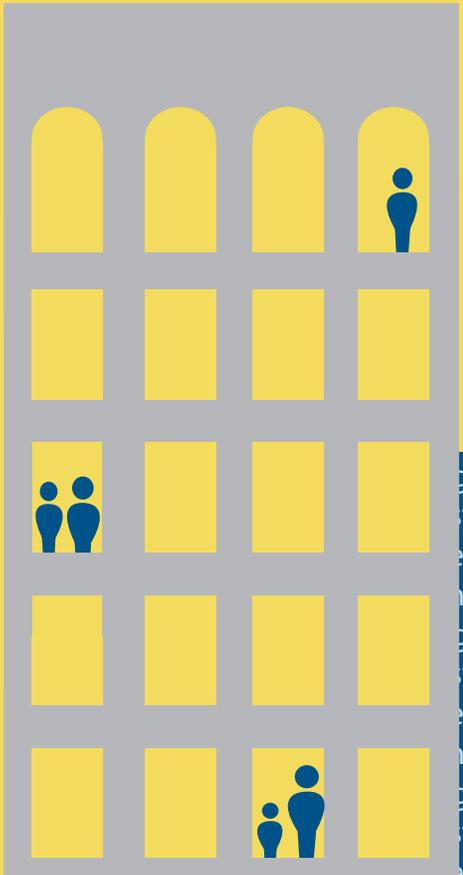




URBAN INFILL CONCEPTS



ALONG NASHVILLE'S EAST-WEST CONNECTOR CORRIDOR

URBAN INFILL CONCEPTS

ALONG NASHVILLE'S EAST-WEST CONNECTOR CORRIDOR

1	Introduction	
	<i>Making a Case for Quality Growth</i>	7
2	Nashville	
	<i>Examining Middle TN's Development Milestones</i>	13
3	Precedents	
	<i>Learning from Successful Corridors</i>	21
4	Case Studies	
	<i>Studying Transit & Land-use Synergies</i>	29
	4.1 <i>Academic Explorations</i>	33
	4.2 <i>Real-world Visions</i>	47
5	Toolbox	
	<i>Implementing Visionary Concepts</i>	57



Image Courtesy of Bruce Cain – Elevated Lens – elevatedlens.com

I INTRODUCTION



Making a Case for Quality Growth

Sustainable Growth through Urban Infill Development

Metropolitan areas are ramping up efforts to encourage smarter and more efficient growth and development to combat the costly effects of decades of urban sprawl. Investments in mass transit infrastructure are an increasingly popular approach to help re-shape and prepare urban centers and corridors to accommodate increased residential and employment density.

Urban infill development allows cities to reclaim vacant or underutilized land by encouraging a greater mixture of residential, retail, and employment opportunities, this usually includes the integration of health-conscience land uses; such as open space for productive urban gardens, commercial horticulture, and even neighborhood playgrounds. Urban infill is crucial for providing space for transit infrastructure as well as development close to transit stations in the form of transit-oriented development (TOD) areas.

Aligning Transportation Policies and Investments with Quality Growth Concepts

The increased focus on urban infill and sustainable growth is supported in the Nashville area by recent transportation planning efforts. In 2010, mayors from across Middle Tennessee adopted the *2035 Regional Transportation Plan* that sets policies for how the metropolitan area will invest in transportation infrastructure over the next 25 years. The plan rests on the view that transportation infrastructure is more than just a tool to improve mobility – it is a significant contributor to the overall health, sustainability, prosperity, and character of a place – be that a small community or a large metropolitan region.

The *2035 Regional Transportation Plan* lays out a strategy to

invest nearly \$6 billion in anticipated revenues into the region's transportation system as the region absorbs nearly an additional million more people and a significant increase in vehicle miles traveled. *2035 Regional Transportation Plan* rests on three major policy initiatives:

- Create a Bold, New Vision for Mass Transit to help guide the expansion and modernization of the region's mass transit system in preparation for the increasing competitive global economy; and to more proactively address the growing concerns about the health of our environment, worsening congestion, and the sprawling land development pattern that has begun to encroach upon the area's cherished rural countryside.
- Support Active Transportation and the Development of Walkable Communities to help facilitate complete streets, improve connectivity between people and places within the urbanizing area of the region, foster healthier activity for the region's citizens, and to serve as the backbone of investments in mass transit.
- Preserve and Enhance Strategic Roadway Corridors with a focus on repairing an aging roadway and bridge network to ensure the safety and security of the traveling public and freight, and an emphasis on using technology to make roadway corridors more efficient and ready for the vehicle fleet of the 21st century.

The East-West Corridor: Backbone to Future Regional Investments

One of the most significant elements of the *2035 Regional Transportation Plan* is the call to establish a high-capacity, rapid transit line to link key destinations along Nashville's major East-West Corridor to surrounding neighborhoods, and existing and planned regional transit services. Since the Plan's adoption, the Nashville

MTA has begun work on the East-West Connector to implement that vision. The project spans 7.5 miles from Five Points in East Nashville to the Harding Road Town Center area in West Nashville.

Initially envisioned as a potential streetcar or light rail transit corridor, the formal Alternatives Analysis conducted in 2011 resulted in a locally-preferred alternative to construct a bus rapid transit (BRT) service. The BRT (think light rail transit service operating on rubber wheels) has an estimated price tag of roughly half the cost of the rail alternative, yet was determined during the study to support nearly as much ridership. The East-West Connector will act as a catalyst for future regional investments by being the first mass transit project of its type within Middle Tennessee.

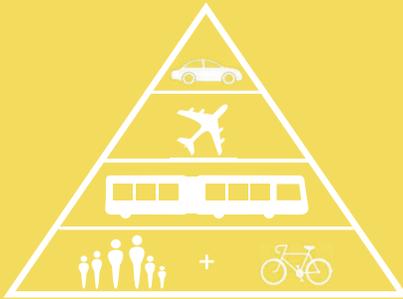
Urban Infill Concepts

The objective of this booklet is to illustrate the potential for urban infill development around the expansion of transit services along the East-West Corridor. The booklet is intended to highlight best practice examples of urban infill development drawing upon academic research as well as real-world precedent – not provide policy. The publication offers concepts, case studies, and “toolboxes” that demonstrate how peer communities have achieved their visions for development around major transit investment. The booklet represents a compilation of work from private-sector urban design professionals, graduate-level design students, and public agencies. Given the evolving nature of land development along the corridor, and the preliminary nature of the design for the East-West Corridor BRT, renderings displayed throughout this document may not be representative of the final BRT vehicle, alignment, or station areas.

– Jennifer Hill, Transportation Planner, Nashville Area MPO

☺ QUALITY OF LIFE

✚ HEALTH

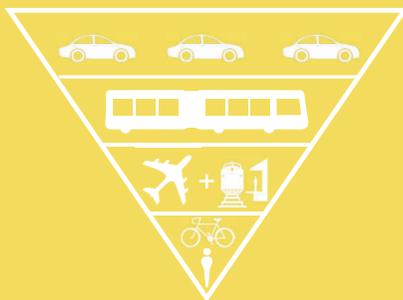


QUALITY GROWTH

Compact, safe, walkable developments featuring a mix of uses and integrated, effective multi-modal transportation options.

BUSINESS AS USUAL

Automobile centric, sprawling developments with separated work-live-play uses.



- Increased access to jobs, education, healthcare, athletics, and entertainment.
- More housing and transit options.
- Relieves congestion. More riders on public transit equates to less cars on the road.
- More disposable income to be redirected to food, education, health and entertainment. Households that use public transportation save over \$9,000 every year (on average).

- Increased movement and activity. More energy can be spent walking and biking in between station areas and destinations. This leads to an overall increased level of public health around these developments.
- Broadened access to healthy food and health care.
- Tax dollars proactively go towards pedestrian, cyclist and transit infrastructure.
- Enhanced quality-of-life and significant financial savings result from healthier lifestyles.

- Decreased access to jobs, education, and healthcare. Work-play-live destinations are increasingly distant from each other.
- Poorer transit service. Low densities and vast distances makes transit more expensive and less effective. Public transit becomes fragmented and cumbersome.
- Lowered productivity. The 2010 population of the 10-county Middle Tennessee region lost 56 million hours sitting in traffic.

- Diminished health. Current development practices encourage a sedentary lifestyle. Long commutes and minimal pedestrian and bicycle infrastructure have contributed to significant health issues across the nation. Type II diabetes, hypertension, obesity and other preventable diseases have skyrocketed over the past 25 years. Taxpayer dollars reactively treat these preventable diseases.
- Reduced access to fresh, nutritious food as well as health care.
- Decreased community interaction.

 ENERGY ECONOMY ENVIRONMENT

- Increased independence from fossil fuels. Households near public transit drive an average of 4,400 fewer miles than households with no access to public transit. Mass transit users save the United States 4.2 billion gallons of gas each year; this is more than 3 times the amount of oil imported from Kuwait annually.
- A Toyota Prius, getting 50 mpg, loaded with four adults, consumes six times the energy per person than a bicyclist, for the same trip.
- Enhanced competitive advantage. Cities with strong mass transit options have a competitive advantage in industry and new business recruitment.
- Higher return on investment. For every \$1 invested in public transportation, \$4 in economic returns is generated. Municipalities benefit from an increased tax base. Properties near mass transit are valued higher than those without access.
- Increased savings. Compact developments translate to a reduced cost to taxpayers because of the efficient infrastructure leverage.
- Expansive environmental benefits. Compact, walkable communities, with access to public transit, do a great deal to mitigate the pressures of human civilization on the environment. Farmland preservation, efficient natural resource management, habitat preservation and air and water quality improvement strategies work towards minimizing our collective footprint on the earth.
- For every switch to mass transit, vehicle emissions go down an amount equivalent to planting nine trees.
- Increased dependence on fossil fuels. A country with a primary dependence on personal automobiles generates a strong dependence on oil.
- Reduced efficiencies. During 2010, the 10-county Middle Tennessee region wasted 16 million gallons of gas sitting in traffic.
- Increased energy use and associated costs for delivery of all utilities and city services.
- Less disposable income. The average annual cost of commuting by personal automobile is \$15,000. Congestion is expensive for residents, businesses, and government.
- Poor investments. The infrastructure for these developments is higher per household because of the lack of density. Tax dollars finance this inefficient infrastructure.
- Diminished environmental health. A sprawling pattern of development not only leads to loss of wildlife habitat, but also wetlands and other natural resources are put at risk. Disappearing farmland and natural areas, light pollution, loss of groundwater, and decreased water and air quality are all serious, negative environmental impacts associated with sprawl.



Image Courtesy of Bruce Cain – Elevated Lens – elevatedlens.com

2 NASHVILLE



Examining Middle TN's Development Milestones

1779 – James Robertson, John Donelson, and a party of Wataugans founded Fort Nashborough.

1784 – Surveyor Thomas Molloy draws original plat for the town: 200 one-acre lots with four acres reserved for a public square on the bluffs overlooking the river.

1794 – Wagon Road is established between Nashville and Knoxville.

1819 – First steamboat docks at the Nashville wharf.

1823 – Nashville's first bridge over the Cumberland River completed.

1842 – Radial turnpikes to Gallatin, Franklin, Columbia, Murfreesboro, Shelbyville completed.



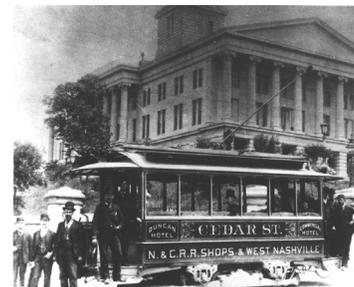
Metropolitan Government Archives
www.nashville.gov/metro_archives

1850 – Peak of steamboat trade: first locomotive engine arrives in Nashville.

1861 – Five rail lines enter the city.

1859 – Louisville, Chattanooga, and Nashville linked by rail.

1896 – First automobile arrives in Nashville.



Metropolitan Government Archives
www.nashville.gov/metro_archives

1888 – First electric streetcar opens, making Nashville One of the 1st in nation to have such “modern” transportation.

1866 – First mule-drawn streetcar route in Nashville opens between downtown and the University of Nashville to the south.

1700s

Fort Nashborough founded. Centralized development near river dictated by topography. Transportation by river and wagon.

1800s

Central development near river dictated by topography. Bridges, steamboats, and rail bring added commerce to Nashville. Regional farm-to-market roads are established. Public transportation, via rail, surfaces near the end of the century enabling expansion.



Metropolitan Government Archives
www.nashville.gov/metro_archives

1900 – Union Station opens as a railroad terminal to serve the passenger operations of the eight railroads then providing passenger service to Nashville. The station was also served by streetcars.

1909 – Shelby Street Bridge constructed connecting Downtown with the residential suburbs of East Nashville.

1926 – Motor buses first introduced to Nashville to supplement the existing streetcar system.

1929 – *Our cities, Today and Tomorrow; a survey of planning and zoning progress in the United States*, finds Nashville “notably lacking in city planning, zoning and subdivision control...having an unbalanced park system.”

1933 – Last commercial steamboat taken out of service.

1931 – Nashville Metropolitan Planning Commission (MPC) created.

1941 – Tennessee Electric Power Company replace electric streetcars with buses and becomes Southern Coach Lines, Inc. (and later Nashville Transit Company in 1953).

1950s-1970s – Unprecedented growth and prosperity graces Nashville; there is a dramatic increase in private automobiles. Fewer and fewer people were using the bus. Spiraling costs, higher fares, service cutbacks and deferred maintenance translated into poorer transit service for those who relied on the transit system. Public opinion of mass transit in Nashville declines.

1963 – Metro Government established, one of the first combinations of city and county governments in the nation.



Metropolitan Government Archives
www.nashville.gov/metro_archives

1968 – Completion of interstate system around Nashville enables regional sprawl.

1900s

Public transportation on rail declines and motorbuses take over. Post World War II brings unprecedented growth and prosperity and enables further outward development. People move away from the industrialized riverfront; uses are separated – per zoning law – and jobs, commercial districts, and housing get further and further away from each other. Development occurs along regional pikes. Completion of the interstate system, coupled with cheap fuel, encourages sprawl and automobiles become the primary mode of transportation. Nashville begins to be designed for cars instead of people. The public realm suffers.

1973 – The Metropolitan Government of Nashville and Davidson County received a federal grant to purchase Nashville Transit Company to rebuild a healthy public transit system necessary to reduce traffic congestion, aid in workforce development, and reduce air pollution. Over the coming years the business is restructured.

1978 – AMTRAK ends passenger rail service to Nashville.

1986 – Union Station is renovated into a hotel.

1987 – I-440 construction complete; the limited access highway links I-40 west of the city with I-65 and I-24 to the south.

1988 – Creation of the Regional Transit Authority (RTA) by state statute to provide ridesharing opportunities between 9 counties in Middle TN in order to promote the economic growth and improve the air quality.



Everton Ogelsby Architects
www.eoaarchitects.com

1991 – Center City Plan is the first Subarea Plan for the city offering a growth vision for the urban core (updated in 1997).

1991 – Mayor Bredesen and the Metro Council created the Greenways Commission, a division of Metro Parks, to plan and develop a greenway system throughout Davidson County to enhance transportation and recreation opportunities.

1992 – Davidson Transit Organization, a private, non-profit organization was formed. Eventually this would become Metropolitan Transit Authority.

1994 – Greenways for Nashville established - linking the private sector and public participation to aid in realizing a comprehensive greenway system.

1998 – Introduction of form-based zoning tools such as Urban Zoning Overlays (UZOs), Urban Design Overlays UDOs, Specific Plan (SPs), and Alternative Zoning Districts (AZDs).

2001 – USA Today names Nashville nation's "Most sprawling metropolitan region with population of 1 million or more".



Sitephocus
www.sitephocus.com

2003 – Shelby Street Bridge reopens (after closing to automobiles in 1998) as a pedestrian bridge providing outstanding views of the river and the downtown skyline.

2004 – Korean War Veterans Bridge completion restores vehicular connection between East Nashville and area south of Broadway (SoBro).

2005 – Nashville Civic Design Center (NCDC) publishes *The Plan of Nashville*, a 2 1/2 year project to develop a community-based vision and design principles for metropolitan Nashville's urban core. Consensus emerged regarding Ten Principles to guide public policy, development practice, urban planning and design.



Nashville Metropolitan Transit Authority
www.nashvillemta.org

2006 – Music City Star, the region's first regional commuter rail, launches on an existing Nashville & Eastern Railroad track. The line stretches 32 miles and has 6 stops between Downtown Nashville and Lebanon.

2006 – Regional Transit Authority (RTA) offers express bus service to surrounding suburbs.

2008 – Music City Central, Nashville's downtown transit transfer station, opens.

2008 – Transit Now Nashville formed as a local grassroots organization whose mission is to raise awareness on the benefits of regional mass transit options for the people living in the Greater Nashville Area.



Nashville Metropolitan Transit Authority
www.nashvillemta.org

2009 – Gallatin Road BRT Lite opens connecting Rivergate Mall with Music City Central. Ridership was up 50% on this corridor within 4 years of completion.

2009 – Creation of the Middle Tennessee Mayor's Caucus. The caucus decides to focus on regional mass transit as their top priority.

2009 – Creation of the Transit Alliance of Middle Tennessee to encourage private and public sector support for new investments in mass transit.

2000s

Increased energy costs, traffic congestion, decreased air quality, and long commutes are commonplace and Nashville sees an increase in the demand for urban living. Public transportation, open space, greenways, and sustainable development become a focus for Middle Tennessee. Zoning law is updated and mixed-use developments work towards closing the gap between live-work-play destinations. Nashville redefines its relationship with its riverfront and the Cumberland River is seen as an environmental and cultural amenity. Mayor Karl Dean strives to make Nashville the "greenest city in the southeast" and the city's renaissance makes national headlines.



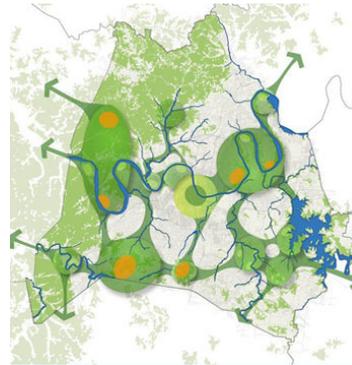
Nashville Public Radio
www.wpln.org/

2010 – Metro Nashville Public Health Department and Parks and Recreation start Green Bikes bikeshare program, providing free bicycle usage for 94 miles of greenways and 133 miles of on-road bike lanes and shared-use bike routes.

2010 – Mayor Karl Dean issued a *Complete Streets Initiative* in the city. It requires that all future projects design for automobiles, cyclists, mass transit, and pedestrians of all ages and abilities.

2010 – Adoption of The Downtown Code – a form-based zoning code for the 662 acres of Downtown.

2010 – Mayors across Middle Tennessee adopt the Nashville Area Metropolitan Planning Organization's (MPO) *2035 Regional Transportation Plan*, which redefines policy for future transportation investments.



The Conservation Fund
www.conservationfund.org

2011 – Nashville's Open Space Plan published by the Office of the Mayor and the Land Trust for Tennessee, calling for 25 miles of trails in 5 years and the addition of 3,000 acres of park land in ten years.

2012 – Metropolitan Transit Authority (MTA) board approves BRT in dedicated lanes as preferred alternative for the East-West Connector. Stretching nearly 7 miles, the transit line will connect East Nashville, Downtown, and West Nashville.

2012 – Hamilton Springs, Middle Tennessee's first TOD begins construction along the Music City Star line between Mt. Juliet and Lebanon.

2012 – Nashville Civic Design Center, in partnership with the Nashville Area MPO, releases *Moving Tennessee Forward: Models for Connecting Communities*. It is a six-part visioning manual for the area MPO's *2035 Regional Transportation Plan*.

2012 – Nashville begins to update the General Plan.

2012 – All MTA buses fitted with bike racks.



Nashville Metropolitan Transit Authority
www.nashvillemta.org

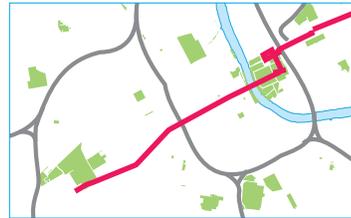
2010 – Music City Circuit opens – Nashville's free downtown circulator bus.

2012 – Music City Bikeway dedicated by Mayor Karl Dean, comprising a continuous bicycle route linking Percy Warner Park in West Davidson County to Percy Priest Dam in Eastern Davidson County. Greenway trails, bikelanes, park roads, and single-share roads make up the nearly 26 mile stretch. Major parks, dense neighborhoods and Downtown are all linked.

2012 – 28th /31st Avenue Connector opens. A “complete street”, the connector bridge will reconnect North Nashville with the bustling West End Ave commercial district. The MTA and Metro Arts Commission coordinated six artist-designed transit shelters along the bridge.

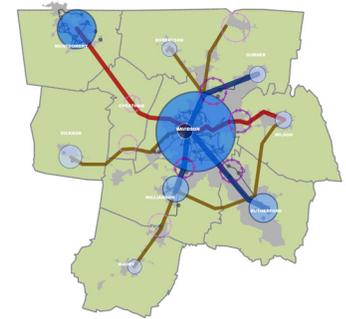
2012 – University Connector bus route opens providing cross-town service connecting six universities and providing transfer points to 10 MTA bus routes.

2012 – \$3 million in federal grant funds will replace four hybrid Music City Circuit buses with zero-emissions electric buses.



2015 – Proposed East/West BRT Connector completion date.

2013 – Anticipated start date for BRT lite along Murfreesboro Pike, connecting Downtown with Hickory Hollow Mall. Projected 30% increase in ridership once complete.



Nashville Area MPO
www.nashvillempo.org/

FUTURE – As part of the 2035 *Regional Transportation Plan*, several projects are on the horizon. Many of these will hinge on the availability of funding and supportive ridership (only obtainable with the inclusion of transit-supportive land use policies). Projects include: rapid transit along the regions NE, SE and S corridors; commuter rail to Clarksville; Express Coach Service; continued development of urban fixed-route bus service; suburban and commuter circulators; regional vanpool; rural paratransit; and an extensive greenway system.

FUTURE

With more than 75% of the world’s population living in cities by 2050, it is increasingly important for municipalities to effectively accommodate the increase of residential and employment densities through sound mass transit solutions and transit supportive land use policies. A lively mix of pedestrian, cyclist, and public transit infrastructure will aid in creating healthy, prosperous places to live, work, and play.

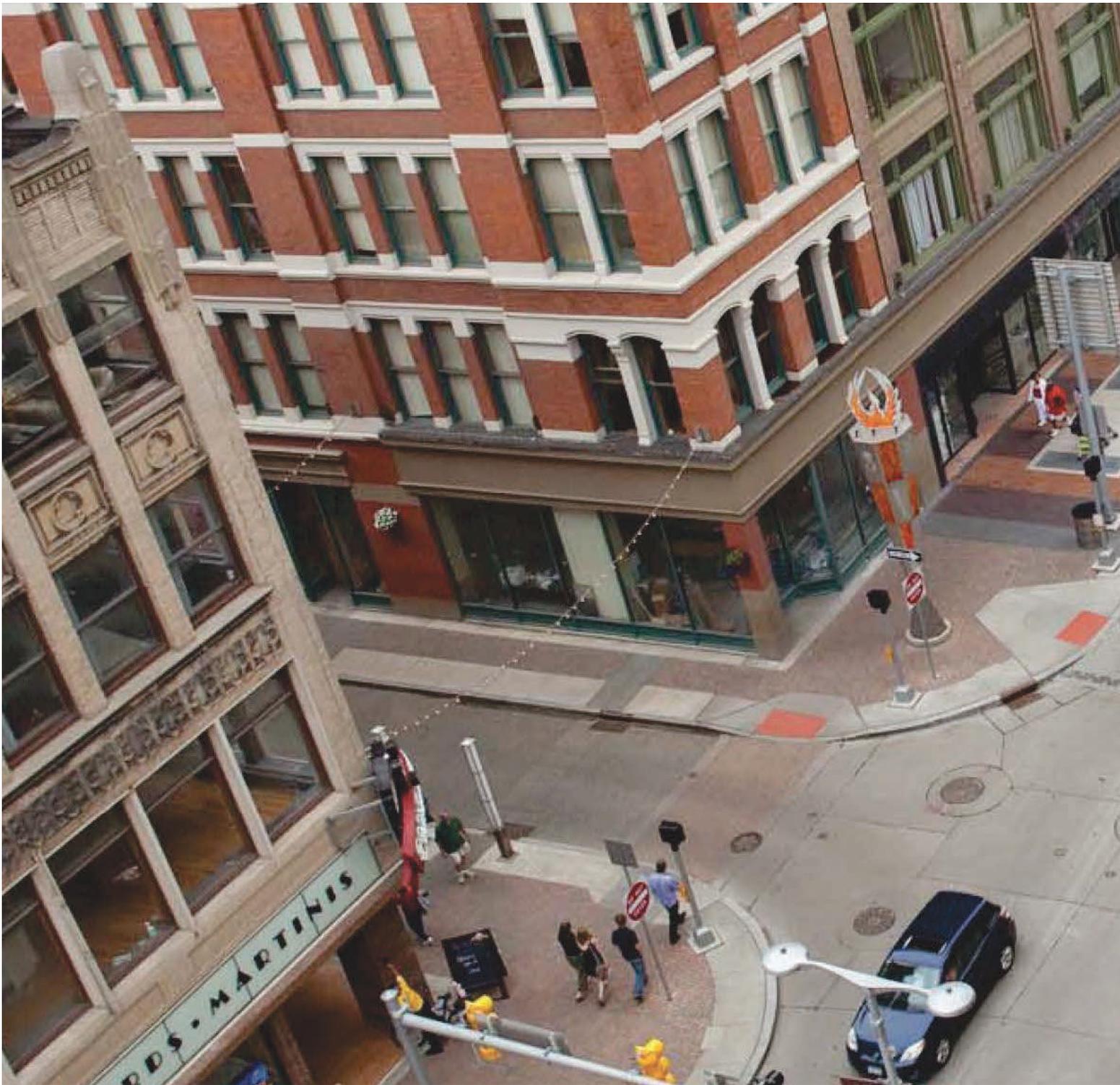
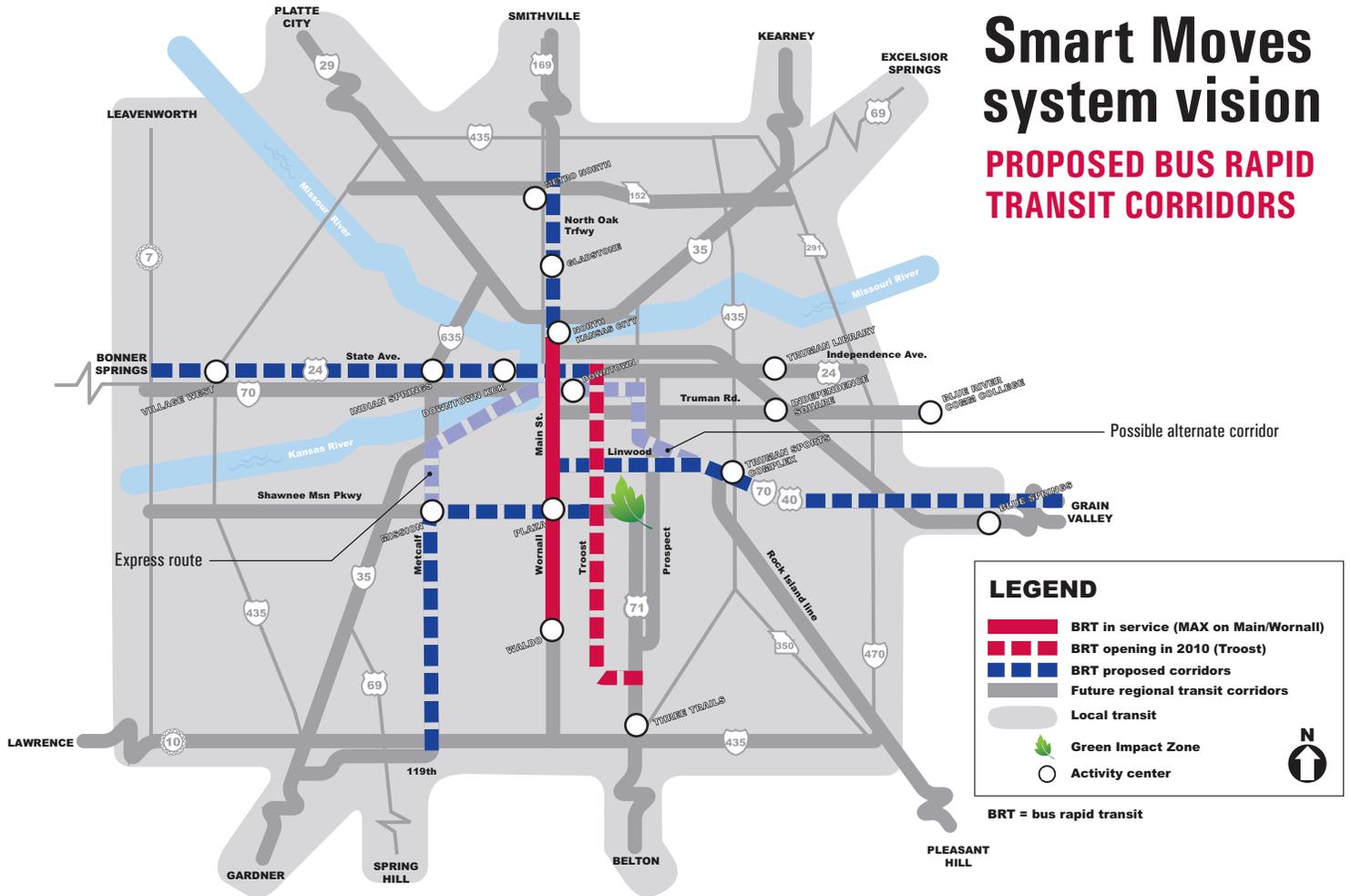


Image Courtesy of Robert Benson Photography & Craig Kuhner

3 PRECEDENTS



Learning from Other Successful Corridors





Kansas City Area Transit Authority – www.kcata.org

KANSAS CITY, MO MAX 2005		
↑25% SPEED	↑50% RIDERSHIP	\$2.3M COST/MILE
9 MI (3.75 MI DEDICATED LANE)		

The Kansas City Area Transportation Authority (KCATA) opened in the Main Street Max in July 2005. It was the first step towards implementing the region’s transit plan – Smart Moves.

The Main Street MAX connects 200,000 jobs and links major civic and cultural attractions. The service was an instant success and immediately saw a 50% increase in ridership. The 44 stations are designed to be local landmarks and feature real-time arrival information, benches, shelter, lighting and unique branding, and wayfinding maps.

Due to the success of the Main St. route, KCATA opened its second MAX line – the Troost Ave MAX. This nine-mile line is part of a revitalization strategy for the Troost Corridor and part of Kansas City’s sustainable community initiative – the Green Impact Zone. Solar lighting, solar trash compactors, rain gardens, recycling facilities and public art can be found at Troost Ave MAX’s twenty-five stations; pervious concrete is used at the park-and-ride lots.

The two MAX lines operate in urban arterials with peak-hour dedicated bus lanes.



Kansas City Area Transit Authority – www.kcata.org



Robert Benson Photography and Craig Kuhner

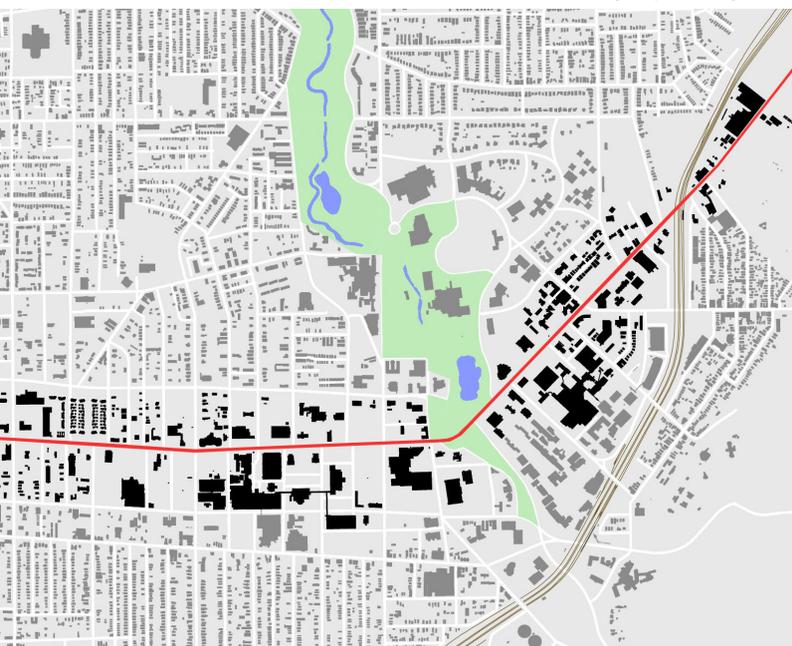


Robert Benson Photography and Craig Kuhner





Robert Benson Photography and Craig Kuhner



Sasaki Associates, Inc. – www.sasaki.com/

CLEVELAND, OH | HEALTHLINE | 2008

↑ 34% SPEED	↑ 60% RIDERSHIP	\$24.1M COST/MILE
-----------------------	---------------------------	-----------------------------

6.8 MI (5.5 MI DEDICATED LANE)

The HealthLine route runs down 6.8 miles of Euclid Avenue from Downtown to East Cleveland, connecting the city’s cultural and educational institutions, and the medical and business centers. It’s part of the *Euclid Corridor Transportation Project*, a transit, roadway, and street amenity project.

The service mimics Light Rail Transit (LRT) in many ways with dedicated lanes, precision docking, multi-door, level boarding, real-time arrival information, off-board fare collection, shelters, lighting and wayfinding. In addition to the \$50 million spent on articulated, hybrid-diesel buses, \$150 million was spent on streetscaping and roadway improvements – including a four-mile bike lane between the universities, and an urban forest with 1,323 new trees. Public art elevates the pedestrian experience. These investments in the public realm have paid off. **A reported \$5.8 billion in additional investments – \$3.3 billion on new construction and \$2.5 billion for building rehabilitation – in over 110 projects.**

The Cleveland Clinic and University Hospitals purchased the naming rights, paying more than \$6 million over a period of 25 years to call the BRT the “HealthLine”. The project won the Urban Land Institute’s Award of Excellence in 2011.





Central Florida Regional Transportation Authority – www.golynx.com



Central Florida Regional Transportation Authority – www.golynx.com

ORLANDO, FL LYMMO 1997		
↑ 15% SPEED	↑ 54% RIDERSHIP	\$7M COST/MILE
3 MI DEDICATED LANE		

The Lynx Lymmo, which began service in 1997, provides free rides in dedicated bus lanes in downtown Orlando. It replaces the Freebee mixed-traffic bus route. The service was developed to aid in the economic development of downtown Orlando, mitigate parking issues, improve mobility, and provide a pleasant pedestrian and transit environment that was “fast, fun, frequent, and free”.

Ten wide-door buses use compressed natural gas and serve eleven station and eight street stops along the route. **The buses are branded with themes and are coined “Moveums”, or moving museums (the first theme was “Imperial Tombs of China”).** Real-time arrival information, collision warning, vehicle tracking and precision docking are some of the systems’s ITS systems. Specialized paving and hardscape, and extensive landscaping along the route, work to improve the LYMMO corridor.

LYMMO has helped to encourage some new high-rise residential development along the corridor. Four new BRT corridors, and a connection to the SunRail commuter rail system are being planned. The goal is to serve existing and future high-density land uses with improved transit.

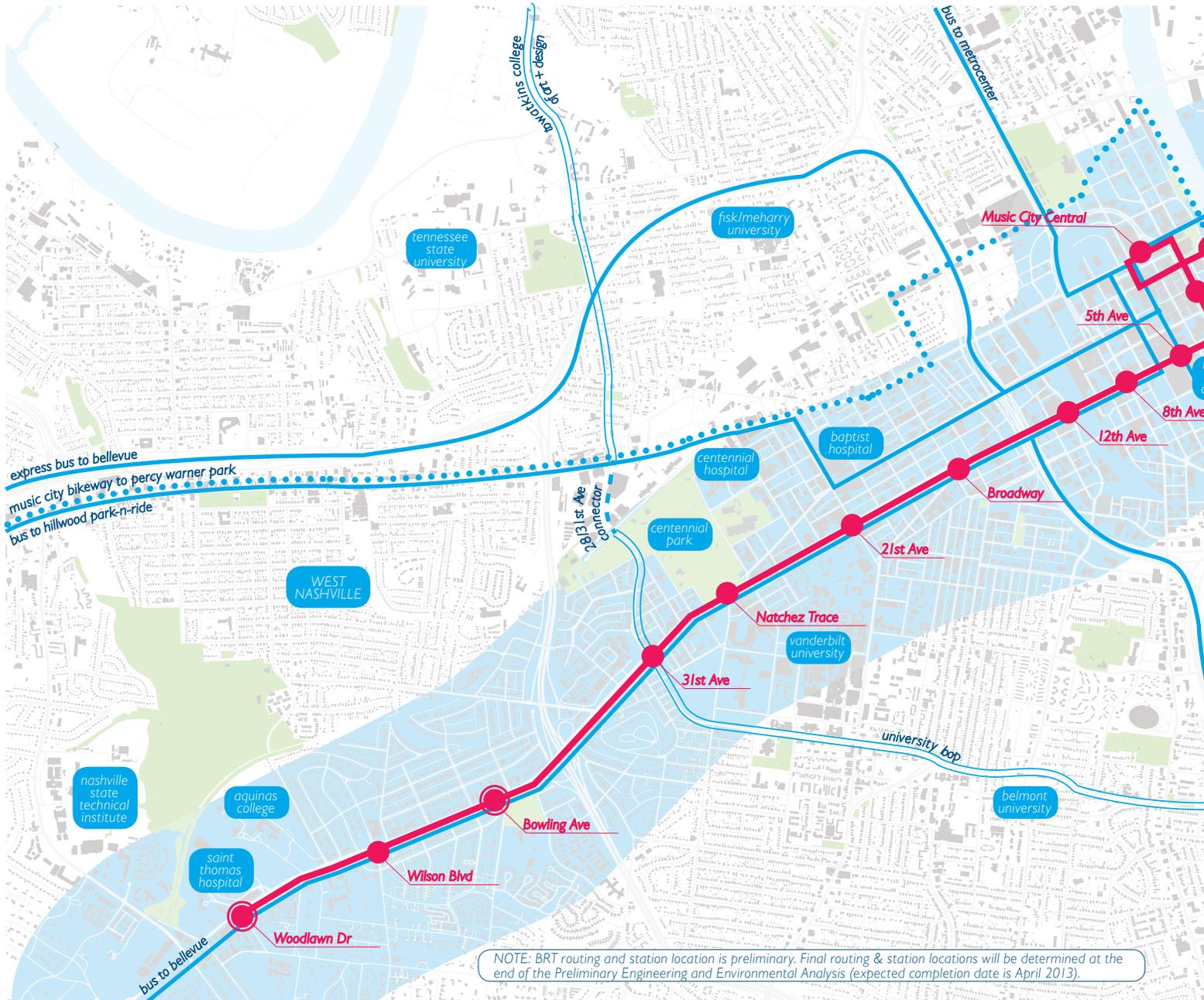


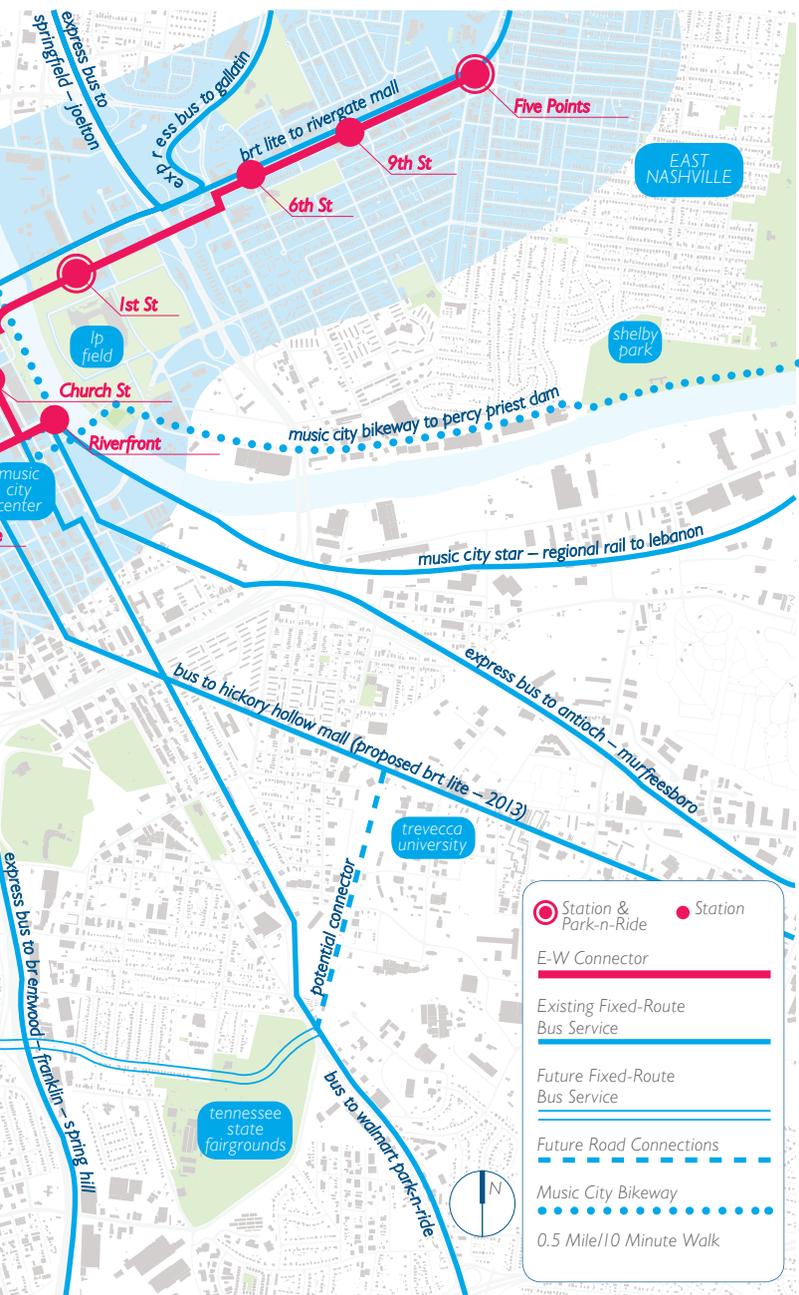
Image Courtesy of Bruce Cain – Elevated Lens – elevatedlens.com

4 CASE STUDIES



Studying Transit & Land-use Synergies





NASHVILLE, TN | E-W CONNECTOR | 2015

↑20%
SPEED

↑54%
RIDERSHIP

\$17M
COST/MILE

7.5 MI TOTAL LENGTH

As a part of the 2035 *Regional Transportation Plan* for the 10 county Middle Tennessee Region, the E-W Connector will serve as a spine making vital transit connections – for those commuting into the city, and getting around the city, on public transit. The line will run from East Nashville, through Downtown and Midtown, to West Nashville – connecting universities, hospitals, businesses, tourist and cultural attractions, entertainment, dining, sports venues, key residential areas, and centers of federal, state and local government all along the way. There are 170,000 jobs, 25,000 residents, and 17% zero-car households in the study area. The connector would serve to mobilize these people in addition to the 11 million annual visitors.

It will achieve the quality service and permanent presence of LRT on the significantly lower BRT budget. The stations along the corridor are slated to have real-time arrival information. Service will likely run as often as every ten minutes in dedicated lanes. Hybrid, low-floor, wide-door vehicles will be used. First-year ridership is projected at 4,500 average weekday trips, 21,461 average weekend trips and 1.35 million average annual trips.

The areas around the permanent transit stations are likely to become desirable for employers, residents, and businesses alike.

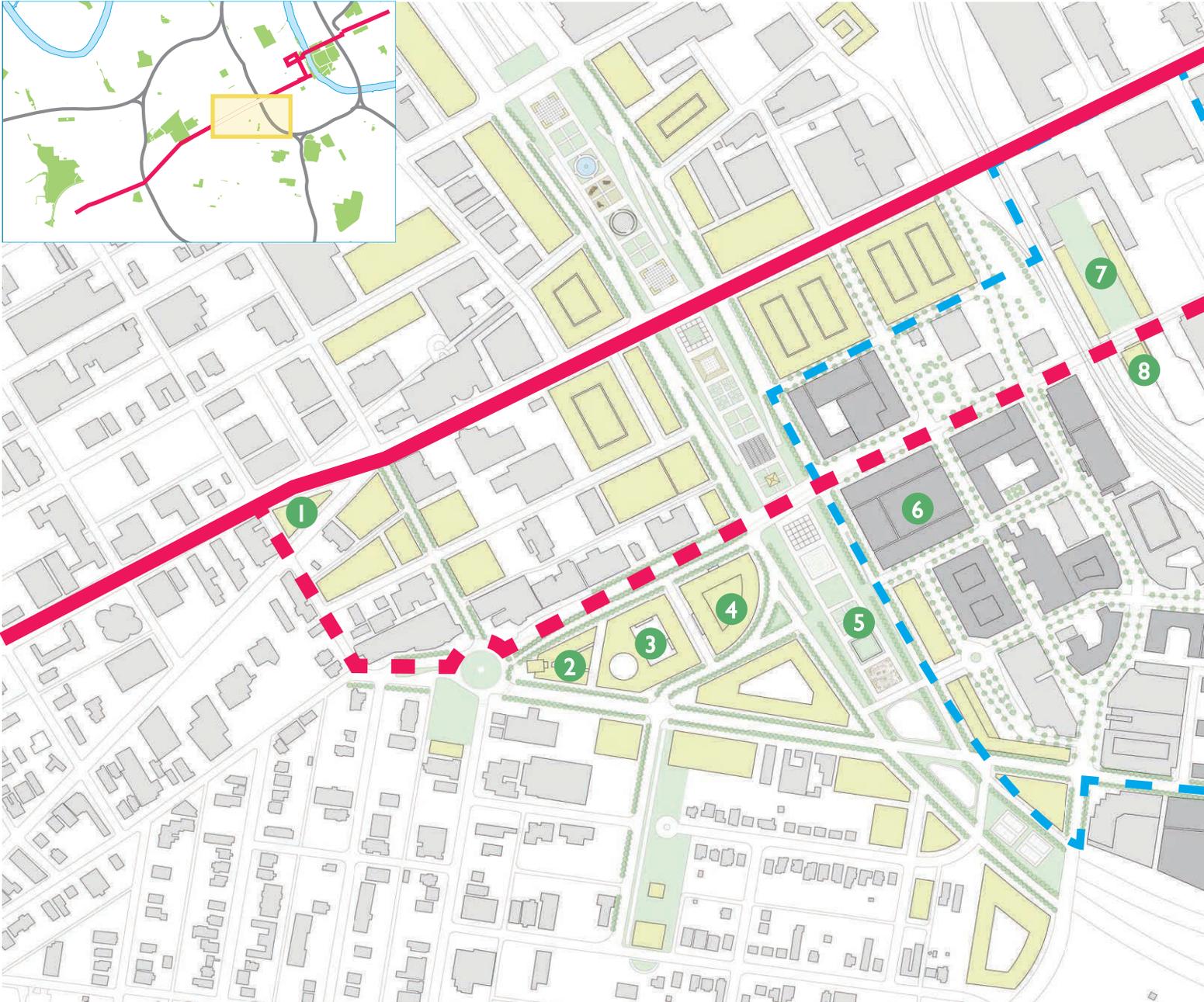


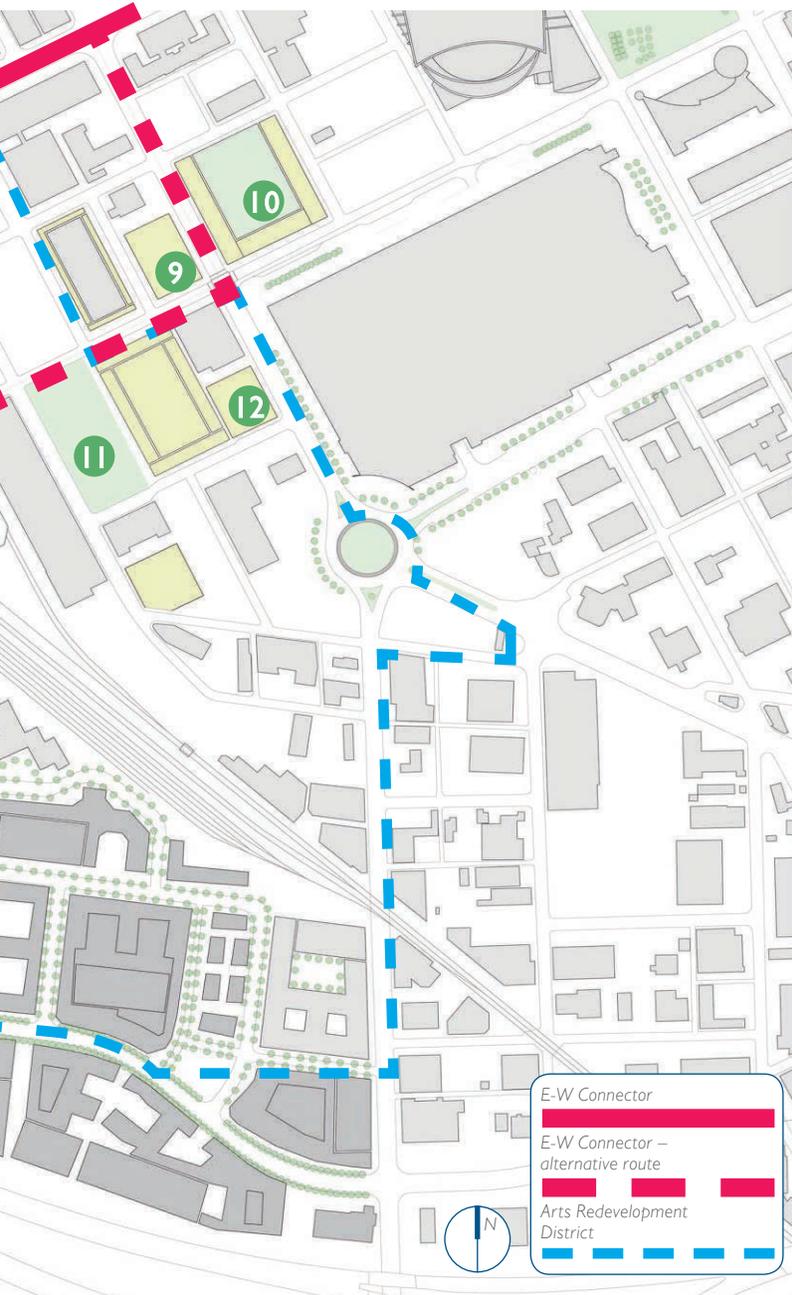
Image Courtesy of Taylor Kitchens and Andrew Martin

4.1 ACADEMIC



Studying Transit & Land Use Synergies



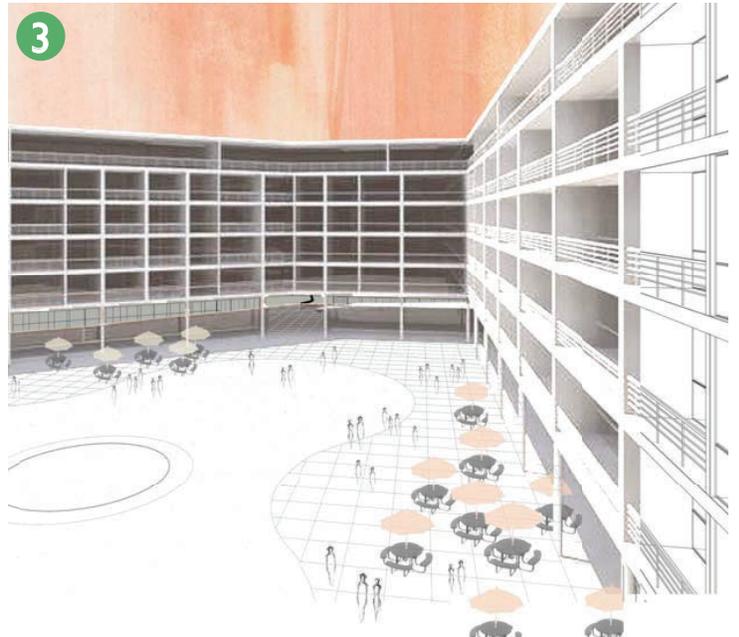
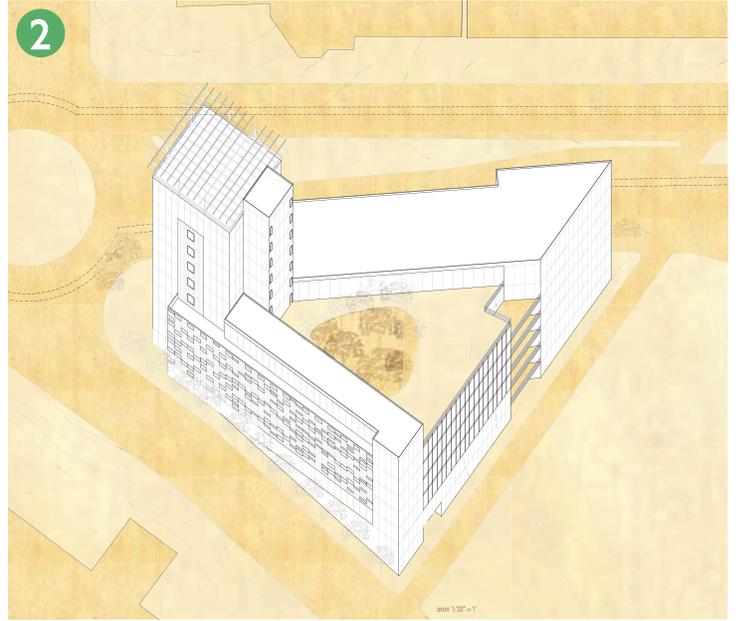
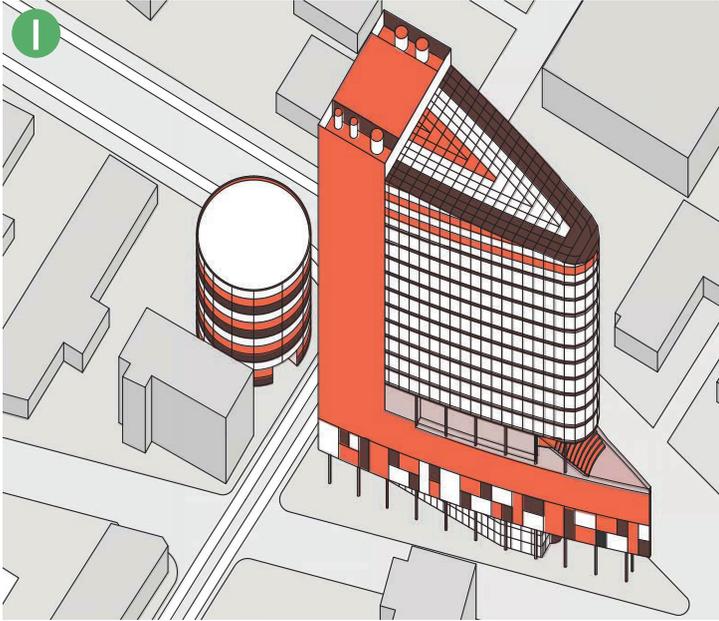


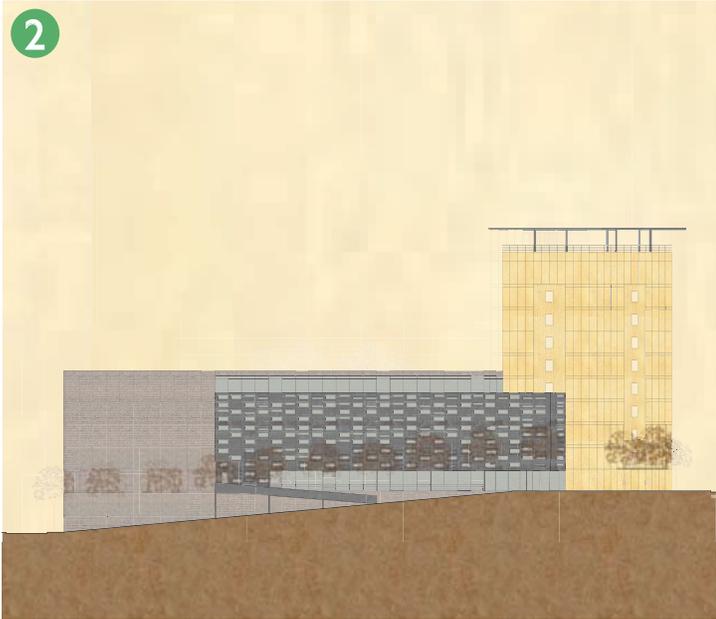
UTK CoAD – REPRESENTATIVE WORK

In the Fall 2011 semester, Fifth Year architecture students from the University of Tennessee College of Architecture + Design (UTK CoAD) programmed and designed proposals for twelve different sites in Nashville’s Downtown and Midtown. This work was lead by associate professor TK Davis.

The project focuses on the premise of a rapid transit line from West Nashville, through Downtown and Midtown to East Nashville. At the time of the studio, corridor alignments were not yet finalized and a proposed route alternative jogs onto Demonbreun in between Downtown and Midtown. Many of the sites are located within an area the Metropolitan Development and Housing Agency (MDHA) has designated as the Arts Redevelopment District, potentially incorporating Tax Increment Financing (TIF) and a design review process for proposed projects.

The Nashville Area MPO sponsored the architectural studio and encouraged design and development potential of sites that might stimulate collateral development in conjunction with a new rapid transit line.





1 Colin Hardaway

A Music Corporate Headquarters at the "Flatiron" Site

This unique, triangulated site is imagined as if rezoned to permit a tower structure, serving as a music corporate headquarters, including; speculative office floors, cafe, theater, parking silo, and a BRT stop.

2 Carly Pfahl

A Music Corporate Headquarters at the Musica Roundabout

This proposal enhances the spatial definition of the roundabout, and activates adjacent sidewalks with café dining and recording studios (a floor of which would be open for public tours) located in the center of the triangulated site.

3 Art Carlton & Philip Powers

Mixed-Use Development at the Musica Roundabout

This project adopts the real-world, published program proposed for this site to explore the site's potential. Rental housing, an urban food market, and other entertainment-oriented uses are anchored by a garden courtyard located above underground parking.

4 Ryan Cavanaugh

A Midtown, Hard Rock Hotel on Demonbreun Street

This project suggests a high-rise Hard Rock Hotel be located on Demonbreun Street, a rapidly evolving tourist street in the city linking the Cumberland River to Music Row. Music City is now contemplating hotels for the Gulch and other nearby locations.







5 Erin Gray & Michael Payne

A Linear Park Caps the Interstate

The students working outside the arts redevelopment district explored a long-term idea suggested by the NDCD – capping the interstate between 12th Avenue and Church Streets with a linear park. The students worked independently – Erin focused more on the peripheral development, and Michael focused more on the open space connecting Midtown and Downtown. The lowered interstate “canyon” now divides Downtown from Midtown; in both projects, the linear park would serve to stitch them together and encourage significantly higher property values and new peripheral development.



6 Taylor Kitchens and Andrew Martin

A Mixed-Use Gateway Development on Demonbreun Street

This proposal seeks to form a gateway between Downtown and Midtown with twin podium structures with green roofs, on the blocks to the north and south of Demonbreun Street. The structures work in concert to form a common space at street level between them. Mixed-use towers are incorporated to maximize this unique location as both a point of transition and as a “social condenser.”

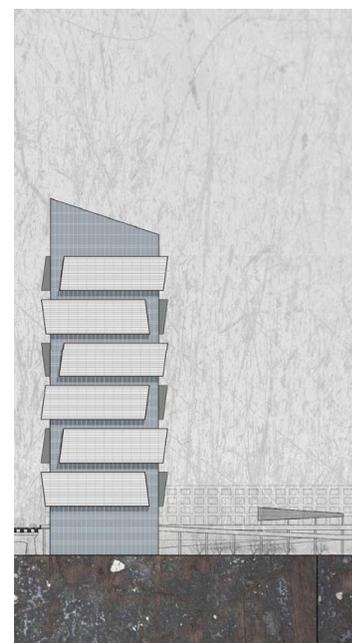
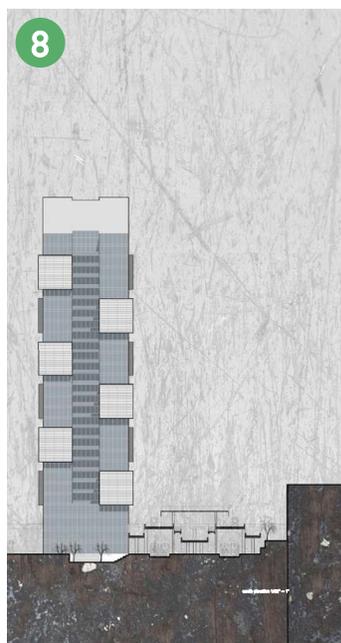
7



7



8



7



7 Ryan Day

Mixed-Uses at Union Station's Former Train Shed Site

Parking decks with green roof gardens step down from the Demonbreun Viaduct to a lower garden courtyard for the historic train station. On top of the parking decks are two linear bars of shared infrastructure and office space for start-up, creative companies. The garden courtyard between this mixed-use development and Union Station could be a new location for the Tennessee Central Railway Museum.

8



8 Ryan Bryant

A Mixed-Use Repurposing of the Landport Structure

The currently unused Landport structure, located between Cummins Station and the rail yard, is proposed to be a future commuter rail station beneath its deck surface. The parking deck could easily become a green roof to be shared by residents and neighbors alike. Parallel to the deck, and tied to the Demonbreun Viaduct, would be a tower with artist housing and live-work space for others interested in the arts community. The tower's massing speaks to the shearing characteristic of the site – as freight trains continually pass each other in the rail yard.

9



10





9

9 Daniel Obdinburg *"The Next Door" and Culinary Institute*

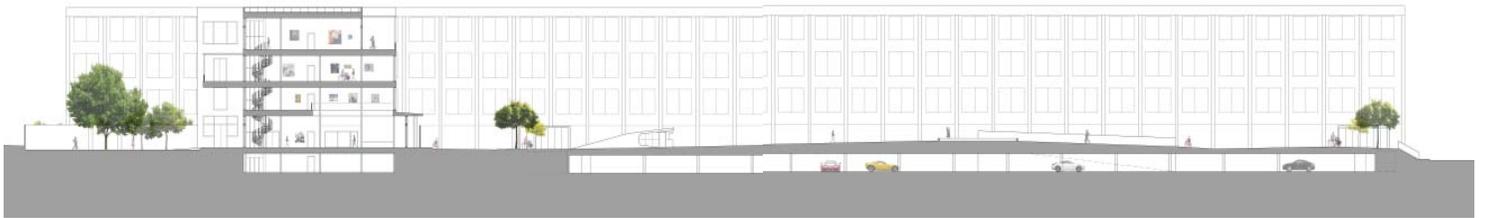
This proposal is for an expanded facility for "The Next Door", adjacent to the historic First Lutheran Church. "The Next Door" is a safe, transitional community for women recently released from the state penitentiary – many of whom have children. Coupled with this community asset would be a culinary institute with restaurants,. The women living in the residences, located above, would be trained in the culinary arts. The site's proximity to mass transit, downtown restaurants, and the new convention center would be highly advantageous.

10

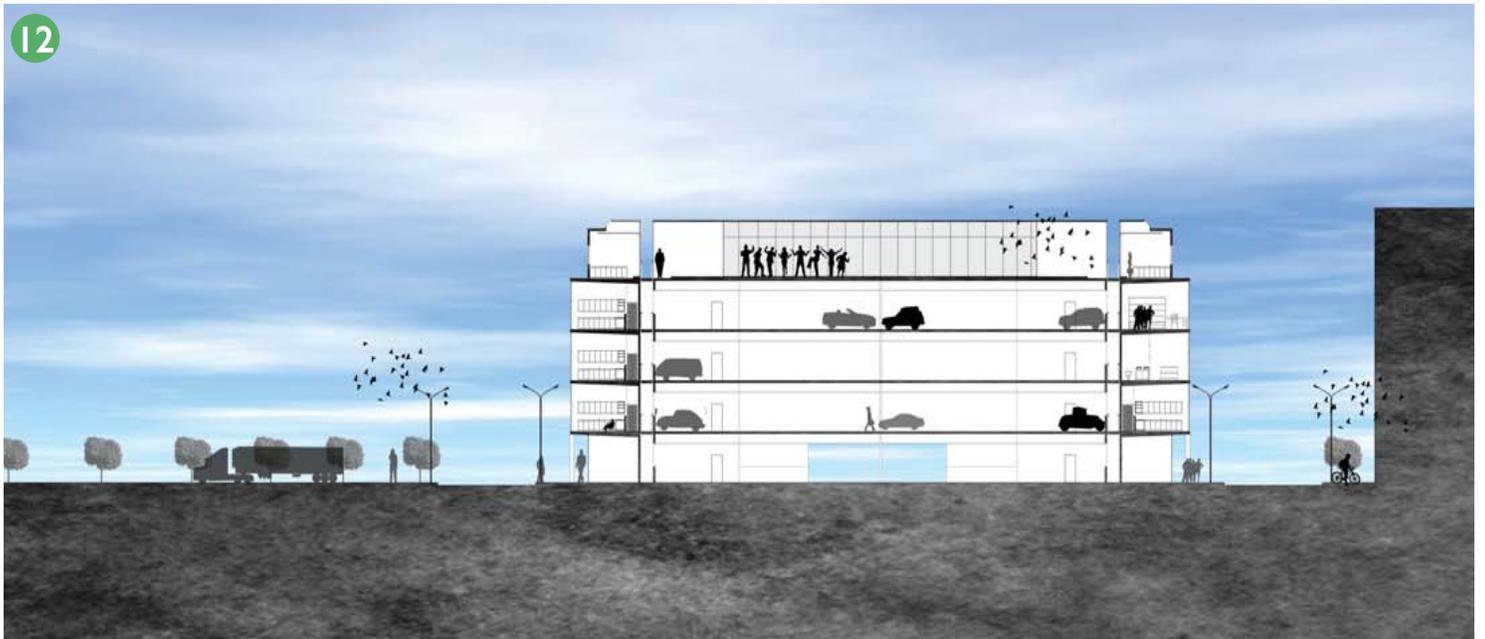
10 Laws Nelson *An Art Hotel for SoBro*

As part of the Music City Center master plan, this project proposes an "art hotel" across the street from the new convention center. The hotel employs a podium base to activate the sidewalks, incorporating a sculpture garden above. Two north-south wings flank the site, with a restaurant spanning between them at the top of the complex. From the east end of the Music City Center concourse, the building would frame views of the historic Customs House to the north.

11



12





11 Krista Graves

A Sculpture Park and Special Exhibitions Building

An existing surface parking lot for Cummins Station is transformed into a sculpture park, with structured parking beneath. An existing, older building, at the south of the site, would get two new stories, and become a special exhibitions adjunct for the Frist. With the presence of the new Music City Center and this new, proposed sculpture park, property values would be enhanced and additional development would be expected. The parking structure could be underwritten through TIF. This idea has been inspired, in part, by the recent success of “Citygarden” in downtown St. Louis.



12 Drew Parry

An Artist Community on Demonbreun Street

This two-block project develops an artist community on both the north and south sides of Demonbreun Street. To the north, a federal parking garage would be edged with housing. To the south, a new parking structure lined by mixed-use, on-grade development with housing above would develop studios, a roof garden, and outdoor assembly spaces.

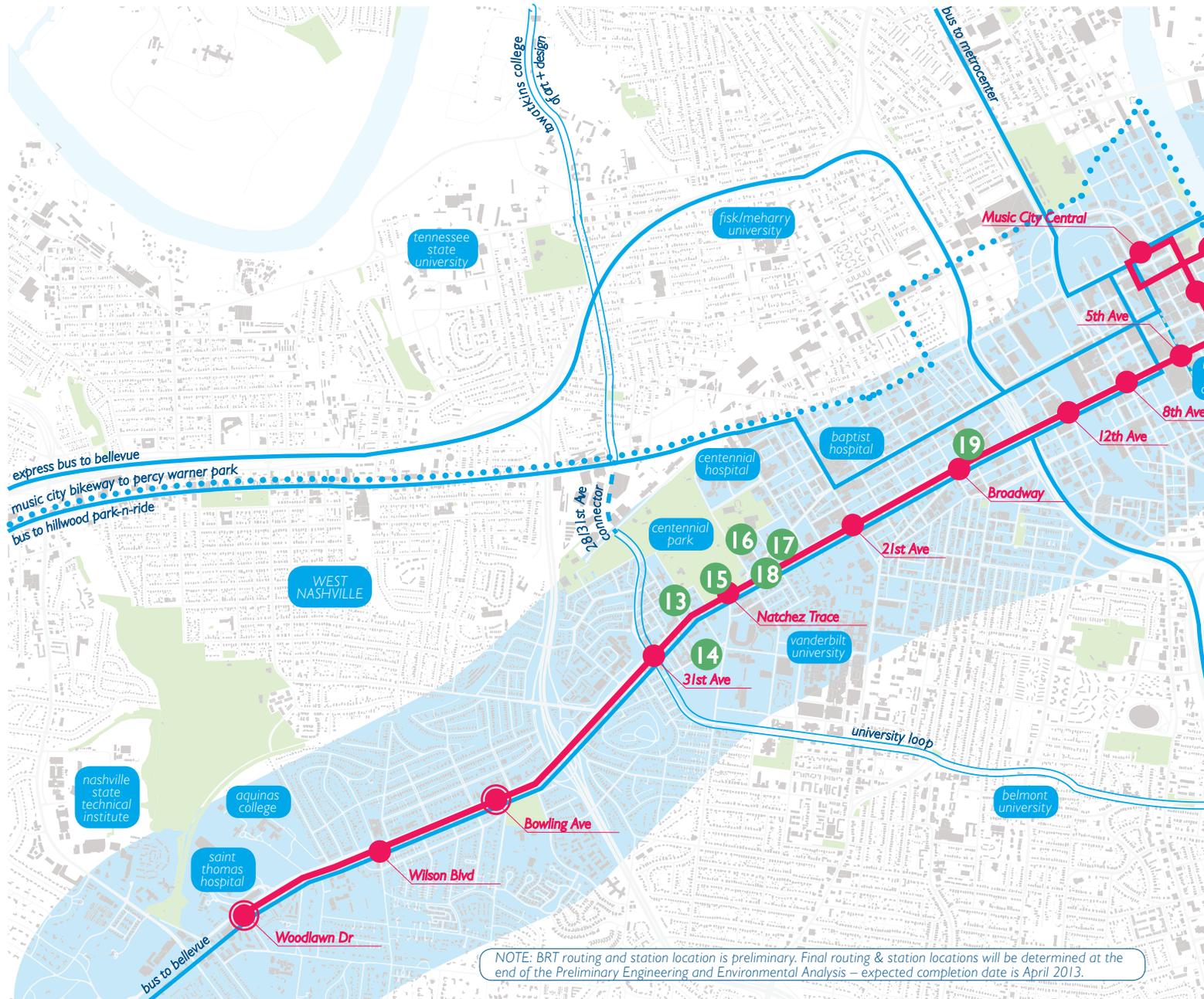


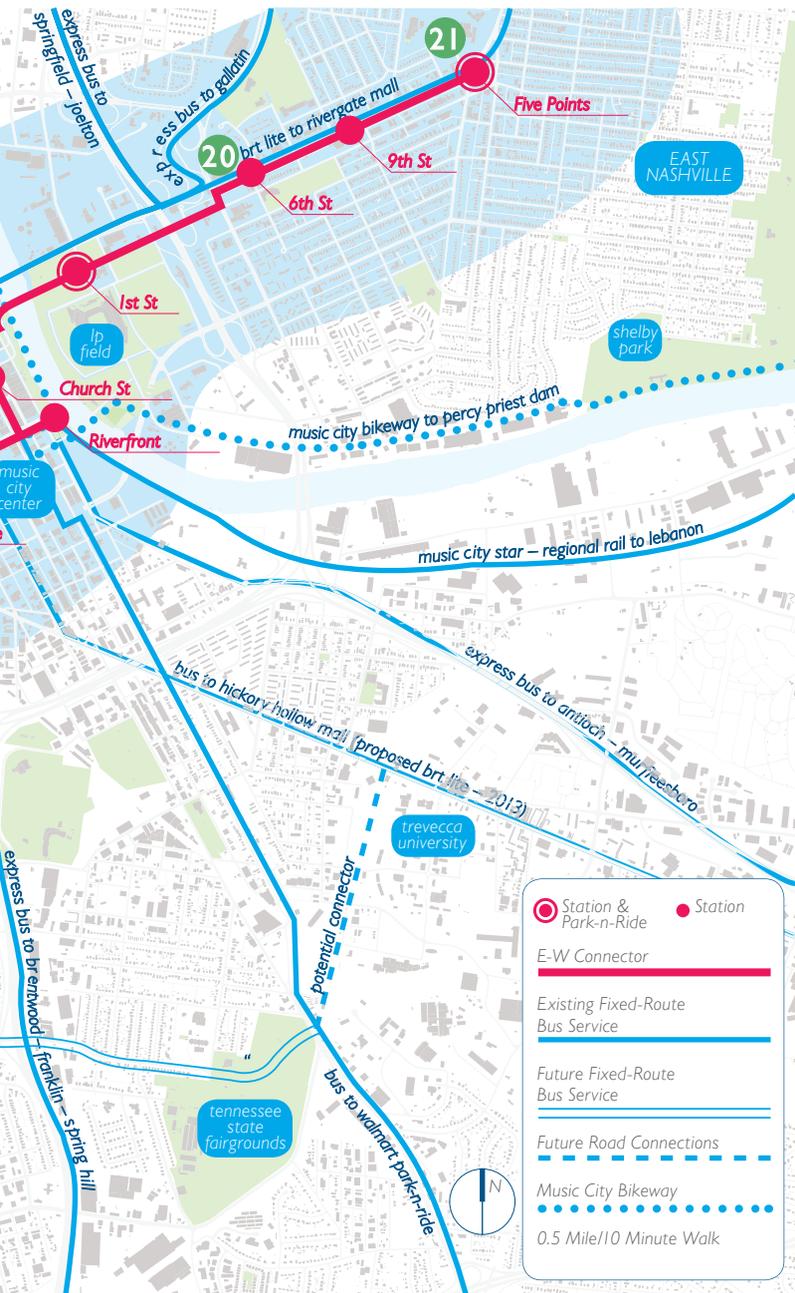
Image Courtesy of Bruce Cain – Elevated Lens – elevatedlens.com

4.2 REAL-WORLD



Studying Transit & Land-use Synergies



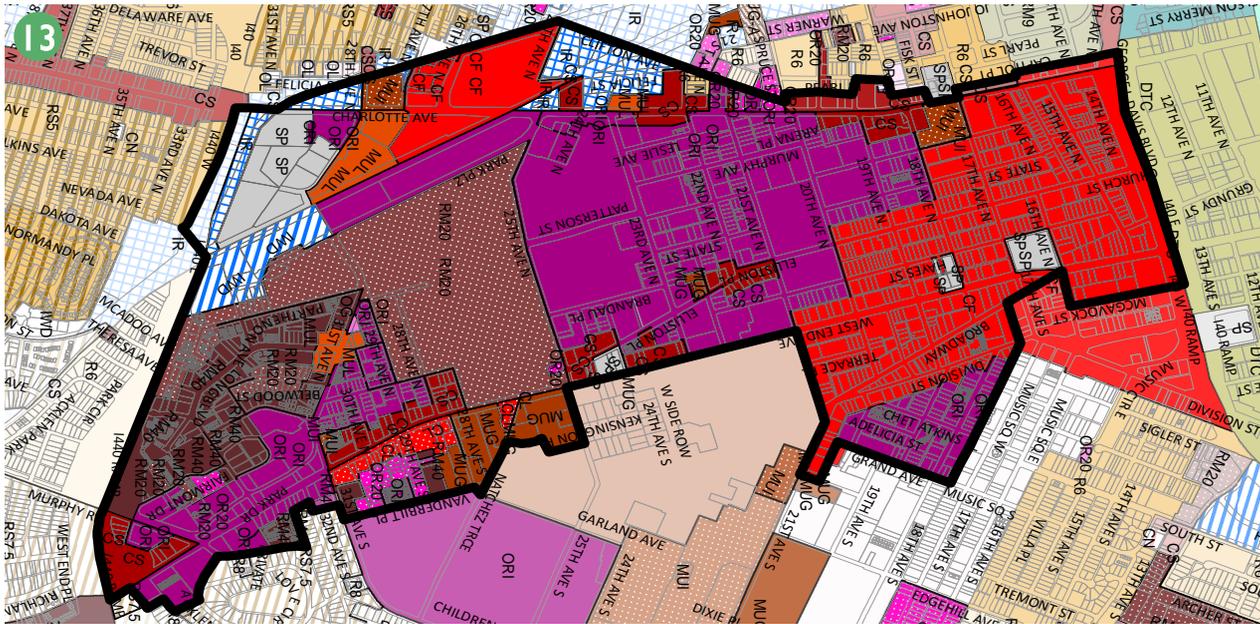


DEVELOPMENTS | PROPOSED & UNDERWAY

Ranked No. 3 “Next Big Boom Town” by Forbes magazine in July 2011, Nashville is one of the fastest-growing areas of the Southeast. Low housing prices and a pro-business environment make Nashville an enticing city. In addition, a high quality-of-life and vibrant cultural and music scene cement the Capitol city as a magnet for a wide diversity of people.

Across Nashville, exciting developments are underway. Projects illustrated here exemplify urban infill developments that are helping make Nashville an more inviting city to visit and a more livable city in which to reside. These projects were chosen because of the synergies inherent to their location – a 10-minute walk away from the upcoming E-W Connector.

They represent a range of uses that work together to create a lively, exciting community – residences, businesses, and public space. Their location within this critical corridor multiplies their individual contribution to the built environment, making them part of a larger, exciting, urban fabric.



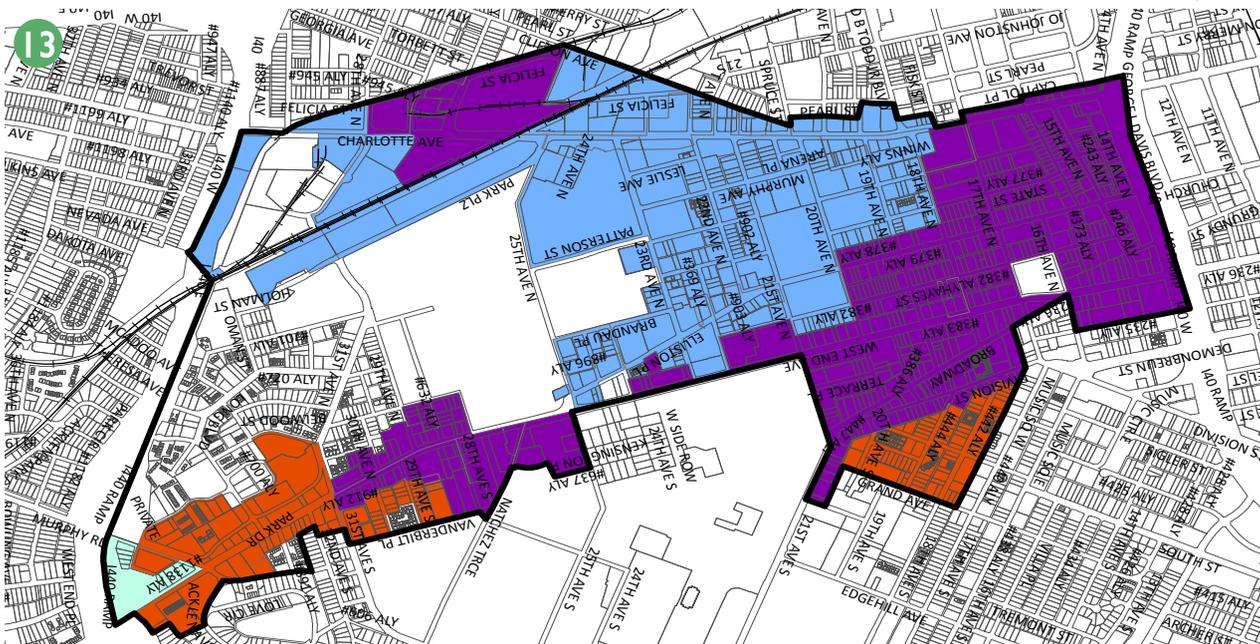
Midtown Existing Base Zoning

Midtown Rezoning Boundary

Midtown Zoning

- CF
- CL
- CS
- IR
- IWD
- MUG
- MUI
- MUL
- OG
- OR20
- OR40
- ORI
- R6
- RM20
- RM40
- RS7.5
- SP

Metropolitan Planning Commission – www.nashville.gov/mpc



Midtown Proposed Zoning

Midtown Proposed Zoning Boundary

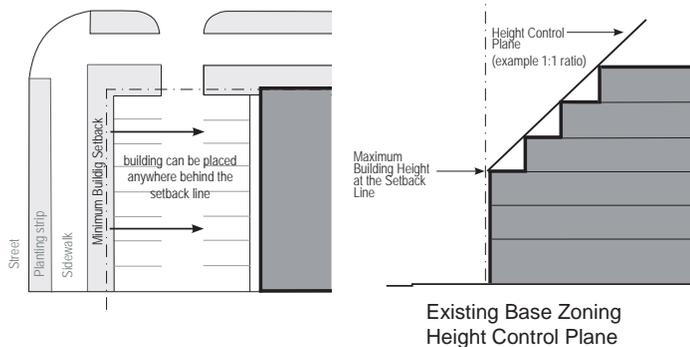
Midtown Proposed Zoning

- MUG-A
- MUI-A
- MUL-A
- ORI-A

Metropolitan Planning Commission – www.nashville.gov/mpc

13

Existing Base Zoning
Minimum Building Setback



Metropolitan Planning Commission – www.nashville.gov/impcc

13 Midtown Zoning Update
Designing a Transit Supportive Environment

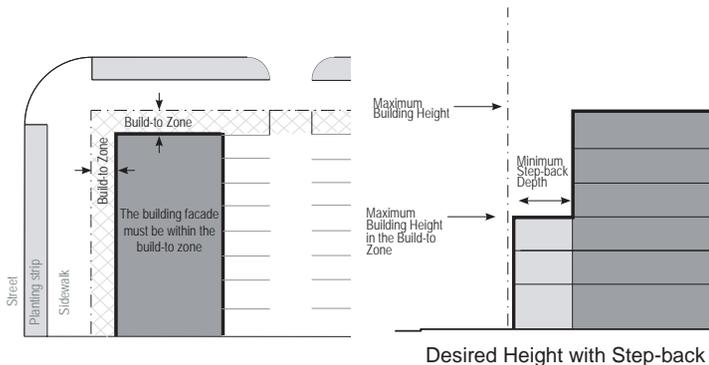
Nashville Metropolitan Planning Commission updated *The Midtown Community Character Plan* in response to recent interest in more intense development projects that were in conflict with requirements of the existing suburban oriented zoning, as well as the E-W Corridor BRT project and the desire to support redevelopment that creates a transit supportive environment.

The Midtown Plan recommends the use of “Alternative Zoning Districts”, which are simplified base zoning districts appropriate for use in more urban environments. These zoning districts utilize a “build to” line, replacing the “setback” line of the previous regulations to ensure predictable building placement. The former requires buildings to engage the public realm, and the latter leaves this to chance (see diagrams to left).

Another part of the planning policy for Midtown includes the recommendation that when E-W Connector station locations are determined and designed, that UDOs may be exercised at the BRT stations to allow for additional height or density in exchange for pedestrian and streetscape amenities. Together, these changes work towards facilitating high quality density along the E-W corridor and ensuring an enticing pedestrian experience.

13

Desired Build-to Zone



Metropolitan Planning Commission – www.nashville.gov/impcc

14



Hawkins Partners, Inc. – hawkinspartners.com

14



Hawkins Partners, Inc. – hawkinspartners.com

16



North American Properties – naproperties.com

17



ELLISTON 23



The Conservancy – www.theconservancyonline.com

14 Midtown Density Studies *Studying Appropriate Development Densities*

While seeking federal funding, the MTA validated the need for a new transit corridor with feasibility studies. Hawkins Partner, Inc. worked closely with the MPC to provide conceptual studies of what types of development scenarios transit would induce along the West End corridor.

15 Centennial Park Masterplan *A Street Grid Broken for Green Space*

Gustafson Guthrie Nichols Ltd., unveiled Centennial Park's masterplan in 2011. It decreases automobile access and increases pedestrian amenities – including a land-bridge over 31st Ave on the western edge.

16 ParkCentral *200-unit – 8-story Apartment Complex*

ParkCentral will offer views of Centennial Park and a short walk to the Centennial Sportsplex, nearby retail, restaurants, and nightlife.

17 Elliston 23 *Mixed-Use with Retail and Dining*

Currently under construction, Elliston 23 will house 331 multi-family units, nearly 15,000 sq ft of retail and restaurant space, and 500 structured parking spaces on site to accommodate residents, diners and shoppers.



Southern Land Company – southernland.com



Nashville Civic Design Center – civicedesigncenter.org



Alex S. Palmer & Company – aspcompany.com



Sitephocus – sitephocus.com



Sitephocus – sitephocus.com

18 Reclaiming Public Space Giving Purpose Back to Residual Urban Space

A visionary illustration in *Moving Tennessee Forward: Models for Connecting Communities, Reclaiming Public Space* proposes new uses for the intersection of 21st Ave + Broadway. It suggests a new transit hub with bicycle station, cafe/restaurant space, abundant outdoor seating, and public art to redefine and enhance the public realm.



Hodgson and Douglas – www.hodgsondouglas.com

19 West End Summit Mixed-Use with Office, Hotel, Dining & Parking

The proposed 20-story development will sit on just under 4 acres at the junction of West End Ave and Broadway.

20 5th & Main Condominiums and Dining as a Gateway Development

Completed in 2008, 5th & Main achieves an almost “car-less” site with pedestrian-friendly sidewalks, interactive courtyards, plazas, and structured parking underground.

21 East Nashville Roundabout Condominiums and Retail as an Anchor

A proposed roundabout and civic square that would anchor the 5-Points area and create a new civic heart for East Nashville.



Image Courtesy of Robert Benson Photography & Craig Kuhner

5 TOOLBOX



Implementing Visionary Concepts





Los Angeles Metro – www.metro.net



Los Angeles Metro – www.metro.net

TRANSIT CORRIDOR BUILDING BLOCKS

Successful transit corridors offer effective transportation solutions and afford a vibrant public realm. **A complex synthesis of finance, design, governance, and citizen preference is necessary to capitalize upon synergistic transit and development opportunities.**

There must be a flexible framework for collateral development. Adjacent zoning needs to support higher densities, acting as a foundation for a well-designed, strong pedestrian realm. UDOs are an effective tool at station areas to achieve such density and establish design guidelines. Pedestrian and cyclist infrastructure work in concert with streetscaping and public art to give an inviting experience – bridging the gap between work-live-play destinations.

Beyond seeking local and federal funding, there are many opportunities to utilize value capture strategies to finance transportation networks and associated infrastructure (TIF is an example). Value capture policies generate revenue by extracting a portion of the gains in the value of land that result from improvements to transportation networks. Public-private partnerships can be an effective tool in financing and implementing large-scale transportation projects.

Relationships between governmental agencies and extensive public outreach must be established early on to ensure appropriate transit solutions for all are reached.

If done well, mass transit can be an effective catalyst for economic development. Through effective branding and innovative design, it has the opportunity to create an identity for the transit system, the corridor, the city, and the region.

A Public–Private Partnership

Urban Infill Concepts Along Nashville’s East-West Connector Corridor is a project of the Nashville Civic Design Center, in partnership with the Nashville Area Metropolitan Planning Organization (MPO). This study was funded by the Nashville Area MPO with grant funds provided by the Tennessee Department of Transportation and the United States Department of Transportation Federal Highway Administration.

Nashville Civic Design Center

The mission of the Nashville Civic Design Center is to elevate the quality of Nashville’s built environment and to promote public participation in the creation of a more beautiful and functional city for all.

This book was designed and written by Betsy Mason, Design Fellow for the Nashville Civic Design Center.

This book was edited by Gary Gaston, Design Director of the Nashville Civic Design Center.

The Nashville Civic Design Center would like to give special thanks to TK Davis, Associate Professor at UTK CoAD, and participating students, for the work featured in this publication, and to Bruce Cain, with Elevated Lens, for his aerial photography.

Nashville Civic Design Center Staff:

Julia Fry Landstreet, Executive Director
Gary Gaston, Design Director
Stephanie McCullough, Communications Director
Ron Yearwood, Urban Designer
Betsy Mason, Design Fellow
Sarah Ripple, Design Fellow

www.civicdesigncenter.org | October 2012

Nashville Area Metropolitan Planning Organization

The Nashville Area MPO is the lead regional transportation, policy, planning and programming authority for Davidson, Rutherford, Sumner, Williamson, Wilson and parts of Maury and Robertson counties. The MPO is committed to providing leadership in the planning, funding, and development of a regional multi–modal transportation system.

Nashville Area MPO Staff:

Michael Skipper, AICP, Executive Director
Lou Edwards, Administrative Assistant
Jeffrey Leach, Finance Officer
Mary Beth Ikard, APR, Communications Director
Félix G. Castrodad, Principal Transportation Planner
Leslie A. Meehan, AICP, Director of Healthy Communities
Max Baker, Senior Planner
Jennifer Hill, Transportation Planner
Chin-Cheng Chen, Engineering Associate
Nicholas Lindeman, Economic & Systems Data Analyst
Josie Bass, Title VI & ADA Coordinator

www.nashvillempo.org



LIVABILITY • PROSPERITY • SUSTAINABILITY • DIVERSITY

