operation is expected to begin in 2020-2021.

Many residents in the Red Line Corridor rely on public transit as their only means of transportation. According to the 2000 Census one-third of the people living in the corridor do not use a car to get to work. The Red Line will provide important work, service, and recreational connections to these individuals and will focus investment towards pedestrian accessible locations along the line. Future development along the line, directed through the Station Area Advisory Committees and through the Community Compact, is to be mixed-income, inclusionary, decent, safe and affordable. This goal is supported by the Baltimore City Inclusionary Housing Ordinance.

Political Context: actors and issues

The project began in 2001 when then-Secretary of Transportation John Porcari appointed the Baltimore Region Rail System Plan Advisory Committee to identify new rail lines and expansions. The Washington area Purple Line and the Baltimore Red Line where identified through this process.

Maryland Governors: The initial plans for the Red Line were championed by then-Governor Robert L. Ehrlich. Current-Governor (and former Baltimore Mayor) **Martin O'Malley** has been a strong political supporter of Red Line developments. The Red Line is supportive of the Governor's "**Smart, Green & Growing**" initiative. This initiative is the state's first comprehensive growth plan. The SGG initiative directs cities to adopt smart growth policies, grow green jobs, improve transit and revitalize communities. Through the Maryland's Next Generation of Transit approach O'Malley's administration is aggressively

moving forward with the Purple Line and corridor Cities Transitway in the Washington area and the Red Line in the Baltimore region.

State of Maryland: In 2008 the State General assembly passed a law identifying Transit-Oriented Development (TOD) as a "transportation purpose." Through this law the Maryland department of Transportation can dedicate land, funding, and staff to designated TOD projects. State designated TOD projects receive tax credits, expanded tax increment financing, MDOT funds for planning and capital projects, prioritization for siting of state offices, pedestrian and bicycle technical assistance, and priority for federal funding that supports sustainable development.

Baltimore Mayors Sheila Dixon and **Stephanie Rawlings-Blake**: In partnership with the state-run Maryland Transit Administration, Baltimore City's Department of Transportation and other offices, the Baltimore mayors have been strong advocates for change. Mayors Dixon and Rawlings-Blake have led the way and work collaboratively to engage citizens, provide TOD opportunities, and reconnect the city.

Community Stakeholders: More than 250 community stakeholders have been meeting with Red Line planners. Open houses have been held by the Station Area Advisory Committees. The entire project is focused on gathering as much community input as possible.

Project Planning Background

After being moved ahead by the Advisory Committee in 2001, planning and environmental study began in 2003. This resulted in a number of alternatives, including a full underground light rail transit (LRT), heavy rail subway and bus rapid transit (BRT).

The **Community Compact** was an important document to ensure continued collaboration between the planning agencies and the citizens in the corridor. Initiated by Mayor Sheila Dixon, the "Mayor's Red Line Summit" gave the opportunity for community leaders, businesses, institutions and organizations to engage in a conversation about how to make the most of the Red Line Transit Project. Signed by the city, the state and leaders of 70 community organizations the Compact emphasizes the promotion of local and minority groups participation; the inclusions of green space and environmental improvements; community centered station area planning; and the mitigation of construction impact on the affected communities.

This is to be accomplished through linking work and housing destinations with connections to other transit services, access to medical and other services and through station area planning that emphasizes housing and employment options. A case study in the Compact is the Portland, OR Economic Empowerment Strategy used before the construction of the Yellow Line.

The plan seeks to make the Red Line green by taking advantage of water quality improvement opportunities, utilizing clean energy on the Red Line, increasing green space along the corridor, and through the creation of safe and accessible connections.

The community-centered station design and emphasis on community involvement are central elements to the project. Through outreach and involvement the station design and development will be community-centered. The creation of Station Area Advisory Committees fosters long-term community engagement and stewardship, builds neighborhood support, and addresses long-standing community issues through the lens of light rail development.

Transportation Outlook 2035 is the 2007 Baltimore Regional Transportation Plan. Currently, the region is developing a new long-range transportation plan known as Plan It 2035. These plans consider the Red Line light rail a regionally significant project to the Baltimore metro region.

Contact and Additional Information

Internet links:

http://www.baltimoreredline.com/

http://www.gobaltimoreredline.com/

http://www.baltometro.org/content/view/566/401

http://www.green.maryland.gov/transit.html

http://www.gobaltimoreredline.com/pdf/Community_Compact_11_4_09.pdf

http://www.hiaguide.org/hia/baltimore-red-line-transit-project

Contacts:

Danyell Diggs – Red Line and the Community Compact, Baltimore, MD

Terry Freeland, Baltimore Metropolitan Council Long-Range Transportation Planning, tfreeland@baltometro.org, 410-732-0500 x1028

Charlotte, NC: Charlotte Area Transit System (CATS) Lynx South Corridor

Key Features

- The planning process integrated land use and transportation planning, **focusing on transit-oriented development, station area design and compact growth** in 15 station areas.

- **Initially sold to taxpayers as a development, growth, and transportation project (in that order)**, not simply a transportation project, the South Corridor project carefully linked land use and development patterns to a new transit system. The 2025 Integrated Transit/ Land-Use Plan for Charlotte-Mecklenburg provides the policy framework for the development of the region. The Plan recommends land use changes, actions and a series of regulatory tools for implementing station area plan and promoting transit-oriented development.
- Near Uptown Charlotte a significant amount of new development has happened near transit stations. Having **TOD zoning allowed developers to explore redevelopment opportunities**.
- The region had completed or near-completion corridor plans and station area plans available before light rail construction began, allowing developers, stakeholders and the community at large to engage and envision the changes possible.
- The City of Charlotte established an **acquisition fund to purchase land near South Corridor stations.** This is to ensure the development of mixed-income, mixed-use TOD. The fund is jointly managed by Coldwell Banker Commercial, CATS, and a number of city departments.
- Charlotte established an **Affordable Housing Trust Fund** to provide public funding to private developers in exchange for affordable housing units. The City Council set aside $10m for the fund in 2001; later the voters approved an additional $35m. The city controls the fund, allowing flexibility to provide loans or grants. By 2007 the fund had contributed to the construction and rehabilitation of more than 2,800 units.
- The cost of building the line was $462.7m, **partially supported by a half-cent sales tax increase**. $107m of funding came from state money, $213m from federal funding and the rest in local money.

Project Introduction

In 1994, after two decades of rapid auto-oriented growth, the City of Charlotte and Mecklenburg County approved the Centers and Corridors vision, a comprehensive guide for future land use and development in the region. This vision identified five major transportation corridors as strong candidates for transit service and transit-oriented development. Under the leadership of Mayor McCrory of Charlotte in 1998 the region supported a half-cent sales tax to support a multi-year transit plan. In order to implement the vision of the corridor development the region approved the 2025 Integrated Transit/ Land-Use Plan for Charlotte-Mecklenburg in 1998. A key element of the plan was the development of a regional rapid transit system that would improve mobility and encourage more compact development without building more roads. The South Corridor was identified as the best corridor for transit development because of available land, an unused railroad right-of-way, available ridership and development opportunity.

Political Context: actors and issues

Mayor Pat McCrory: Republican mayor of Charlotte from 1995 to 2010, serving a record seven terms. McCrory understood that building more roads would not solve the city's congestion issues and that high-density growth was necessary for sustainable growth in the city.

Developers: Following the lead of keen-eyed developer Tony Pressley many developers invested in mixed-use projects along the corridor. Pressley first redeveloped an old textile mill in the South End into condos, shops, and restaurants along the railroad right-of-way before trolley or light rail service was implemented. Other development has occurred through the Housing Trust Fund. The Charlotte Mecklenburg Housing Partnership created a mixed-income housing project along the South Corridor that is within walking distance to the Arrowood Station and includes 100 affordable and 92 market-rate two- and three-bedroom rental units.

Voters: By first approving the half-cent sales tax specifically for transit development the taxpayers of the Charlotte region recognized and supported change in their region. In 2007 the tax was challenged by referendum; the sales tax was supported overwhelmingly.

Project Planning Background

Initial groundwork for planning the Blue Line began in 1994 with the Centers and Corridors plan which formed the basis of the 2025 Integrated Transit/ Land-Use Plan for Charlotte-Mecklenburg, approved in 1998. General support of this plan allowed the passage of the half-cent sales tax increase to pay for new transit.

As planning progressed the City Council adopted the Transit Station Area Planning Principles in 2001 to ensure proper design and connections for the new corridor. The principles included a strong emphasis on pedestrian amenities and connectivity. Principles were aimed at increasing development density within ½ mile of the 15 transit stations. In 2003 Charlotte established a TOD zoning ordinance that allows developers to take advantage of reduced parking requirements, allows high unit density, and rezones station areas on a parcel-by-parcel basis. This allows the City to negotiate contributions from developers for public improvements. The design of the TOD areas has been guided by the nationally acclaimed Charlotte Urban Street Design Guidelines. These policies call for the creation of livable streets through the implementation of 'right-sizing' streets, creating complete streets that improve mobility and accessibility by prioritizing pedestrians, cyclists, and transit riders. The guidelines are a collaborative effort undertaken by various city planners and designers, stakeholders, and public involvement.

Voters approved the South Corridor Infrastructure Program (SCIP), a $50m bond to build station area infrastructure including sidewalks, bike paths, water management, and park and ride lots. The State of North Carolina approved legislation for the use of tax-increment financing In 2005 previous trolley-focused area plans for the South Corridor were updated by the South End Transit Station Area Plan which allowed for community engagement. In 2007 the CATS Lynx Blue Line began regular service.

Impacts from the recession that began in 2008 are thought to have influenced the ridership as gas prices increased and people's travel behaviors changed. Though ridership has outstripped projects, the recession, unemployment and lack of public funds have also stalled continued development of the transit system.

Contact and Additional Information

Internet links:
Charlotte's Affordable Housing Trust Fund: http://www.dukakiscenter.org/trust-funds/

CTOD case study, p 51:
http://www.reconnectingamerica.org/assets/Uploads/CTODR2RFinal2.pdf

Charlotte's Housing Trust Fund:

http://www.dukakiscenter.org/trust-funds/

FHWA Case Study on Charlotte's Livability Framework:
http://www.fhwa.dot.gov/livability/case_studies/guidebook/ch3fwtod.cfm

Contacts:
Norm Steinman, City of Charlotte: 704-336-3939nsteinman@charlottenc.gov

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Denver, CO: West Rail Line

Key Features

- The West Rail Line is a 12.1-mile light rail transit corridor planned to open in May 2013, which will connect downtown Denver to Jefferson County via Golden and Lakewood. **The corridor is the first transit project funded with FasTracks, the 2004 bond measure that led to a $.004 regional sales tax** supporting capital projects for the region's transportation system.
- Comprehensive plans by the Cities of Denver and Lakewood utilize a "typology" method of delineating different urban forms around stations in these neighborhoods. Significant **land use planning has been undertaken**, with plans for increased density, transportation connectivity, and transit-oriented neighborhoods along the entirety of the corridor.
- The City of Denver is cooperating heavily with the **Denver Livability Partnership**, supported by nearly $3m from HUD and TIGER II grants, and leveraged by over $7m in public and private sector funds.

Project Introduction

The West Rail Line, a $707m, 12.1-mile light rail transit corridor between Denver Union Station in downtown Denver and the Jefferson County Government Center in Golden, will

serve Denver, Lakewood, the Denver Federal Center, Golden and Jefferson County. The line is projected to be completed and operational by May 2013.

This is the first transit corridor in the Denver area to use funds from FasTracks, the 2004 regional ballot referendum to fund transportation improvements with a sales tax. The .4 cent sales tax increase ($.04 on every ten dollars) is part of a $6.5b improvement plan to the region's transportation system, which anticipates 119 miles of light rail, commuter rail and bus rapid transit by 2016.

Political Context: actors and issues

As mentioned, this project is the first major tangible product of the Denver region's **FasTracks** bond levy. The Denver region' willingness to tax themselves for transportation improvements is note-worthy for their ability to effectively sell a broad vision for transportation reform in the region. Concerns abound as to whether the recession will necessitate the implementation of another levy to raise more funds for construction, as costs for the regional system have ballooned to $6.5b from $4.7b as promised to voters in 2004. FasTracks expects approximately $1.4b in federal funds to help complete the transit network envisioned in the project.

The corridor has five stations in the **City of Denver**, all of which are west of the central downtown business district, where the corridor connects to Denver's existing rail transit network and regional destinations such as train stations, stadia and office centers. The city received $2.9m in federal funds for the **Denver Livability Partnership**, which brings together federal, regional and local public and private sector partners to advance strategic implementation of transit-oriented development in Denver. This Partnership, a result of Denver's recently awarded HUD Community Challenge Planning Grant and the designation of Denver as a Preferred Sustainability Status community, aims to address affordable housing and transit oriented development in the city and county of Denver, with particular focus on locating these projects on the West Corridor.

Neighboring **Lakewood** has also undergone extensive station planning at the community planning level, coordinating efforts across jurisdictions and using similar "typologies" to plan station communities.

Project Planning Background

$2.9m in funds from the Denver Livability Partnership have gone towards planning transit-oriented development along the corridor, with extensive planning efforts focused at developing housing for a variety of incomes at Denver's Decatur Station. All five stations within the City of Denver have been designated as "urban neighborhood," which supports local-serving retail and residential with minimal car parking. The eastern segment of the trail also closely parallels the Lakewood Gulch and nearby green spaces. Similarly, the City of Lakewood has plans to increase the number of mixed use, transit oriented developments near station areas.

Though minimal, the RTC has relied on eminent domain for certain parcels in the process of completing the light rail corridor, which has been received with substantial citizen criticism. In an effort to cut costs, the western segment of the line (from Federal Center to the Jefferson County Government Center) was reduced to single track, which increased expected headway but significantly reduced capital expenditure in the low-density exurban area.

Contact and Additional Information

Internet Links:
2006 Article in Next American City about FasTracks and TOD:
http://americancity.org/magazine/article/along-the-tracks-goodknight/
City of Lakewood Light Rail Planning
http://www.lakewood.org/index.cfm?&include=/PPW/CPR/WestCorridor/WCplanning.cfm
City of Denver TOD Typology
http://denvergov.org/tod/AboutTOD/StationTypology/tabid/395260/Default.aspx
Denver Livability Partnership:
http://denvergov.org/TOD/TODStrategicImplementation/tabid/438465/Default.aspx
Plans for Denver's Decatur Station:
http://www.denvergov.org/tod/StationAreas/DecaturStation/tabid/395243/Default.aspx
City of Lakewood Comprehensive Plan
http://www.lakewood.org/index.cfm?&include=/PPW/CPR/WestCorridor/WClanding.cfm

Krisin Fritz, Senior City Planner
Community Planning and Development
City and County of Denver
720.865.2942
krisin.fritz@denvergov.org

Brenda Tierney
Public Information Manager,West Rail Line
RTD FasTracks Team
10455 W. 6th Avenue
Lakewood, CO 80215
(303) 299-2401

Minneapolis/St. Paul, MN: Central Corridor

Key Features

- Slated to open 2014, the Central Corridor is an 11-mile light rail project connecting Minneapolis to the University of Minnesota, the Midway shopping district, the State Capitol and downtown Saint Paul via University Avenue. The project will connect to Minneapolis' existing Hiawatha Light Rail Line, Northstar Commuter Line, to Minneapolis' planned LRT and BRT routes connecting to points south and west, and to St Paul's to-be-revamped Union Depot regional train station.

- After years of political football, the project is moving forward, and the city of Saint Paul in particular has been aggressively planning for the completion of the facility. The city has completed significant **rezoning and long-term community planning along corridor**, including prioritizing replacement of the currently-existing automobile-oriented strip mall development with Transit Oriented Development.
- Saint Paul has had mixed success including the diverse communities along the corridor into the comprehensive planning process; plans for redevelopment along the corridor are closely tied to concerns of gentrification in the city's remaining African-American and H'mong communities. The Saint Paul chapter of the NAACP **filed a lawsuit against the Met Council,** claiming the regional and federal governments had not fully conducted federal environmental policy review to address undue impact on local communities.
- The project leaders used **"typologies"** of possible urban forms along the corridor around station areas, such as "marketplace" and "urban village" to help guide changes in zoning and craft appropriate reuses of currently vacant space. These typologies have been instrumental in gaining public support for redevelopment proposals by allowing citizens to visualize the long-term anticipated changes to the landscape.
- Efforts to cut costs and meet FTA requirements led project managers to cut three stations in disadvantaged communities; stations eventually reinstated after community opposition and the receipt of federal funds for implementation.

Project Introduction

Connecting downtown Minneapolis to the University of Minnesota and neighboring Saint Paul, the Central Corridor is an 11-mile light rail project slated for completion in 2014. Replacing the region's most heavily-used bus line, the Central Corridor is expected to have a significant impact on "repositioning Saint Paul in the region."

Political Context: actors and issues

The project represents the second high capacity transit project in the Twin Cities metropolitan region, governed by the Met Council. As the region's MPO, the Met Council is the chief agency responsible for the construction of the light rail facility, while the City of Saint Paul has been actively involved with the comprehensive community planning along the eastern half of the corridor.

Many local organizations, such as the University Avenue Business Association (UABA), have played an important role in making sure that local constituents' interests have been considered in the final plans.

The University of Minnesota has also been an important political actor in the life of the Central Corridor for the project; various incarnations of plans included running the train in a tunnel under the campus, farther away from the recently constructed Gopher Stadium, and over a new bridge crossing the Mississippi River. The university had been hesitant to

partner with the project. They filed a lawsuit to "protect the institution's research" facilities, due to concerns about the proximity of the line to laboratories and impacts to delicate scientific research. A similar situation arose during the planning of Metro Washington's Purple Line with the University of Maryland- College Park; the University of Maryland has since changed their stance and supports the Purple Line.

Project Planning Background

The City of Saint Paul's Development Strategy is primarily focused with "Identifying the potential for positive change and ways to manage this change," and highlights a significant overhaul to the land-use planning of the corridor. The plan anticipates that the Central Corridor "will be home to 20,000-30,000 more people by 2030 with an additional 11,00-14,000 new housing units by 2030."

Extensive visioning efforts have led to a plan that appropriately supports construction of transit-oriented development on infill and underutilized lots on the corridor, specifically targeting communities directly adjacent to future LRT stations. The Central Corridor is being constructed on University Avenue, home to many of Saint Paul's H'mong, Vietnamese and African-American communities. These neighborhoods, steeped with the collective memory of the construction of nearby Interstate 94 that decimated African American businesses and neighborhoods fifty years ago. They organized with the NAACP in 2010 to sue the Met Council under concerns that impacts to African Americans in the project's impact area had not been fully addressed and when three light rail stations in these neighborhoods were dropped from the Central Corridor's plans in cost-cutting efforts. All three stations were reinstated in the plan when funding from the FTA became available in 2010.

In a mitigation effort, the Met Council has made $4m in loans available for small businesses negatively impacted by construction and has spent considerable resources considering how to mitigate the loss of on-street parking to nearby residents and businesses. Communities along the route have also expressed concern that their neighborhood streets to the light rail will be full of parked cars from suburban commuters anxious to avoid parking fees in downtown Minneapolis or Saint Paul.

Contact and Additional Information

City of Saint Paul's website on CCLRT: http://stpaul.gov/index.aspx?NID=155
Metro Council:
http://www.metrocouncil.org/transportation/ccorridor/centralcorridor.asp
City of Saint Paul's presentation on Development Strategy (video):
http://stpaul.granicus.com/MediaPlayer.php?publish_id=65
University of Minnesota's concerns about the CCLRT project:
http://lightrail.umn.edu/assets/pdf_new/Q-A_jan-29-10.pdf
Minneapolis Star Tribune article on NAACP lawsuit:
http://www.startribune.com/local/stpaul/82071777.html
Minnesota Public Radio article on NAACP lawsuit:

http://www.universityavenuebiz.com/documents/MPR.pdf

Contacts:

Sarah Zorn at: sarah.zorn@ci.stpaul.mn.us

Greater Phoenix Region, Arizona: Valley Metro Regional Public Transportation Authority (RPTA), METRO Light Rail

Key Features

- Regional inter-jurisdictional **coordination and collaboration** between Phoenix, Tempe and Mesa was instrumental in the development of the METRO Light Rail.
- Project was supported through a series of **sales tax increases at the local and regional level**.
- Ridership has exceeded projected ridership figures by 51%.
- Makes important non-commute connections: shops, restaurants, downtown convention center, NBA and NFL stadiums and it connects the ASU Tempe campus to the downtown campus.
- Since the 2001 Phoenix sales tax increase was approved there has been $5b in public and private investment- $3.5b of it private- around the site of the light rail.

Project Introduction

METRO Light Rail was a coordinated planning effort between Phoenix, Tempe and Mesa, AZ. In 1985 the voters of Maricopa County passed Proposition 300, a half-cent sales tax increase to fund roadway improvements. Without provision for public transportation improvements an amendment, Proposition 400, was proposed by lawmakers in 1994. This proposition extended proposition 300 until 2016 and added an additional half cent sales tax for public transportation improvements. The proposition was defeated by the voters of Maricopa County. Local lawmakers in Tempe and Phoenix noted that the Proposition had been supported in their jurisdictions so they moved ahead with local sales-tax increases.

In 1996 Tempe voters approved a permanent half-cent sales-tax dedicated to transit, approving Proposition 400. In 1997 Phoenix voted again in a joint vote with Scottsdale. This ballot measure, Proposition 1, failed again, but only by 122 votes. In 2000 the Phoenix voters, under the citizen leadership of the Committee of 2000 approved a 20-year .04 per cent sales tax increase to fund transit development. Through the Transit 2000 Regional Transportation Plan planning for light rail began as a collaboration between Valley Metro RPTA, Phoenix and Tempe. In 2004 the voters of Maricopa County passed the new Proposition 2000 which provides funding for light rail extensions.

Construction began in 2005 and operation started in late 2008. The current system is comprised of a 20-mile line length with 28 stations. It is the longest street-running light rail system in the U.S. Before construction Phoenix was the largest city in the country without a rail transit system. Local leaders conceived the starter line project as a catalyst for economic development. The 20-mile starter line cost $1.4b including financing costs. Funding sources included a $587m federal New Starts grant, $59m from federal Congestion Mitigation and Air Quality funding and local tax dollars. Local funding comes from sales tax revenue from Phoenix and Tempe, Mesa's General Fund, and Maricopa County's Proposition 400 half-cent sales tax.

The Maricopa Association of Governments' Regional Transportation Plan identifies six future high-capacity transit corridors totaling 37 miles. These transit lines are to be completed by 2031 and will require continued political will and popular support. This needs to be engendered through the continued success of the transit system.

Through the Citywide and Regional TOD Strategic Plan the City of Phoenix promotes TOD through its two zoning overlay districts, TOD 1 and TOD 2. The new zoning overlays encourage transit-oriented development within ¼ mile of key light rail stations. TOD 1 zoning primarily applies to commercial and residential areas, it prohibits auto-oriented businesses with onsite installation, drive-through facilities, industrial uses, and warehouses. TOD 2 applies to industrial and support areas and allows uses prohibited in TOD 1. These overlays provide a zoning structure to encourage uses appropriate for higher densities and a structure for encouraging pedestrian friendly uses and design standards that can make the foundation of successful TOD.

Political Context: actors and issues

Regional cooperation: Through a coalition of the region's mayors, business leaders, and political leaders the cities of Phoenix and Mesa passed sales tax increases and championed the passage of the Maricopa Countywide referendum, Proposition 400. This regional vision has spurred economic development and a new region vision for compact development.

Phoenix Mayor **Skip Rimsza** served from 1994-2004, he was a strong proponent of light rail development as a growth mechanism in downtown Phoenix. Rimsza was instrumental in the passage of the Transit 2000 Regional Transportation Plan. Rimsza was followed by current mayor Phil Gordon who continued to be a strong advocate for light rail and TOD. Mesa mayor, Scott Smith and Tempe mayor Hugh Hallman coordinated efforts across jurisdictions.

Committee of 2000: A group of civic-minded voters helped to craft Proposition 2000. After a number of failed ballot initiatives to leverage transit funding the Committee of 2000 leads the passage of Proposition 2000, approving the funding sources for the Transit Plan.

Voters: In a conservative, property-rights driven political climate the voters of Maricopa County have chosen a new way forward. By funding the transportation network through

sales tax increases, utilizing new forms of transportation, and supporting new land uses they are fundamentally shifting the growth patterns of the city.

Project Planning Background

Internally known as "The People's Project" because of the high level of citizen engagement the METRO line has benefited from input and support from many citizens. The planning effort began in earnest through the Transit 2000 Regional Transportation Plan. The implementation of this Plan was contingent on the passage of the half-cent sales tax. Transit 2000 served as the RTP for the Maricopa Association of Governments; it called for improved bus service, BRT and LRT.

The current RTP was approved by council in late 2003 and was updated in 2006. The RTP plans to 2026, calling for extensions of the light rail system, improved roadways, and ITS. The Plan calls for 32% of total regional funds to go to Transit, 57% of regional funds is allocated to freeways and highways and 9% goes toward street improvements. Light rail has become an important component of the RTP.

Bicycle and pedestrian infrastructure is not a focus of the planning. The 9% street improvement funding can be used for bicycle and pedestrian improvements, but there is not money allocated to this purpose. The City of Phoenix's Bicycle Element of the General Plan makes it City policy to connect bicycle infrastructure to light rail transit. Each METRO train has room for eight bikes and all park and ride stations have bicycle lockers. Pedestrians, bicycles and mass transit are addressed through Phoenix's General Plan Circulation Element that promotes alternatives to driving.

The cities have used this commitment and the success of the METRO to leverage special TOD overlay zoning to encourage dense, accessible, pedestrian friendly development along the light rail corridors. The TOD 1 and TOD 2 overlays encourage density, pedestrian connections and mixed use. This planning includes the City of Phoenix's Light Rail Transit Station Area Planning Program that supports TOD around light rail stations. This program encourages citizen participation in the process of new development and improves the connectivity of neighborhoods to light rail stations. There is little online that explains how this program works; Curt Upton is the City of Phoenix contact for the Program.

Contact and Additional Information

Internet links:

RTP website: http://www.letskeepmoving.com/

Bicycle Element of the General Plan: http://phoenix.gov/planning/gpbic.pdf

METRO Strategic Plan:
http://www.valleymetro.org/images/uploads/lightrail_publications/METRO_Strategic_Plan.pdf

TOD Zoning Overlays:
http://www.valleymetro.org/images/uploads/lightrail_publications/TOD_Brochure.pdf

Light Rail Transit Station Area Planning Program:
http://phoenix.gov/planning/lrtindex.html

StreetFilms METRO LRT video: http://vimeo.com/12745105

Contacts:

Curt Upton, Planner II, LRT Station Area Planning Program: 602-495-8208, curt.upton@phoenix.gov

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Metro Washington, D.C.: Metro Purple Line

Key Features

- The Purple Line plans include a **bicycle-pedestrian trail** that will connect Silver Spring and Bethesda. The Capital Crescent Trail and the Georgetown Branch Trail will share the right of way between Bethesda and Silver Spring.
- Plans call for a vegetated buffer and green rail beds.
- Project intention is to redevelop and rejuvenate older suburbs through the development of 21 station areas.
- **Line makes important suburb-to-suburb connections rather than traditional hub-and-spoke operation.**
- TOD defined as a transportation use by Maryland state law allows the state to invest in many locational improvements. Please see the Baltimore Red Line section for more information on the law.
- Lessons to be learned about the **local opposition that has turned to political support**.

Project Introduction

The Purple Line, like Baltimore's Red Line, is one of Maryland's three New Starts projects. It is a proposed 16-mile transit line that links the Washington Metro transportation system to the Maryland suburbs of Washington, D.C. The project will link New Carrollton, the University of Maryland-College Park, Silver Spring, and Bethesda to the MARC system. The Purple Line connects to the Metro system and is being planned by the Maryland Transit Administration. The line will pass through multiple jurisdictions, incorporates a walk/bike trail, vegetated buffers, and connects job centers, the University of Maryland, and suburban jurisdictions.

The building of the system is anticipated to cost $1.9b with a projected ridership of 63,000 daily rides. The state's current plan anticipates that the FTA will cover half of the build costs. Twenty-one station locations have been initially identified. The project is currently administered by the Maryland Transit Administration as a part of the statewide "Smart, Green & Growing" initiative.

Political Context: actors and issues

The Purple Line was identified by the Baltimore Region Rail System Plan Advisory Committee at the same time the Baltimore Red Line was identified in 2001. Under the state leadership of then-**Governor Ehrlich** and Maryland State **Secretary of Transportation Flanagan** initial planning and consideration of heavy rail, light rail and bus rapid transit was considered. Heavy rail was discarded because the projected ridership would not support the cost of heavy rail development.

In 2008 **the O'Malley administration** allocated $100m for the completion of design documents. The Governor has been strongly advocating the development of new transit and transit oriented developments in the state.

There have been a number of political shifts over the course of the projects early-stages. Local opposition has largely turned to public and political support. The Town of Chevy Chase had tarnished its regional reputation by staunchly opposing the Purple Line; they have softened their stance and have been working with the MTA to develop station plans. The **University of Maryland- College Park**, initially against the proposed alignments that would bring the Purple Line onto the campus has since dropped its opposition stating that the MTA had addressed all of the University's issues. The University was against the proposed alignment through the center of campus because of noise, vibration and proximity to sensitive equipment. There is continued opposition from groups concerned about preserving the trail between Silver Spring and Bethesda.

Contact and Additional Information

Internet Links:

Project website: http://www.purplelinemd.com

Washington Post story on suburban revival: http://www.washingtonpost.com/wp-dyn/content/story/2009/01/27/ST2009012702047.html

Brookings Institute Purple Line case study: http://www.brookings.edu/~/media/Files/events/2008/1203_purple/20081203_purple.pdf

Preliminary WP coverage: http://www.washingtonpost.com/wp-dyn/content/article/2006/07/06/AR2006070601473.html

University of Maryland supports Purple Line:
http://www.washingtonpost.com/local/commuting/university-of-maryland-drops-opposition-to-central-campus-route-for-purple-line/2011/06/01/AGpoAgGH_story.html

Contacts:

Michael Madden, Purple Line Project Manager, purpleline@mta.maryland.com

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Vancouver and Richmond, BC, Canada: Canada Line and the Cambie Corridor Plan

Key Features Canada Line

- First Public-Private Partnership (P3) rail rapid transit in North America
- Largest PPP of any kind implemented in Canada,
- 19km light rail line featuring elevated and below grade operations.
- While the rail line was being built the city ran a bus rapid transit (BRT) line along corridor to provide advanced high capacity transit.

Key Features Cambie Corridor Plan

- Integrated flexible plan combining land use, transportation, and energy planning designed to maximize sustainability performance while enhancing access and mobility
- Coordinated corridor-wide land use, infrastructure, and design guidelines to maximize

Project Introduction

The Canada Line is a light rail connection between downtown Vancouver, Vancouver International Airport and the city of Richmond. The line connects downtown to the airport in 25 minutes. This line runs along Cambie Blvd on the Westside of Vancouver, this alignment was chosen for its growth potential- maximizing the impact of the service. Tenuously brought to life after a number of public oppositions, the line has proven to be a great success- already exceeding 2013 ridership forecasts.

A light rail connection between downtown Vancouver and the Vancouver International Airport has long been a goal in the Vancouver region. The region's transportation authority, Translink, pushed forward with planning and building efforts in the run-up to the 2010 Olympic Games in Vancouver. Even with the games being award to Vancouver TransLink declined the project twice. The urgency of the games pushed the region towards perusing funding commitments provided through the Canadian government, the airport authority, the cities of Vancouver and Richmond, and a private partner. The line was completed and opened in August 2009, three months ahead of schedule. The line is run independently but is connected to and under the authority of the SkyTrain system. The SkyTrain system, overall, runs efficiently with 95% on-time reliability using driverless automated trains and elevated rails. This offers efficient service unhindered by light timing and other system delays common to at-grade service.

TransLink ran a bus rapid transit (BRT) line along the corridor while the elevated and below-grade portions of the line were being built. This service began in 2001 and stopped when the rail line was complete. This innovative inclusion allowed for transportation needs to be met in the rapidly growing section of the city. The BRT line moved 20,000 passengers a day. The Canada Line is currently running at around 110,000 passengers per day. The latest full year numbers, for 2010, show that total ridership on the line was 38.4 million rides.

The Cambie Corridor Plan is an ongoing planning effort designed to leverage the full growth possibility of the light rail investment. The plan is an effort by the City of Vancouver to allow the four stations on the Westside of Vancouver to increase densities and make optimized use of investments. At first it was conceived in a station by station manner, but during development a corridor-wide approach was adopted in order to provide a mix of amenities that are neighborhood sensitive. The City of Vancouver says, "The Cambie Corridor Plan leverages both vital transportation infrastructure and opportunities for district heating, thus addressing the two principal contributors to global warming. The plan acknowledges the need for social inclusion and amenities appropriate to the scale of development proposed."

By increasing density, providing sustainable transportation connections, and planning for the provision of district energy the City of Vancouver will weave together a number of City plans, moving this rapidly growing part of the city in a more sustainable direction. The Plan is currently (January 2012) beginning the third phase of planning. The completed phases included interim rezoning, new rezoning policies being adopted, and the adoption of the plan in May 2011.

The new zoning includes housing goals of 20% social housing and a variety of housing choices, prioritization of land use intensification, complete community planning, walkable and cycleable streets that connect seamlessly to the light rail service.

Political Context: actors and issues

Political action around 'Vancouverism' has pushed the city to advocate for new transportation infrastructure since the 1990s. A variety of city Councilors have moved the city toward integrated land use and transportation development. More than any political pressure, the Canada Line was truly moved forward because of the 2010 Winter Olympics. The need to connect the downtown, Olympic Village, and the airport pushed the project to the fore. It is the story of the post-planning as it relates to the Cambie Corridor that provides that more instructive lessons to be learned.

Project Planning Background

The Canada Line was built as a Public Private Partnership (P3) between the airport authority, the cities of Vancouver and Richmond, and the federal government partnering through TransLink with InTransitBC, a joint venture between SNC-Lavalin, Caisse de Depot

et Placement du Quebec and british Columbia Investment Management Corporation. This partnership created the Canada Line Rapid Transit Incorporated. **It represents the first rail rapid transit PPP in the continent.**

Federal funding came from the Canadian Strategic Infrastructure Fund that awards funds on a merit-based system. The projects are evaluated across sixteen categories that include public health, water and transportation infrastructure. InTransitBC was required to build the line for a fixed price and is responsible for any budget overruns. Payment was only received if InTransitBC his predetermined milestones on time. The company's outlay of funds was much greater than the payments but repayment over the 35-year operation and maintenance period will result in net profits for the company. **InTransitBC also receives performance payments**; these are awarded during the operations period and are based on arrival times, ridership, and the quality of operations. This performance is based principally on availability and also on the quality and ridership forecasts.

The Cambie Corridor Plan is the second important component to the post-Olympic success of the Line. This plan is a corridor wide zoning and rezoning plan that also includes important consideration of sustainability, housing diversity, enhancing movement, removing barriers to walking and biking, increasing access to nature, preserving habitats, building public plazas, and preserving neighborhoods. A daunting task to accomplish, the plan focuses on the four Canada Line stops located along the Cambie Road corridor between 16th Avenue and the Fraser River. Zoning overlays allow for housing up to 12 stories adjacent to the corridor and focus greater densities at the stops. The plan includes the Marine Gateway Project at its southern end that includes 825,000 sq ft of new development and 400+ housing units. The plan has already seen results as land value has tripled in some places along the corridor. This is a worry for housing advocates and neighborhood associations dedicated to preserving the livability of their communities.

The plan links transportation, land use, and a third element: energy. Not always considered in land use planning, **the Cambie Corridor plan requires the inclusion of district energy in the development process**. District Energy allows for power generation to be shared among many buildings and significantly reduces the environmental footprint of new development. Cost savings are seen by the developer, lower energy rates are experiences by the consumers, and the City is healthier.

Contact and Additional Information

Internet links:

Cambie Corridor Plan, City of Vancouver, BC:
http://vancouver.ca/commsvcs/planning/cambiecorridor/resources/pdf/CambieCorridorPlan.pdf

CBC report on housing price increases: http://www.cbc.ca/news/canada/british-columbia/story/2011/10/27/bc-cambie-corridor-speculation.html

Cambie Corridor Phase II report:
http://vancouver.ca/ctyclerk/cclerk/20110505/documents/csbu2.pdf

InTransitBC website: http://www.intransitbc.ca/

Canada Line Final Project Report:
http://www.translink.ca/~/media/Documents/rider_info/Canada%20Line/Comp%20Selection%20Process%20Agreements/Final%20Project%20Report/Canada%20Line%20Final%20Project%20Report%20%20Competitive%20Selection%20Phase.ashx

DOMESTIC EXAMPLES OF BUS RAPID TRANSIT

Chicago, Cleveland, Eugene and Los Angeles

Introduction to Bus Rapid Transit

Bus Rapid Transit (BRT) is a mass transit system that combines the quality and efficiency of rail transit with relatively lower cost similar to buses. Full-featured BRT with exclusive busways, show-as-you-go ticketing, level loading platforms and distinct station areas has been shown to attract development especially when cities provide TOD zoning overlays. In the United States the perception that BRT is basic bus service or a second best to LRT is a major hurdle that the FTA is actively trying to overcome. The FTA and the DOT are prioritizing BRT New Starts in order to encourage new BRT systems.

Bus Rapid Transit systems are being rapidly built throughout the world. The exemplary international example is that of Curtiba, Brazil. Bringing together corridor land use and transportation planning around a BRT system has resulted in a more compact and environmentally sustainable city with less pollution and congestion. Transit-oriented development has blossomed along the line and green space has been preserved where sprawl was beginning to encroach.

In the United States, Cleveland's HealthLine, Eugene's EmX, and Los Angeles' Orange Line provide good examples of built BRT. In the preliminary planning stages, the city of Chicago is currently developing a comprehensive BRT system to make connections throughout the city.

Worldwide, a political patron has been seen to be very important to the development of BRT. In the US a similar pattern has emerged: Cleveland's Governor/Mayor George Voinovich; Eugene's US Representative Peter De Fazio; and Los Angeles's County Supervisor Zev Yaroslavsky. Political champions appear to be of paramount importance in the implementation of BRT facilities.

Transit-oriented development can be enhanced along BRT lines in the same way as LRT lines through real estate value capture, special assessment districts, tax-increment financing, bonding against forecast tax revenues with government-backed loan guarantees, and packaging the developments with equity investment.

Cleveland RTA HealthLine (formerly the Euclid Corridor)

Built through partnerships with the City of Cleveland, the Cleveland Clinic and University Hospital the HealthLine represents a revitalization and redevelopment project that links diverse neighborhood together and offers access to greenspace.

The Cleveland RTA states that the line has leveraged $4.3b in economic development: $62m generated in local taxes, $180m in Cleveland State University master plan, and $500m

through the University Hospitals expansion. Additionally it has spurred 7.9 million square feet in commercial development, 13,000 new jobs, $350m Cleveland Museum of Art project, $506m Cleveland Clinic Heart Center, and 4,000 new residential units along the route. The HealthLine buses utilize hybrid technology and represent an expansion in American bus manufacture, significantly lowering the vehicle prices. Environmentally the line provides access to a system of parks and 1500 trees planted along the corridor.

The HealthLine is 9.2 miles of roadway improvements on and along Euclid Avenue. The alignment utilizes a center median configuration, exclusive busways either physically separated or with exclusive markings. There are forty stops along the route, connecting Downtown, University Circle and East Cleveland. Naming rights were sold to the Cleveland Clinic and University Hospital. Through the 1993 Dual Hub Corridor Alternatives Analysis/ DEIS and the 1995 Euclid Corridor Transportation Project BRT was chosen as the LPA. Four rail options were also considered; the decision ultimately came down to a costs/benefits analysis.

Funding of the $168.4m project was: $82.2m from the FTA New Starts, $50mfrom the State of Ohio, $17.6m from GCRTA, $8m from the City of Cleveland, $10m from NOACA, $.6m from FTA Rail Mode.

The goals of the project include the desire to improve service to greater Cleveland, reduce congestion, to make rail transit stations along the eastern portion of the Red Line more convenient and accessible to centers of employment and population. A key goal is to promote concurrent long-term economic and community development and growth in and adjacent to the Euclid Avenue Corridor. This is to be accomplished by focusing private economic development activities through policies that encourage investment.

http://www.streetsblog.org/2008/07/14/clevelands-health-line-setting-a-national-example-for-bus-rapid-transit/

http://www.itdp.org/documents/Part1_Advancing_World_Class_BRT_in_US.pdf

http://youtu.be/kF6EF3kOGQE

Eugene, Oregon Emerald Express

Built by the Lane Transit District, the Eugene region is one of the first regions in the country to build full-service BRT. As the Eugene region searched for a means to reduce congestion and better utilize land, the Emerald Express (EmX) BRT line emerged as the LPA in 2007. The EmX began as a four-mile BRT corridor linking downtown Eugene and downtown Springfield. This corridor also serves the University of Oregon campus, Northwest Christian College and Sacred Heart Medical Center. The second corridor is known as the Gateway extension, this service connects downtown Eugene and Springfield with the Gateway mall area. Service began in January 2011.

Construction of the first EmX line cost $24m, $19.2mcame from FTA Section 5307 and 5309 funds. **Accessibility was a primary goal** during design of the system. 60% of the route is on dedicated, vegetated, guideways. Numerous design challenges presented themselves; in configuring the route planners had to overcome local resistance and right of way issues. The agency was required to minimize disruption to auto traffic, limiting the ability to remove auto travel lanes and parking- this resulted in a less than full-featured BRT. Additional requirements included a local ordinance that requires a city-wide vote to remove trees more than 50 years old; to avoid this, planners routed the busway around trees- this slows driving speeds but enforces some of the 'green' branding and basis of the project.

The effort to build a full-featured BRT line in Eugene was directed by the strong political leadership of Rep. DeFazio.

Los Angeles Orange Line

The Orange Line is one of the first full-featured BRT systems in the U.S. Operated by the Los Angeles County Metropolitan Transportation Authority (Metro) it first opened in 2005. The line connects the Red Line subway with the San Fernando Valley. It is a two-lane, 14-mile, dedicated busway. Rubberized asphalt and sound deadening reduce noise impacts. Notably, **Metro built eight miles of bicycle and pedestrian pathways in the right-of-way** directly adjacent to the busway. There are designated on-street bike lanes for the remaining six miles. Built along an abandoned railroad right of way, BRT was chosen along the mostly single-family residential corridor for cost effectiveness, political viability and level of service. Ridership has greatly outpaced projections: Metro projected 5,000 -7,000 average weekday boardings for the first year and 22,000 average weekday boardings by 2020. Seven months into service the Orange Line had achieved its 2020 goals. Metro ridership surveys in January 2006 found that 17 percent of all riders were new to Metro and 14 percent had been using Metro for less than a year. This indicates that riders are not using the line as a bus replacement but rather the Orange Line is attracting new riders.

The Metro Transit Oriented Development Grant program provides funds to encourage local governments to adopt land use regulations that promote sustainable transit oriented design principles. This does not mean that the voters do not support continued and aggressive transit development. **In 2008 LA County voters surmounted the two-thirds vote requirement to pass Measure R**, which will raise $30b for 11 new rail lines and extensions, including light rail, BRT, and the Subway to the Sea.

The Orange Line and continued transit system development have been guided by Zev Yaroslavsky, LA County Supervisor. Mr. Yaroslavsky calls for a break with "dated, auto-centric models" in favor of bicycling, walking and public transportation. He assumed office in 1994 and has become an outspoken, and popular, advocate for change. He wrote and sponsored the MTA Reform and Accountability Act of 1998 which banned the use of county sales tax revenue for the planning or building of subways but he has shown a change of thought and has championed BRT and transit system development.

Continued transit system development including an extension to the Orange Line and 11 other transit projects may be funded through Los Angeles County's proposed 30/10 Initiative. This program seeks to accomplish 30 years of transit projects in 10 years. The concept uses long-term revenue from the Measure R sales tax as a guarantee for long-term bonds and a federal loan that will allow the build out of 12 key mass transit projects in 10 years. Through Transit Improvement Bonds, the Transportation Infrastructure Finance and Innovation Act and a federally-supported Early Systems Work Agreement LA County will be able to rapidly move forward their transit projects, effectively leveraging mode-shift through provision of service and network density.

http://www.gobrt.org/Orange_Line_Preliminary_Evaluation_by_BTI.pdf

CTOD review:
http://latod.reconnectingamerica.org/sites/default/files/LA_executive_summary.pdf

LA County TOD Guidelines: http://www.metro.net/projects/2012-tod/tod-guidelines/

30/10 Initiative: http://www.metro.net/projects/30-10/

Contact: Olga M. Lopez, Acting Manager molextension@metro.net

Chicago's Bus Rapid Transit System

Chicago's Metropolitan Planning Council has proposed a ten-bus line BRT network that is designed to provide service to areas currently underserved by the El. These lines will be developed and operated by the Chicago Transit Authority. **This proposal represents the first true BRT system in the U.S.** The proposed total network would be 95 miles. At a projected $13m a mile, the $1.2b cost would provide substantially greater cost effectiveness than light rail. Most of the system will be bus-only lanes with buses making stops every half mile at special stations.

Routes recommended in the study also serve major destinations and the Metropolitan Planning Council intends to focus development along this system. Currently the Chicago Transit Authority (CTA) and Chicago Department of Transportation (CDOT) are experimenting through the BRT Pilot Program. Full-featured BRT has yet to be tested in Chicago. The City's Pilot Program uses BRT-light, meaning that the buses do not have dedicated guideways and do not provide the level of service necessary to influence mode-shift. Future projects and pilots are slated to demonstrate full-featured BRT service. Newly-elected Mayor Rahm Emanuel has emerged as a strong advocate for this full-featured BRT system, ensuring near-term political support.

http://www.metroplanning.org/multimedia/publication/524?utm_source=%2fbrtpaper&utm_medium=web&utm_campaign=redirect

Contact: Josh Ellis, project manager at the planning council