

# IMPLEMENTATION STRATEGIES FOR A SUSTAINABLE DULUTH



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PREPARED BY



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# 01. OVERVIEW

## PLANNING FOCUS AREAS & PRINCIPLES

The City of Duluth is engaged in several parallel planning initiatives to improve economic development, sustainability and community quality of life for residents and businesses in Duluth. Specific plans include the Imagine 2035 Comprehensive Plan Update, the Brownfield Health Indicator Database Tool, the Irving and Fairmount Brownfields Revitalization Plan and the Smart Growth Principles for the City of Duluth. This document ties together the goals and themes of each effort, provides a set of strategies based on national best practices and locally recommended policies, and outlines an implementation framework to support the City and partners in moving from plan to action. The purpose of this document is to support staff, the Visioning Committee and Focus Area Groups in prioritizing strategies and refining the implementation process for the Imagine Duluth 2035 Comprehensive Plan Update.

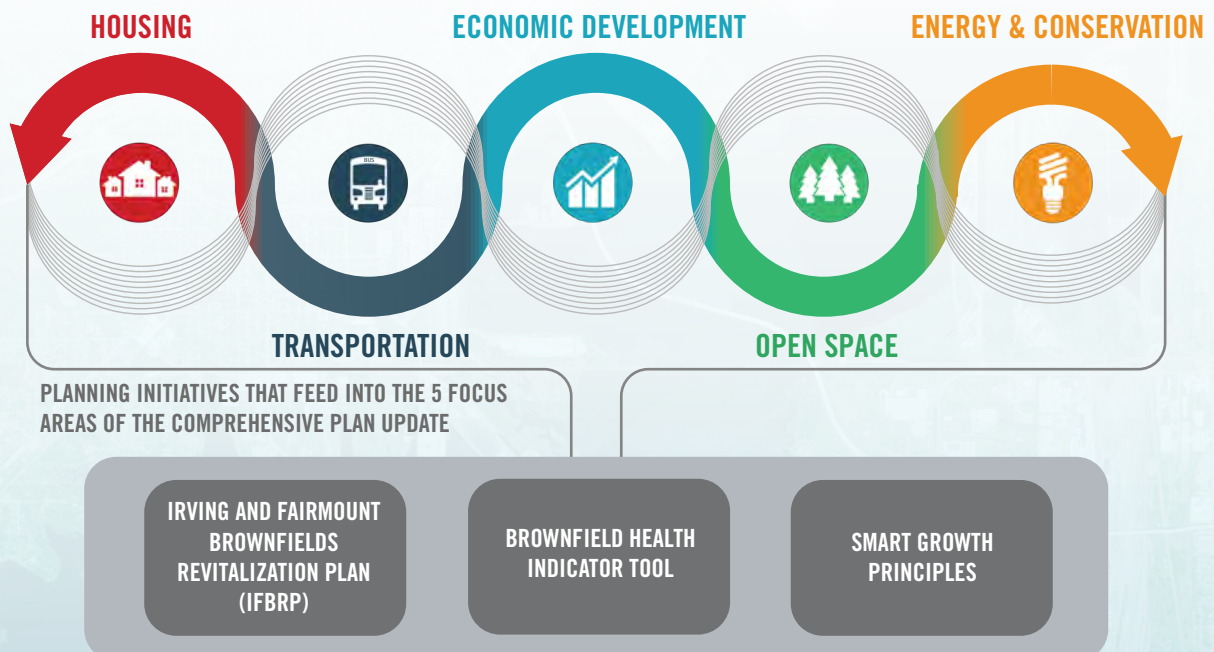
This section provides an overview of each planning initiative and how they are integrated into this implementation tool. The next section includes an implementation framework for each of the five Comprehensive Plan focus areas, including implementation steps and strategies for achieving the sustainability principles. The final section includes additional resources including case studies, best practices, and funding programs to implement these sustainability principles.

### FOCUS AREAS FOR IMAGINE 2035 – DULUTH’S COMPREHENSIVE PLAN UPDATE

In 2016, the City of Duluth launched Imagine Duluth 2035, an extensive planning and community engagement process to update the 2006 Comprehensive Plan to reflect the changes in demographic, economical, and cultural profiles across the city. Staff and the Visioning Committee have organized the updates into the following 5 focus areas:

- Housing
- Transportation
- Economic Development
- Open Space
- Energy and Conservation

Figure 1.1: Relationship between planning initiatives and the Comprehensive Plan Update



## STRATEGIES FROM THE IRVING AND FAIRMOUNT BROWNFIELDS REVITALIZATION PLAN

In parallel with the Comprehensive Plan Update, the City of Duluth has recently completed an areawide planning process resulting in the Irving and Fairmount Brownfields Revitalization Plan (IFBRP). The Plan outlines a detailed set of strategies to promote revitalization in the Irving and Fairmount neighborhoods, many of which could provide benefit in other neighborhoods.

The City prioritized the following subset of these strategies to guide implementation in the five Comprehensive Plan focus areas.

- **Housing** - Incentivize and fund a range of diverse housing types
- **Transportation** - Integrate multi-modal approaches to transportation investments
- **Economic Development** - Prioritize and redevelop underutilized parcels
- **Open Space** - Protect and enhance open space and greenway connections
- **Energy and Conservation** - Encourage employment growth near transit connections

As shown in the following table, each strategy benefits multiple focus areas in the Comprehensive Plan.

Figure 1.2: Draft Sustainability Strategies and Comprehensive Plan Focus Areas

	Housing	Transportation	Economic Development	Open Space	Energy & Conservation
Incentivize and fund a range of diverse housing types	●		●		
Integrate multi-modal approaches to transportation investments	●	●			●
Prioritize and redevelop underutilized parcels	●		●	●	●
Protect and enhance open space and greenway connection		●		●	●
Encourage employment growth near transit connections		●	●		●



## PRINCIPLES FROM THE BROWNFIELD HEALTH INDICATOR DATABASE TOOL

As guiding principles, the IFBRP process adopted six health indicators developed by the Minnesota Department of Health and Minnesota Brownfields as part of the Brownfield Health Indicator Database Tool. The tool is designed to identify redevelopment and public health priorities based on the following goals:



**Community + Context:** Promote dense, healthy mix of land uses and increase access to goods and services, parks/open spaces, and transportation options.



**Community Institutions:** Protect and enhance community institutions, amenities, services (libraries, public art and other civic services), education (resources and facilities), and housing (location, quality, density and affordability).



**Economic Stability:** Promote redevelopment that increases access to jobs, living wages and employment benefits.



**Environmental Resilience:** Enhance environmental quality by improving air and water quality, conserving natural resources, preserving habitats and promoting sustainable planning and building design.



**Health + Safety:** Improve overall health and well-being by promoting recreation and active living, improving safety (and reduction of perceived crime), enhancing emotional well-being, and increasing access to improved food systems (retail services, restaurants, and community agriculture).



**Social Cohesion + Engagement:** Improve social cohesion by increasing social equity (equitable engagement, equitable treatment of disadvantaged populations and reduce displacement of residents) and investing in social capital (strengthening integration and relationships in the community, reducing inequality, and fostering community empowerment).

## EPA SMART GROWTH IMPLEMENTATION ASSISTANCE

In parallel with the IFBRP, the City of Duluth applied for and received technical assistance from EPA's Office of Sustainability to promote sustainable smart growth principles in areawide brownfield revitalization as well as broader citywide policies and programs. The technical assistance resulted in this document which provides an implementation framework and set of strategies that support the implementation of Imagine Duluth 2035. The process included the following steps:

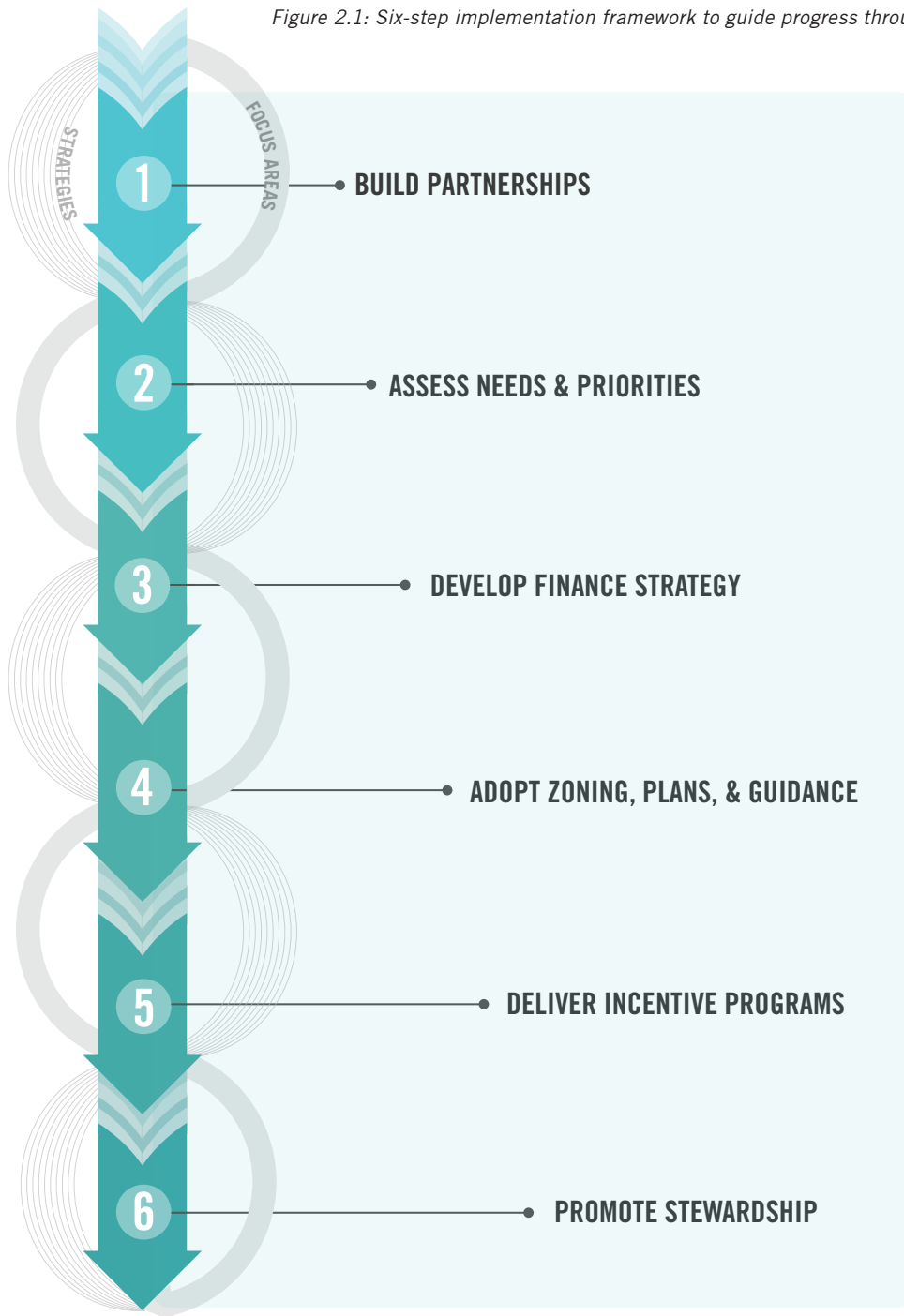
- Start with the five Imagine Duluth 2035 focus areas.
- Organize local policy recommendations into an implementation framework with action steps.
- Add strategies from the IFBRP that align well with the focus areas.
- Supplement with national best practices in sustainability.
- Identify resources for implementation.

# 02. IMPLEMENTATION

## IMPLEMENTATION FRAMEWORK & STRATEGIES

Building on the planning initiatives described in Section 1, this section provides an implementation framework and set of strategies for each of the five focus areas, along with tools, benefits and a case study highlight. The diagram below illustrates a 6-step implementation framework to guide discussions.

Figure 2.1: Six-step implementation framework to guide progress through the strategies



# HOUSING STRATEGY

## INCENTIVIZE AND FUND A RANGE OF DIVERSE HOUSING TYPES



Image Source: STAPLETON, CO <http://www.stapletondenver.com/>

## HOUSING

Many revitalizing cities are adopting tools to ensure a range of housing types and options for people of all income groups, age groups and family sizes. Diverse housing strategies provide different options that vary by density, affordability and location relative to amenities, employment centers and transportation choices. They build diverse, equitable and stronger communities where all residents can have equal access to quality of life and economic benefits. The table on the following page highlights implementation steps and strategies to support affordable and diverse housing development. Steps in left-hand column provide an organizational structure to guide discussion and implementation of the draft housing policies and strategies in the comprehensive plan update.

## BENEFITS

- Ensures **efficient use of municipal infrastructure** and resources.
- Provides **flexibility for residents** to locate near employment centers.
- Provides a **range of housing choices** to accommodate students, workforce, young families and seniors.
- Reduces potential for displacing current residents from growing neighborhoods.
- Reduces concentration of poverty.
- Creates opportunities for communities to densify at a **sustainable pace**.
- Helps revitalize commercial centers.

## TOOLS

There are multiple strategies to expand housing choices from changing zoning and building codes in existing neighborhoods to modifying land-use patterns for new development.

Some of these include:

- Zoning and building codes reforms
- Density Bonuses
- Housing Land Trusts
- Home Improvement Loans
- Rehabilitation Building Codes
- Expedited Project Review
- Property Tax Exemption
- Educational programs for realtors, lenders, and home buyers
- Inclusionary Zoning Ordinance





## CASE STUDY

**Fall Creek Place** was a formerly distressed neighborhood on the north side of Indianapolis. Things started to improve in the late 1990s, when public and private investment began flowing into the neighborhood. Market-rate homes and homes for low- and middle-income families were built side by side, with similar style and quality, without displacing any of the existing homeowners. According to the developer, Chris Palladino, there are now

“women joggers, dog walkers, and couples pushing baby strollers out as late as ten o’clock at night.”

*This Is Smart Growth* (2006): <https://www.epa.gov/smartgrowth/smart-growth-publication>

Image Source: *This is Smart Growth* (2006)

## IMPLEMENTATION STRATEGIES

Implementation Steps	Potential Tools and Actions to Advance Strategy
1. Build Partnerships	<ul style="list-style-type: none"> <li>• Build Partnerships with funding partners, housing providers, neighborhood groups, as well as internal city team.</li> <li>• Enlist local jurisdictions in implementing a regional fair-share housing allocation plan across metropolitan areas.</li> </ul>
2. Assess Needs and Opportunities	<ul style="list-style-type: none"> <li>• Identify city and neighborhood housing targets by income level</li> <li>• Evaluate housing structure and needs by neighborhood.</li> </ul>
3. Develop Finance Strategy	<ul style="list-style-type: none"> <li>• Develop a plan to leverage the full range of financing mechanisms.</li> <li>• Provide home buyer assistance through support to community land trusts.</li> <li>• Establish an employer-assisted housing program.</li> <li>• Create a housing trust fund.</li> </ul>
4. Adopt Zoning, Plans and Guidance	<ul style="list-style-type: none"> <li>• Identify and adopt relevant zoning tools such as Mother-in-law units, percent affordable requirements, density bonuses, form-based zoning and building codes to permit a wider variety of housing types.</li> <li>• Consider inclusionary zoning ordinance for new housing developments.</li> <li>• Adopt special rehabilitation building codes to regulate the renovation of existing structures.</li> </ul>
5. Deliver Incentive Programs	<ul style="list-style-type: none"> <li>• Package appropriate public land and financing for housing providers.</li> <li>• Educate realtors, lenders, and home buyers on the use of resource-efficient mortgages.</li> <li>• Educate developers of multifamily housing units and non-profits on the use of limited-equity (or equity-restriction) components.</li> <li>• Streamline the development review process when units include affordable housing.</li> <li>• Use transportation funds as an incentive to provide housing near transit.</li> <li>• Adopt property tax exemption programs for mixed-income developments and low-income homeowners.</li> </ul>
6. Promote Stewardship	<ul style="list-style-type: none"> <li>• Adopt special rehabilitation building codes to regulate the renovation of existing structures.</li> <li>• Partner with non-profits to provide maintenance and energy efficient assistance; provide improvement loans, housing code enforcement.</li> <li>• Implement a program to identify and dispose of vacant and abandoned buildings.</li> </ul>



# TRANSPORTATION STRATEGY

## INTEGRATE MULTI-MODAL APPROACHES TO TRANSPORTATION INVESTMENTS



Buffalo Niagara Medical Center plaza/streetscape re-design (Image Source: SCAPE, <http://www.scapestudio.com>)

### MULTIMODAL + INTERMODAL

Today, a significant amount of space in cities is used as travel lanes or storage for automobiles. Yet many cities are taking actions to make their streets more livable and animated. A livable urban streetscape – roads, curbs and sidewalks – is expected to serve a number of users including pedestrians, cyclists, surface transit and parked vehicles. While these users typically have competing interests and uses for the space, such actions aim to create a more comprehensive, multimodal transportation network for everyone. The following tools outline strategies to integrate multi-modal approaches for transportation investments that support alternative mobility options, the movement of goods and urban freight, and the underlying experience of all users.

### BENEFITS

- Provides mobility choices that **reduce household automobile dependence** and household transportation costs.
- **Improve quality of life** and reduces congestion and travel time.
- Provides **flexibility for residents** in terms of travel time and active travel options.
- Supports intermodal freight systems that reduce heavy loads on neighborhood roadways and **lower regional air pollution** and greenhouse gas emissions.
- Supports **cost effective and energy-reducing approaches to infrastructure** maintenance and servicing.

New bike lanes on Michigan Street between Third and Fourth Avenues (Brady Slater, Duluth News Tribune, 2017)

### TOOLS

Strengthening and the continued integration of multi-modal and intermodal approaches to transportation in Duluth can be coordinated with a variety of stakeholders towards environmental, community, and economic goals. Below are 5 implementation tools, with further detail provided on the following page:

- Transit connections as place-making opportunities
- Local governance support for sustainable urban freight logistics
- Incentivize local demand for transit
- Consider health impacts and risks associated with climate change





## CASE STUDY

The Alameda Corridor, a 20-mile freight railway linking the Port of Long Beach and Los Angeles to downtown L.A., has helped to move goods more efficiently while eliminating many community hazards and improving the quality of life in the communities it traverses. It is a series of bridges, underpasses, overpasses and street improvements that separate freight trains from street traffic and passenger trains, facilitating a more efficient transport network.

**Two hundred street-level railroad crossings will be eliminated, allowing trains to travel more quickly and easing traffic congestion.** In addition, the Alameda Corridor Transportation Authority has job training and placement for hundreds of residents in adjacent communities.

Getting to Smart Growth II: 100 More Policies for Implementation  
<https://icma.org/documents/getting-smart-growth-ii-100-more-policies-implementation>

Aerial view of the Alameda Corridor Rail Cargo Expressway Project in Los Angeles (Image Source: GettyImages)

## IMPLEMENTATION STRATEGIES

Implementation Steps	Potential Tools and Actions to Advance Strategy
1. Build Partnerships	<ul style="list-style-type: none"> <li>Partner with economic development and transit agencies.</li> <li>Partner with carriers to ensure that local decisions on transportation and land use are “freight friendly.”</li> </ul>
2. Assess Needs and Priorities	<ul style="list-style-type: none"> <li>Develop mapped database of the pedestrian network to integrate with bicycle, transit, and vehicle networks.</li> <li>Develop a priority network for heavy goods vehicles to improve efficiency and capacity, while prioritizing neighborhood routes for complete streets, rails-to-trails greenways and green infrastructure.</li> <li>Prioritize public waterfront access and waterfront facilities needed for long-term port/marine terminal use.</li> <li>Review the resilience of public infrastructure to the effects of climate change such as increased volume or intensity of rainfall.</li> </ul>
3. Develop Finance Strategy	<ul style="list-style-type: none"> <li>Seek transportation funding that prioritizes multimodal enhancements.</li> <li>Promote developer financed multi-modal amenities.</li> <li>Dedicate a percentage of transportation capital budget projects for public art and amenities.</li> <li>Work with major employers to promote commuter transit benefit program options.</li> </ul>
4. Adopt Zoning, Plans and Guidance	<ul style="list-style-type: none"> <li>Enhance accessibility to the waterfront.</li> <li>Introduce intersection features that clarify movement, space, and timing for cyclists.</li> <li>Buffer different transportation modes with green amenities (bioswales, street trees, natural grasses).</li> <li>Develop streetscape design standards for different street typologies (downtown, residential, regional).</li> <li>Modify roadway level-of-service standards in areas served by transit.</li> <li>Connect transportation modes to one another.</li> <li>Enhance mass transit stops to include amenities such as a shelter, passenger information, seating, lighting, and wayfinding signs.</li> </ul>
5. Deliver Incentive Programs	<ul style="list-style-type: none"> <li>Support outreach to community groups and senior residences on transit options within the city.</li> <li>Collaborate with employers on programs to minimize or decrease rush-hour congestion impacts.</li> <li>Create programs and policies that support car sharing.</li> </ul>
6. Promote Stewardship	<ul style="list-style-type: none"> <li>Develop interactive tools for passenger and schedule information.</li> <li>Consider transportation when developing rating systems for green buildings and programs.</li> </ul>



# ECONOMIC DEVELOPMENT STRATEGY

## PRIORITIZE & REDEVELOP UNDERUTILIZED PARCELS



A former bowling alley repurposed by Meow Wolf Arts Collective in Sante Fe (Image Source: Kate Russell, courtesy of Meow Wolf, 2017)

### CATALYZING DEVELOPMENT

Many communities are embarking on planning efforts to cultivate a strong local economy and to attract new investment. Case studies of best practices suggest that focusing on existing place-based assets, infill development, and the redevelopment of underutilized sites can catalyze long-term sustainable development. Smart growth economic development emphasizes building on existing community infrastructure, rather than pursuing growth without regard for location and existing businesses. The tools provided below outline creative ways that underutilized sites - including vacant, brownfield, and heritage sites - can be productively repurposed. Implementation steps on the following page provide organizational structure to supplement the draft Economic Development policies of the comprehensive plan update.

### BENEFITS

- **Strengthen the tax base:** encourage urban industry and infill development that utilizes existing infrastructure and in return, benefit from proximity to transit and existing amenities.
- Cultivate a **local competitive advantage:** strengthen unique community assets and existing businesses, while attracting new investment.
- **Create destinations** through redevelopment and place-based branding and marketing.
- **Guide investments** in local workforce development, housing, and an improved quality of life for community members.

Sugar Beach Park in Toronto Harbour, Toronto (Source: Lisa Parker, 2011)



### TOOLS

The redevelopment of underutilized sites can be coordinated with a variety of stakeholders towards sustainable economic development. Below are 5 implementation tools, with further detail provided on the following page:

- Zoning for mixed-use development and complete area plans for downtown and other infill locations
- Adaptive reuse potential of land, buildings, and community assets
- Green building and landscape practices
- Citywide brownfields remediation program and facilitation of community goals for brownfields
- Infill development incentives





## CASE STUDY

Hamm's, the nation's fifth-largest beer company in the 1950s, was once a major economic engine for St. Paul, employing about 2,000 people. However, the company fell behind competitors, which led to its demise in 1997. Since Urban Organics moved in during 2014, a distillery and brewery have also opened at Hamm's. Urban Organics uses aquaponics to raise fish and greens, proving the viability of year-round indoor vertical farming.

“Urban Organics’ brewery-centric real estate is no accident. The sites are set up with access to freshwater wells...The company reclaims the sites’ history while introducing a new farming technology.”

Urban Fish Farm expanding in St. Paul (Star Tribune, 2015)  
<http://www.startribune.com/urban-fish-farm-expanding-in-st-paul/292310561/>

A former brewery converted to an indoor aquaponics farm in St. Paul (Image Source: Business Wire)

## IMPLEMENTATION STRATEGIES

Implementation Steps	Potential Tools and Actions to Advance Strategy
1. Build Partnerships	<ul style="list-style-type: none"> <li>Build partnerships with funding partners, developers, neighborhood groups, owners of underutilized sites, as well as internal city team.</li> <li>Conduct outreach to owners of vacant or underused properties to determine why new or redevelopment is not occurring and how the city can support sustainable uses for the site.</li> <li>Foster coordination among decision-makers, regulators, and landowner and promote cross-sector solutions.</li> </ul>
2. Assess Needs and Priorities	<ul style="list-style-type: none"> <li>Inventory local brownfield sites; identify high priority sites for clean-up based on local goals.</li> <li>Identify underutilized sites that have community or heritage value and support creative rehabilitation efforts such as creating multi-use hubs from outdated airports, military bases, malls and hospitals.</li> <li>Engage the community to identify priorities for reusing brownfield sites.</li> <li>Prioritize infill development where there is existing infrastructure.</li> <li>Designate sites or specific areas as brownfield opportunity sites eligible for local tools and prioritize them for local, state, and federal funding assistance.</li> </ul>
3. Develop Finance Strategy	<ul style="list-style-type: none"> <li>Apply for brownfield assessment and cleanup funding for priority sites.</li> <li>Develop a citywide brownfields remediation program and establish community goals for brownfields</li> </ul>
4. Adopt Zoning, Plans and Guidance	<ul style="list-style-type: none"> <li>Support zoning for mixed-use development for downtown and other infill locations.</li> <li>Adjust zoning codes to allow mixed-use development at densities that are consistent with market demand.</li> <li>Create place-specific goals and guidance for downtown and other infill locations to guide future development.</li> <li>Make easy-to-understand zoning handouts available online and at city hall.</li> </ul>
5. Deliver Incentive Programs	<ul style="list-style-type: none"> <li>Reduce building and permit fees, and/or provide tax credits for developers of green buildings and landscapes in key locations.</li> <li>Streamline the permitting process for priority brownfield sites to shorten the timeline and reduce development costs.</li> <li>Encourage programs that promote business growth in strategic locations where there is existing pedestrian traffic and infrastructure, such as historic downtowns and core activity centers or corridors.</li> <li>Provide site-selection assistance to new or relocating businesses such as a website inventory of available commercial spaces; site tours for new or expanding businesses.</li> </ul>
6. Promote Stewardship	<ul style="list-style-type: none"> <li>Engage community-based arts organizations and cultural groups to explore adaptive reuse potential.</li> </ul>



# OPEN SPACE STRATEGY

## PROTECT AND ENHANCE OPEN SPACE AND GREENWAY CONNECTIONS



Buffalo Bayou Park, Houston, Texas / Image Source: SWA Group <http://www.swagroup.com/projects/buffalo-bayou-park/>

## OPEN SPACE

Protection of open space is integral to community's quality of life. It includes protecting and enhancing open spaces like parks, natural areas, working landscapes, green corridors and community gardens which provide tangible community and environmental benefits. Building a network of such open spaces connected by greenways or green corridors could help create continuity of sensitive lands and support environmental performance.

Open space protection promotes smart growth goals by strengthening local economies, building community resilience, protecting environmentally sensitive lands, and guiding growth into existing communities.

## BENEFITS

### COMMUNITY

- Increased **recreation** opportunities
- Enhanced **air and water quality**
- **Protection** from flooding and heat waves
- Enhanced neighborhoods and employment centers with increased **property values**

### ENVIRONMENTAL

- Filtered runoff for protection of **water quality**
- Trees, vegetation and connected open space areas help reduce and mitigate **air quality risks**
- Preservation of **ecological diversity**

## TOOLS

There are multiple tools that could be used for preservation and enhancement of open space. Some of these include:

- Transfer of Development Rights
- Purchase of Development Rights
- Linking land conservation with other smart growth principles.
- Cross-sector partnerships for land conservation and development.
- Green Infrastructure Planning
- Zoning tools that preserve open space
- Education and stewardship for open space protection





## CASE STUDY

The **Midtown Greenway** runs 5.5 miles (8.8 km) east to west along a former rail corridor in south Minneapolis. The trail connects the Uptown neighborhood, the Mississippi River waterfront, the Chain of Lakes park area, and various bicycling routes, including the Southwest Light-Rail Transit and Hiawatha Trails. The Midtown Greenway has, **transformed commuting options and improved the quality of life in many Minneapolis neighborhoods, and the real estate community has taken note.**

ULI Case Studies: <https://casestudies.uli.org/midtown-greenway/>



Image Source: ULI Midtown Greenway Case Study (<https://casestudies.uli.org/midtown-greenway/>)

## IMPLEMENTATION STRATEGIES

Implementation Steps	Potential Tools and Actions to Advance Strategy
1. Build Partnerships	<ul style="list-style-type: none"> <li>Coordinate and link neighborhood, citywide, state, and federal planning on land conservation and development.</li> <li>Partner with nongovernmental organizations to acquire and protect land.</li> <li>Partner with community based organizations focused on open space protection and associated activities such as community gardening, watershed preservation, tree plantation etc.</li> </ul>
2. Assess Needs & Priorities	<ul style="list-style-type: none"> <li>Link land conservation with other smart growth principles.</li> <li>Establish priority-setting criteria for open space acquisition.</li> </ul>
3. Develop Finance Strategy	<ul style="list-style-type: none"> <li>Expand use of innovative financing tools to facilitate opens space acquisition and preservation.</li> <li>Use an array of financing techniques to preserve open space.</li> <li>Allow land trusts to compete for conservation funds.</li> </ul>
4. Adopt Zoning, Plans and Guidance	<ul style="list-style-type: none"> <li>Design and implement zoning tools that preserve open space.</li> <li>Adopt a green infrastructure plan to create a network of trails and greenways.</li> <li>Incorporate land conservation into transportation planning.</li> </ul>
5. Deliver Incentive Programs	<ul style="list-style-type: none"> <li>Use transfer of development rights, purchase of development rights, and other market mechanisms to conserve private lands.</li> <li>Provide mechanisms for preserving working lands.</li> <li>Use innovative permitting approaches to protect critical environmental areas.</li> </ul>
6. Promote Stewardship	<ul style="list-style-type: none"> <li>Design and implement an information-gathering and education program.</li> <li>Support tree preservation through public-private partnerships.</li> </ul>



# ENERGY CONSERVATION STRATEGY ENCOURAGE EMPLOYMENT GROWTH NEAR TRANSIT CONNECTIONS



Denver Union Station Transit Improvements (Image Source: Design-Build Institute of America)

## JOBS & TRANSIT SYNERGIES

Encouraging development close to transit connections is a sustainable development model that continues to gain momentum, as municipalities seek to build healthier communities, stronger economies, and efficient infrastructure while reducing their carbon footprint. Successful implementation requires addressing the complexity of building mixed-use projects and matching land use with commute patterns. However, supporting employment densities around transit corridors and station areas is key for sustained economic development and community connectedness. The following tools outline implementation steps that align with the goals embedded in the Energy & Conservation section of the comprehensive plan update.

## BENEFITS

- **Reduce infrastructure and environmental costs** associated with sprawl development..
- Potential to **increase transit revenues through higher ridership.**
- **Potential to increase property values**, and associated tax revenue, where transit investments occur.
- Improve access to job clusters and **economic opportunity.**
- Increases neighborhood vibrancy and connectedness throughout the day and evening.

Utah Transit Authority, Salt Lake City (Source: Smart Growth Tulsa)

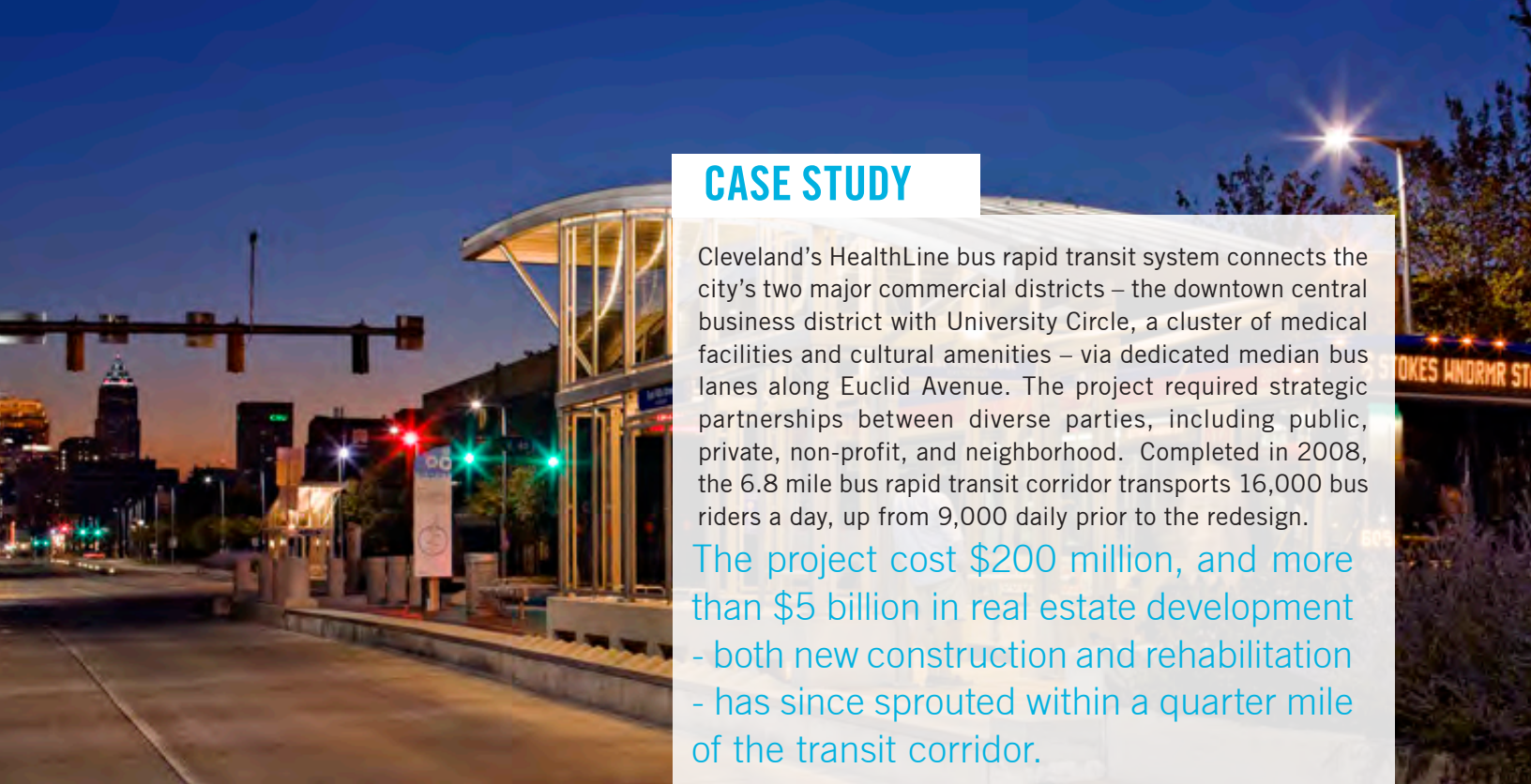


## TOOLS

There are multiple ways employment land use and transportation planning can be coordinated for long-term energy conservation. Below are 5 implementation tools with further detail provided on the following page:

- Local zoning to integrate employment, housing and transit in specific locations
- Design guidelines for employment land uses
- Financial incentive programs for public and private stakeholders
- Coordination with transit providers
- Integrated transit, land use, economic development and energy planning





## CASE STUDY

Cleveland's HealthLine bus rapid transit system connects the city's two major commercial districts – the downtown central business district with University Circle, a cluster of medical facilities and cultural amenities – via dedicated median bus lanes along Euclid Avenue. The project required strategic partnerships between diverse parties, including public, private, non-profit, and neighborhood. Completed in 2008, the 6.8 mile bus rapid transit corridor transports 16,000 bus riders a day, up from 9,000 daily prior to the redesign.

The project cost \$200 million, and more than \$5 billion in real estate development - both new construction and rehabilitation - has since sprouted within a quarter mile of the transit corridor.

Euclid Corridor Transportation/BRT Project, Cleveland (Image Source: Sasaki)

## IMPLEMENTATION STRATEGIES

Implementation Steps	Potential Tools and Actions to Advance Strategy
1. Build Partnerships	<ul style="list-style-type: none"> <li>Build partnerships with transit providers.</li> </ul>
2. Assess Needs and Priorities	<ul style="list-style-type: none"> <li>Identify growth centers that are appropriate for higher densities of employment activity.</li> <li>Conduct planning studies to assess the market readiness for transit-oriented commercial, retail, and industrial development.</li> <li>Identify high impact projects that would encourage use of public transit, support walkability and mixed-use growth.</li> <li>Rank and prioritize growth centers and projects based on their impact on environment.</li> </ul>
3. Develop Finance Strategy	<ul style="list-style-type: none"> <li>Create a development finance insurance program to finance projects designated as catalysts for community development.</li> <li>Identify programs that provide grants, loans, tax credits, or direct financial incentives for TOD projects or plans.</li> </ul>
4. Adopt Zoning, Plans and Guidance	<ul style="list-style-type: none"> <li>Encourage the creation of business improvement districts.</li> <li>Increase transit-oriented development by adding infill stations on existing transit lines and retrofitting existing stations.</li> <li>Encourage a balance of residential and employment land uses along strategic transit corridors, to capture existing commute flows.</li> <li>Develop design guidelines for the spectrum of employment based land uses, including the location and scale.</li> <li>Encourage transit system development along strategic corridors with residential and employment land uses.</li> <li>Develop transit oriented development typologies, such as regional center, urban center, suburban center, neighborhood, main street, campus center, etc.</li> </ul>
5. Deliver Incentive Programs	<ul style="list-style-type: none"> <li>Provide developers with incentives for infill and mixed-use projects. Use priority funding areas to direct development toward existing communities.</li> </ul>
6. Promote Stewardship	<ul style="list-style-type: none"> <li>Promote business district organizations to maintain neighborhood pride and vibrancy.</li> </ul>

# 03. TOOLS & RESOURCES

## IMPLEMENTATION STRATEGY

### RESOURCES

#### HOUSING: INCENTIVIZE AND FUND A RANGE OF AFFORDABLE, DIVERSE HOUSING TYPES

##### **Inclusionary zoning ordinance**

- HUD HOME funds  
<https://www.hud.gov/hudprograms/home-program>
- Federal Low Income Housing Tax Credits  
<https://www.occ.gov/topics/community-affairs/publications/insights/insights-low-income-housing-tax-credits.pdf>

##### **Home buyer assistance**

- The Institute for Community Economics' guide on community land trusts  
[www.iceclt.org](http://www.iceclt.org)
- HRA Levy  
<https://metro council.org/Handbook/Files/Resources/Fact-Sheet/HOUSING/City-Development-Powers-to-Create-Legal-Entities.aspx>
- MHFA First Mortgage  
<http://www.mnhousing.gov/wcs/Satellite?c=Page&pagename=External%2FPages%2FEXTHomeLayout&c id=1358904711497>
- Greater Minnesota Housing Fund Loans, Rental Housing Bonds, Housing Infrastructure Bonds  
<http://gmhf.com/finance/>
- Rental Housing Bonds  
<https://www.ncsha.org/advocacy-issues/housing-bonds>
- Housing Infrastructure Bonds  
[http://www.mnhousing.gov/get/MHFA\\_1038786](http://www.mnhousing.gov/get/MHFA_1038786)

- LISC predevelopment loans

<http://www.lisc.org/our-model/financing/lending/loan-products/>

##### **Zoning and building codes to increase housing diversity**

- Sample Inclusionary Zoning Ordinance  
<http://www.walnut-creek.org/department-services/housing-programs/inclusionary-housing-ordinance>
- CAHCD's Accessory Dwelling Unit Memorandum  
<http://www.hcd.ca.gov/policy-research/docs/2016-12-12-ADU-TA-Memo.docx.pdf>

##### **Identification of vacant and abandoned buildings**

- EPA Assessment Grants  
<https://www.epa.gov/grants/fy-2018-guidelines-brownfields-assessment-grants>
- MN DEED Assessment Grants  
<http://mnbrownfields.org/deed-investigation-rap-development-grant-program/>



## TRANSPORTATION: INTEGRATE MULTI-MODAL APPROACHES TO TRANSPORTATION

### Multi-Modal Street Design

- National Association of City Transportation Officials, Urban Street Design Guide (2013)  
<https://nacto.org/publication/urban-street-design-guide/>
- Complete Streets Local Policy Workbook  
<https://smartgrowthamerica.org/resources/complete-streets-local-policy-workbook/>

### Place-Making at Transit Connections

- Arts, Culture and Transportation: A Creative Placemaking Field Scan (2017)  
<https://smartgrowthamerica.org/introducing-arts-culture-transportation-creative-placemaking-field-scan/>
- Cross City Trail Mini-Master Plan, Duluth, Minnesota (2017)  
[http://www.duluthmn.gov/media/541905/cct\\_masterplandraft\\_20170210.pdf](http://www.duluthmn.gov/media/541905/cct_masterplandraft_20170210.pdf)
- Integrate the Arts into Design, Construction and Engineering; The Scenic Route (2017)  
<http://creativeplacemaking.t4america.org/our-eight-approaches/integrate-arts-design-construction-engineering/>
- Intermodal Transportation Facilities (2013)  
[http://www.ipa.udel.edu/publications/intermodal\\_report\\_final\\_2013-12-6-web.pdf](http://www.ipa.udel.edu/publications/intermodal_report_final_2013-12-6-web.pdf)

### Incentivize Local Demand for Transit

- Ten Ways to Improve Bus Transit Use and Experience  
<https://www.smartcitiesdive.com/ex/sustainablecitiescollective/ten-ways-improve-bus-transit/1074286/>

- Targeted Strategies for Generating Ridership (2016)

<http://nationalrtap.org/marketingtoolkit/How-To-Guide-for-Marketing-Transit/Strategies-for-Marketing-Public-Transit/Targeted-Strategies-for-Generating-Ridership>

- Analyzing the Effectiveness of Commuter Benefits Programs, Transportation Research Board of the National Academies (2005)  
<http://www.reconnectingamerica.org/assets/Uploads/bestpractice114.pdf>

- HealthLine Drives Growth in Cleveland. Urban Land Magazine (2012)

<https://urbanland.uli.org/economy-markets-trends/healthline-drives-growth-in-cleveland/>

### Climate Change Impact Assessment Model

- What Climate Change Means for Minnesota, EPA (2016)  
<https://www.epa.gov/sites/production/files/2016-09/documents/climate-change-mn.pdf>

### Sustainable Urban Freight Logistics

- Draft Ports Primer for Communities, EPA (2016)  
<https://www.epa.gov/ports-initiative/draft-ports-primer-communities>

## ECONOMIC DEVELOPMENT: PRIORITIZE & REDEVELOP UNDERUTILIZED PARCELS

### Leveraging Industrial Legacy for Innovation and Growth

- The Adaptive Reuse Toolkit: How Cities Can Turn their Industrial Legacy into Infrastructure for Innovation and Growth

[www.gmfus.org/file/9033/download](http://www.gmfus.org/file/9033/download)

### Planning Tools Promoting Infill and Redevelopment

- Codes that Support Smart Growth Development, EPA (2017)

<https://www.epa.gov/smartgrowth/codes-support-smart-growth-development>

- Attracting Infill Development in Distressed Communities: 30 Strategies, EPA (2015)

[https://www.epa.gov/sites/production/files/2015-05/documents/fresno\\_final\\_report\\_042215\\_508\\_final.pdf](https://www.epa.gov/sites/production/files/2015-05/documents/fresno_final_report_042215_508_final.pdf)

- Restructuring the Commercial Strip: A Practical Guide for Planning the Revitalization of Deteriorating Strip Corridors (2010)

<https://www.epa.gov/smartgrowth/restructuring-commercial-strip>

- Smart Growth and Economic Success: Investing in Infill Development

<https://www.epa.gov/smartgrowth/smart-growth-and-economic-success-investing-infill-development>

- EPA Superfund Redevelopment Initiative - St. Louis River/Interlake/Duluth Tar Site Reuse Assessment (2017)

<https://www.epa.gov/superfund-redevelopment-initiative/region-5-superfund-sites-reuse>

### Green Building and Landscape Practices

- City Green: Innovative Green Infrastructure Solutions for Downtowns and Infill Locations

<https://www.epa.gov/smartgrowth/city-green-innovative-green-infrastructure-solutions-downtowns-and-infill-locations>

- Sustainable Design and Green Building Toolkit for Local Governments, EPA (2013)

[https://www.epa.gov/sites/production/files/2014-09/documents/sustainable-design-permitting-toolkit-06\\_27\\_13\\_formatted.pdf](https://www.epa.gov/sites/production/files/2014-09/documents/sustainable-design-permitting-toolkit-06_27_13_formatted.pdf)

- Sustainable Sites Initiative

<http://www.sustainablesites.org/>

### Citywide Brownfields Remediation Program

- Brownfields Guides and Brochures, EPA

<https://www.epa.gov/brownfields/brownfields-guides-and-brochures>



## OPEN SPACE: PROTECT & ENHANCE OPEN SPACE + GREENWAY CONNECTIONS

### Land Conservation Strategies

- Our Built and Natural Environments: A Technical Review of the Interactions Between Land Use, Transportation, and Environmental Quality

<https://www.epa.gov/smartgrowth/our-built-and-natural-environments>

- New York State TDR program

<http://smartpreservation.net/new-york-city-new-york/>

### Funding Open Space Planning

- Trust for Public Land's resource on innovative approaches to financing open space acquisition

<https://www.tpl.org/how-we-work/research-library#sm.001dsnx961bbkf6p10h3hte7kp1>

- Local Trail Connections Program, Minnesota Department of Natural Resources

[http://www.dnr.state.mn.us/grants/recreation/trails\\_local.html](http://www.dnr.state.mn.us/grants/recreation/trails_local.html)

- Project Learning Tree grants, Minnesota Department of Natural Resources

<http://www.dnr.state.mn.us/grants/plt/greenschools.html>

- Great Lakes Revolving Fund for the conservation of sites of ecological significance

<https://www.conservationfund.org/projects/great-lakes-revolving-fund>

### Coordinating Planning Efforts on Land Conservation and Development

- Incorporating Green Infrastructure Practices at the Municipal, Neighborhood, and Site Scale

<https://www.epa.gov/smartgrowth/water-quality-scorecard>

### Green Infrastructure Planning

- Enhancing Sustainable Communities with Green Infrastructure

<https://www.epa.gov/smartgrowth/enhancing-sustainable-communities-green-infrastructure>  
[www.greeninfrastructure.net](http://www.greeninfrastructure.net)

- City Green: Innovative Green Infrastructure Solutions for Downtowns and Infill Locations

<https://www.epa.gov/smartgrowth/city-green-innovative-green-infrastructure-solutions-downtowns-and-infill-locations>

## ENERGY: ENCOURAGE EMPLOYMENT GROWTH NEAR TRANSIT CONNECTIONS

### Integrated Transit, Land use, and Energy Conservation Planning

- Evaluating Public Transit as an Energy Conservation and Emission Reduction Strategy, Victoria Transport Policy Institute (2017)  
[http://www.vtppi.org/tran\\_climate.pdf](http://www.vtppi.org/tran_climate.pdf)
- Station Area Planning: How to Make Great Transit-Oriented Places, Reconnecting America (2008)  
<http://www.reconnectingamerica.org/resource-center/books-and-reports/2008/tod-202-station-area-planning/>
- Great Corridors, Great Communities, Project for Public Spaces (2008)  
[https://www.pps.org/pdf/bookstore/Great\\_Corridors\\_Great\\_Communities.pdf](https://www.pps.org/pdf/bookstore/Great_Corridors_Great_Communities.pdf)
- Planning Land Use and Infrastructure to Support Industry Clusters, Metropolitan Council (2015)  
<https://metro council.org/News-Events/Communities/Newsletters/Planning-land-use-and-infrastructure-to-support-in.aspx>

### Design Guidelines for Industrial Employment Centers

- Industrial Citywide Design Guidelines: Heavy Industrial, Limited and Light Industrial, Hybrid Industrial & Commercial Manufacturing, Los Angeles Department of City Planning (2011)  
[https://planning.lacity.org/PolicyInitiatives/UrbanDesign/IndustrialDesignGuidelinesHighRes\\_6\\_23\\_2011.pdf](https://planning.lacity.org/PolicyInitiatives/UrbanDesign/IndustrialDesignGuidelinesHighRes_6_23_2011.pdf)

### Funding & Financial Incentive Programs

- A National Review of State, Regional, and Local Programs that Fund Transit-Oriented Development Plans and Projects  
<http://reconnectingamerica.org/inventory/index.php>

### Coordination with Transit Providers

- Linking Transit Agencies and Land Use Decision Making: Guidebook for Transit Agencies, Federal Transit Administration (2002)  
<https://todresources.org/resources/linking-transit-agencies-and-land-use-decision-making-guidebook-for-transit-agencies/>
- National Resources & Technical Assistance for Transit-Oriented Development, Federal Transit Administration  
<https://todresources.org/>
- Why Design Matters for Transit, American Public Transportation Association (2013)  
<https://todresources.org/app/uploads/sites/2/2016/06/why-design-matters.pdf>



