

Transit Oriented and City Center Development

How Land Use Regulations are Being Impacted
by National Travel Trends & Mobility of the Future

Westchester Municipal Planning Federation

March 14, 2018

Jeffrey Smith, P.E., LEED AP

Kimley»»Horn

This Evening's Discussion

- National Trends in Travel
- Regulation's Role in TOD and City Center Development
- Success Stories



National Trends in Travel

Compact Development Is Not New

My Parents' Childhood



My Childhood



What People Want

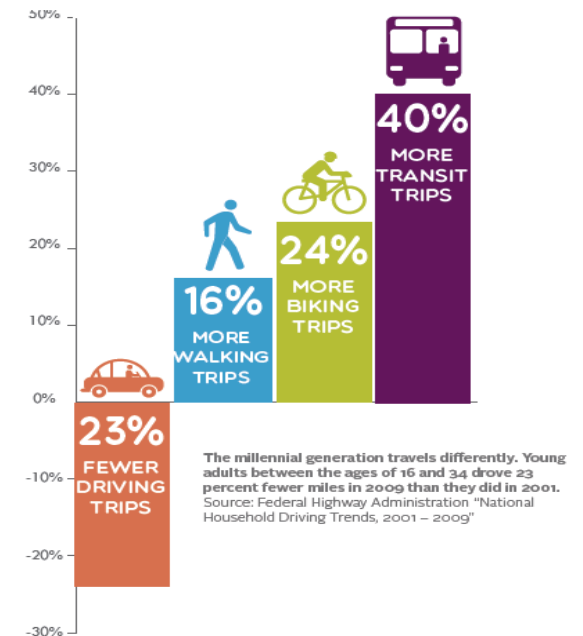
- Return to City Centers
 - Access to culture and community assets
 - Social engagement
 - Avoidance of transportation inconveniences and costs (proximity to work)
 - Affordable housing one of the biggest challenges



Travel Behavior Trends

- Delayed interest in acquiring drivers license
- Desire for more transportation options, willing to eliminate car all-together
 - Walking
 - Biking
 - Transit
- More telecommuting
- Electric vehicle usage
- Technologically savvy society

Change in Millennial Travel Patterns
Between 2001 & 2009



Shared Mobility Explosion

1995

Don't get into cars with strangers

Don't meet people from the internet

Don't trust the internet with your credit card information



2018

Call a complete stranger from the internet for a ride, give them your credit card information and pick up other strangers along the way

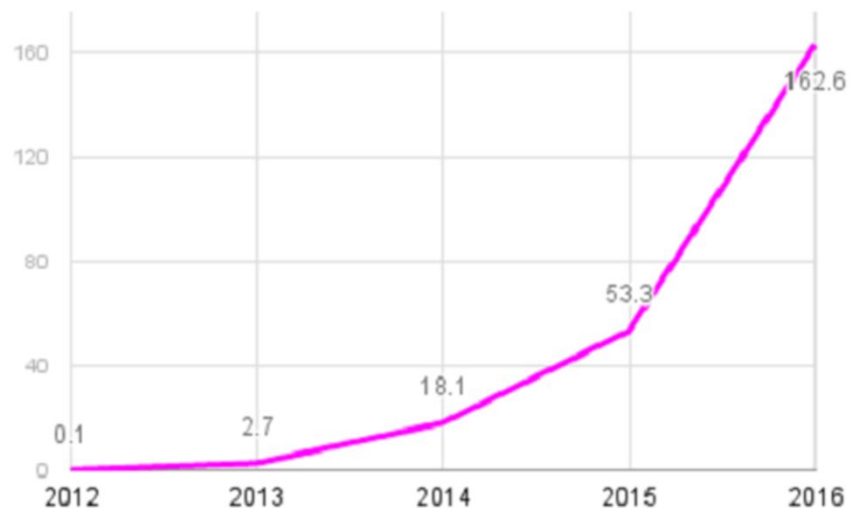
Shared Mobility Explosion

- Ridesharing (TNC)
- Carpool
- Carshare
- Bikeshare
- On Demand Transit
- Ridematching
- Mobility Aggregators
- Vanpool
- Smartphone Parking
- Commute Trip Tracking
- Traffic Aggregators

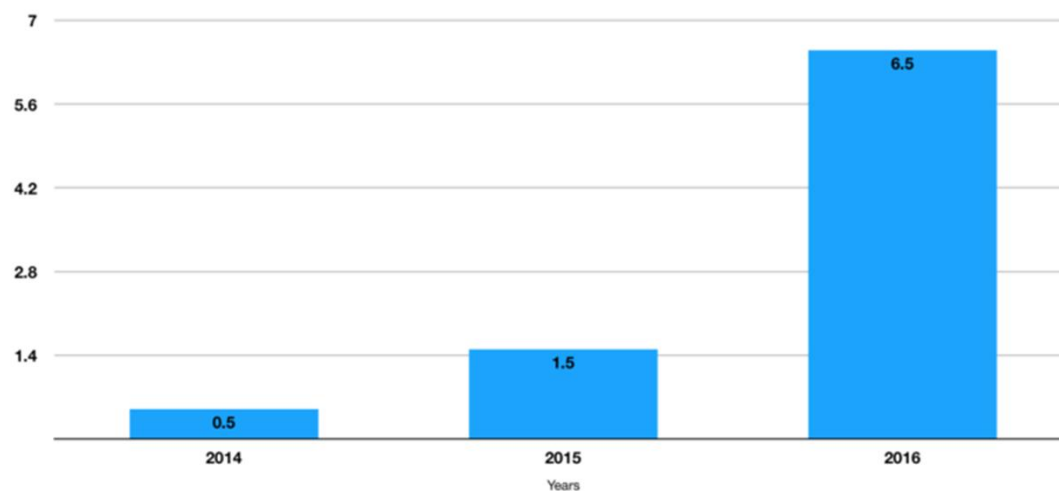


Shared Mobility Explosion

Lyft Annual Completed Rides (Millions)
Since 2012



Uber Annual Net Revenue (Billions)
Since 2014



Impacts to the Built Environment

- Parking demand
 - Less Parking
 - 2 veh households to 1 veh
 - Urban settings
 - Hospitality
 - Residential
 - More Parking
 - Office
- Increased curbside amenities
 - On-street parking
 - TNC zones
 - Bike and carshare
 - On-demand delivery services
- Densification of high quality malls / retail
- Desire for real time information
- Incremental suburbanization due to cheaper, lower stress commutes

Other Potential Future Impacts

- Lower parking demands (upwards of 50%-90%)
 - Conversion of garage parking into storage units
 - Short term EV charging and staging areas for shared vehicles
- Autonomous and connected vehicles
 - Owned or shared
 - Subscription vs. advertising
 - Integration of parking occupancy and pricing (parking facilities not connected, don't exist)
- Parking design
 - Adaptive reuse (e.g. flat floor construction)
 - Smaller spaces
 - Enhanced entry/lobby
- Parking pricing increases
- Reduced need for Billboards
- Drone roof loading docks



Other Potential Future Impacts (Cont'd)

- Future of Transit
 - Competition with autonomous/connected vehicles
- Or
- Enhanced through last mile connectivity
- Threats to lower speed/local service
- Opportunity for transit providers to enhance service





Regulation's Role in Transit Oriented and City Center Development

The Need for Land Use Regulation

Good urban design does not naturally occur,
intervention is needed

Pedestrians and vehicles have competing interests

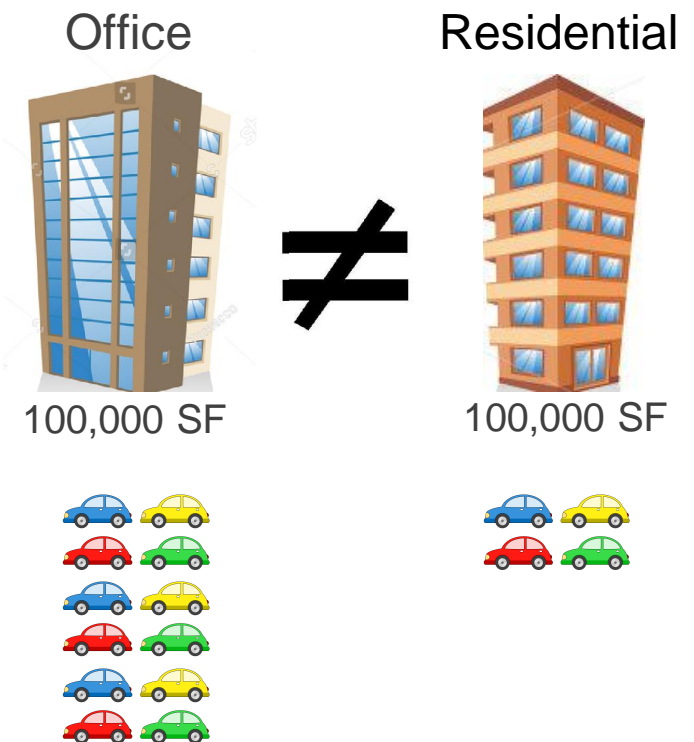
Regulatory Methods

- Form based code (Unified Development Code)
- Comprehensive Development Plans
- Overlay districts
- Design guidelines
- Density driven master plans
- Many others...

Most Important – Regulations should be prescriptive and expected, but not overly complicated

It Can Be Hard...

- Lack of control (private ownership)
- Community opposition
- Dispelling traffic myths
 - ITE trip generation methodologies



The Goldilocks Solution

- Plan for the right amount of parking
 - Off-site parking (e.g. park-and-ride)
 - On-site parking (e.g. shared parking)
- Parking Management
 - Ownership
 - Pricing
 - Policies / Enforcement
- Right mix of land uses
- Set the buildings correctly
- Appropriate driveway and roadway design
- Cooperation between property owners



Popular Zoning Trends

- Parking Supply
 - Simplification of the code
 - Unbundling parking
 - Zero parking requirements near transit
 - Minimums and maximums (lender challenges)
 - Incentives for providing public parking in private facilities (e.g. density bonus)
- Shared parking arrangements and incentives
- Limited surface lots
- Municipal owned parking and in lieu parking payments

Popular Zoning Trends (Cont'd)

- Parking Design
 - Screening and visibility
 - 1st floor retail
 - Lowered or no parking minimums
 - EV charging stations
 - Priority parking (e.g. carpool)
 - Impervious parking design requirements
- Multimodal Considerations
 - Planning for 0% traffic growth
 - Bike lanes, paths and racks
 - Walking paths
 - Showers and lockers
- New Streets and Connectivity
- Affordable Housing Requirements

Popular Zoning Trends (Cont'd)

- Transportation Demand Management
 - Participation in TMA
 - Mobility concierges
 - Transit subsidies
 - Flexible work hours
 - Shared mobility
 - Annual monitoring

TRANSPORTATION DEMAND MANAGEMENT QUICK GUIDE: An Introduction to Strategies and Plan Development

Kimley»Horn
Expect More. Experience Better.

September 2014

TRANSPORTATION DEMAND MANAGEMENT QUICK GUIDE

STRATEGIES, EFFECTIVENESS, AND RELATIVE COSTS

The following table provides actions aimed at impacting travel behavior by reducing the number of single-occupant vehicle trips. The table also provides guidance on which strategy is likely to influence behavior in the most known as the Employee Vehicle Trip Reduction (EVT) impact, as well as relative cost.

TIME STRATEGY	EMPLOYEE/INSTITUTIONAL SUPPORT ACTIONS	DESCRIPTION	POTENTIAL TO AFFECT BEHAVIOR	RELATIVE COST TO IMPLEMENT
Transportation Concierge	On-site professional provides personalized for planning and commuter assistance.	On-site professional provides personalized for planning and commuter assistance.	High	High
On-Site Services/Assistance	On-site professional provides personalized for planning and commuter assistance.	On-site professional provides personalized for planning and commuter assistance.	High	High
Employer-Assisted Transit Service	Employer provides transit passes or subsidies for transit passes.	Employer provides transit passes or subsidies for transit passes.	High	High
Car-Sharing	Employer provides car-sharing program or subsidies for car-sharing.	Employer provides car-sharing program or subsidies for car-sharing.	High	High
On-Site Mobility Concierge	On-site professional provides personalized for planning and commuter assistance.	On-site professional provides personalized for planning and commuter assistance.	High	High
TDM Branding and Marketing	Employer provides branding and marketing for TDM program.	Employer provides branding and marketing for TDM program.	High	High
New Hire Orientation	Employer provides new hire orientation for TDM program.	Employer provides new hire orientation for TDM program.	High	High
Multi-Modal Navigation Tools	Employer provides multi-modal navigation tools for TDM program.	Employer provides multi-modal navigation tools for TDM program.	High	High
Address Security Concerns	Employer provides security concerns for TDM program.	Employer provides security concerns for TDM program.	High	High
Relocation	Employer provides relocation for TDM program.	Employer provides relocation for TDM program.	High	High
Family Promotions	Employer provides family promotions for TDM program.	Employer provides family promotions for TDM program.	High	High
Guaranteed Ride Home	Employer provides guaranteed ride home for TDM program.	Employer provides guaranteed ride home for TDM program.	High	High
Preferred Parking	Employer provides preferred parking for TDM program.	Employer provides preferred parking for TDM program.	High	High
Storage, Lockers, Changing Facilities, and Showers	Employer provides storage, lockers, changing facilities, and showers for TDM program.	Employer provides storage, lockers, changing facilities, and showers for TDM program.	High	High
Lobby Amenities	Employer provides lobby amenities for TDM program.	Employer provides lobby amenities for TDM program.	High	High
Bicycle Loan Programs	Employer provides bicycle loan programs for TDM program.	Employer provides bicycle loan programs for TDM program.	High	High
Site Design	Employer provides site design for TDM program.	Employer provides site design for TDM program.	High	High
Alternative Work Arrangements	Employer provides alternative work arrangements for TDM program.	Employer provides alternative work arrangements for TDM program.	High	High
Telecommuting	Employer provides telecommuting for TDM program.	Employer provides telecommuting for TDM program.	High	High
Flexible Work Hours	Employer provides flexible work hours for TDM program.	Employer provides flexible work hours for TDM program.	High	High
Staggered Work Hours	Employer provides staggered work hours for TDM program.	Employer provides staggered work hours for TDM program.	High	High
Compressed Work Week	Employer provides compressed work week for TDM program.	Employer provides compressed work week for TDM program.	High	High

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Supportive Agency Actions

- Land control
 - Public vs private
- Public infrastructure investments
 - Parking
 - Parks
 - Streetscapes
 - Utilities
 - Stormwater management
- Appropriate parking pricing and management



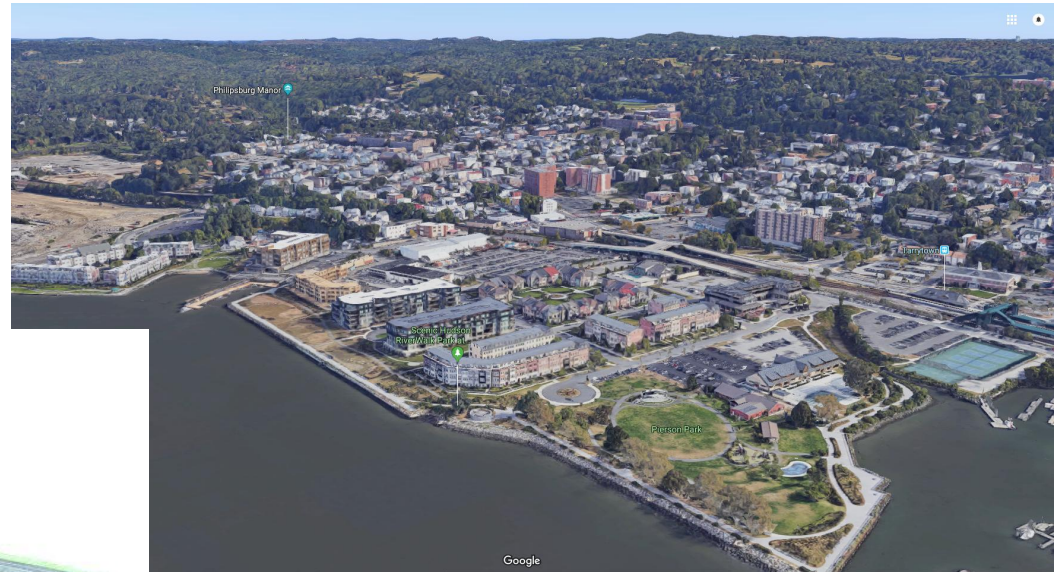
TOD and City Center Success Stories



Local Examples

Village of Tarrytown

- Infill Development



City of Yonkers

- Civic Space
(Van Der Donck Park)



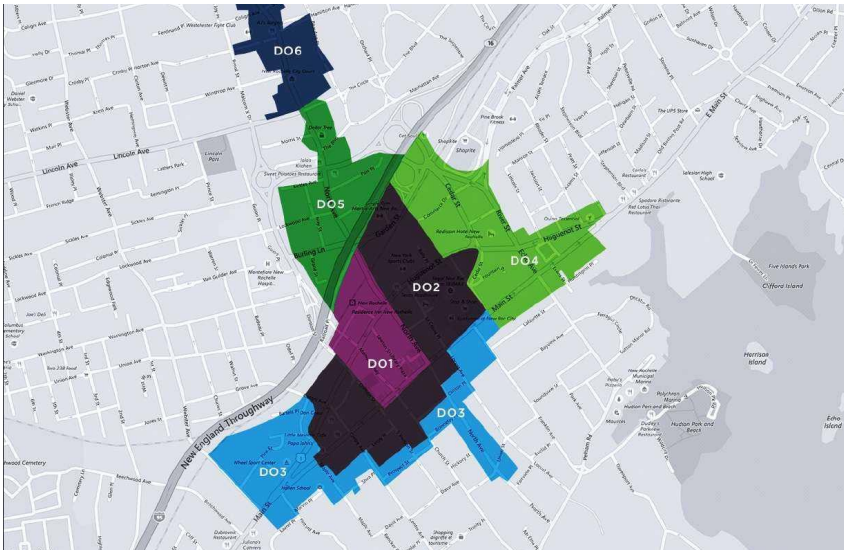
City of White Plains

- Infill Development



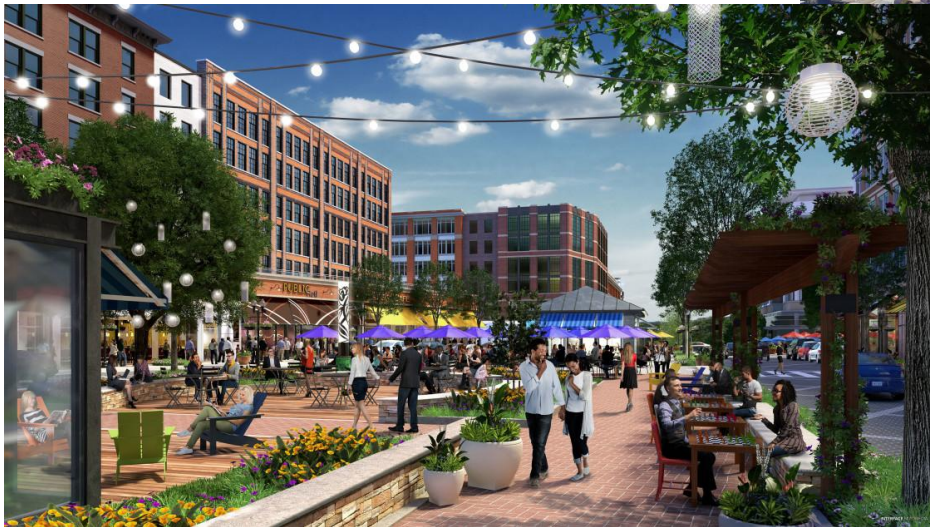
City of New Rochelle

- Zoning Overlay



Village of Port Chester

- Form Based Code





National Examples

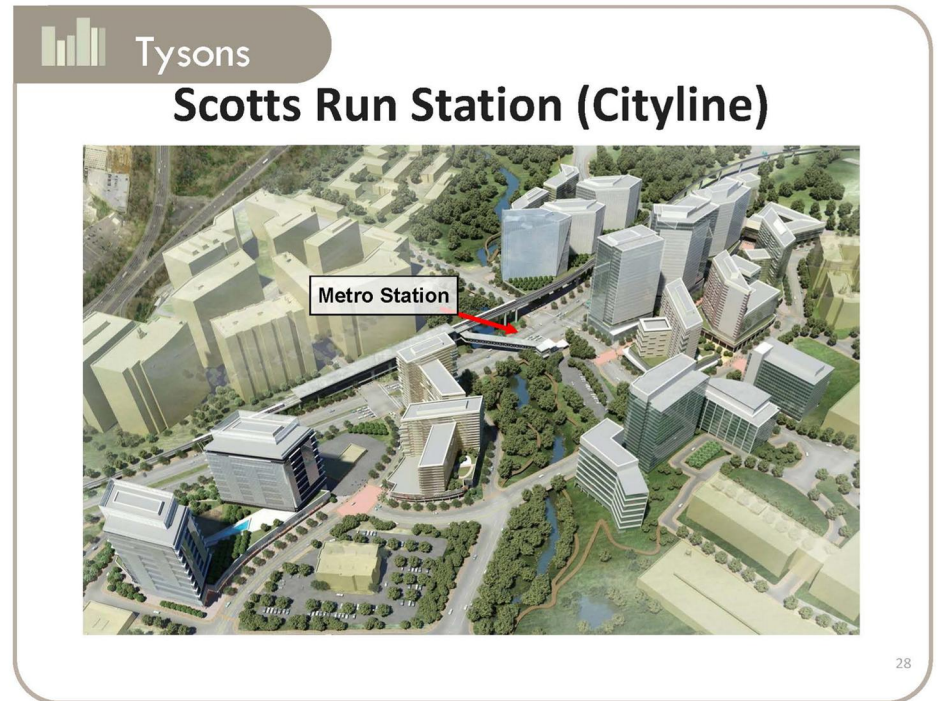
Metropolitan Atlanta Rapid Transit Authority (MARTA) TOD Guidelines

- No surface parking
- Shared parking (e.g. park-and-ride with residential)
- No car-centered uses (e.g. drive throughs)
- Bikeshare and bike parking
- Carshare
- Kiss-and-ride
- Local shuttle service
- Public Private Partnerships
- Parking decks with ground level use
- First and last mile connectivity TNC partnership
- Affordable housing requirements



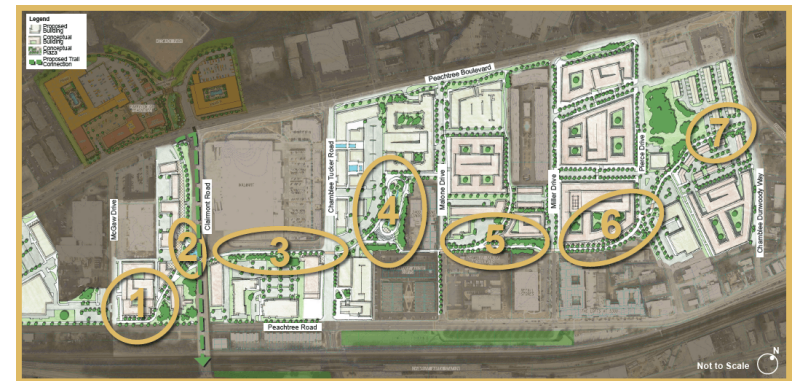
Tysons Corner, VA

- Multi decade planning approach
- Orange Line extension along I-66
- Trip monitoring and TDM goals



Chamblee, GA

- Zoning rewrite
- Rails to trails
- Civic green space
- EV charging stations
- New street requirements (block size <600')
- Time limited and increased on-street parking



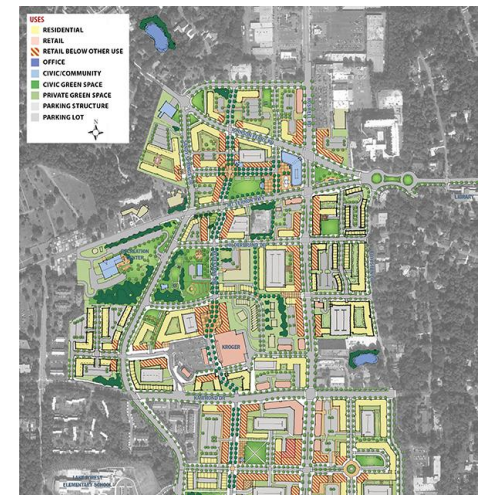
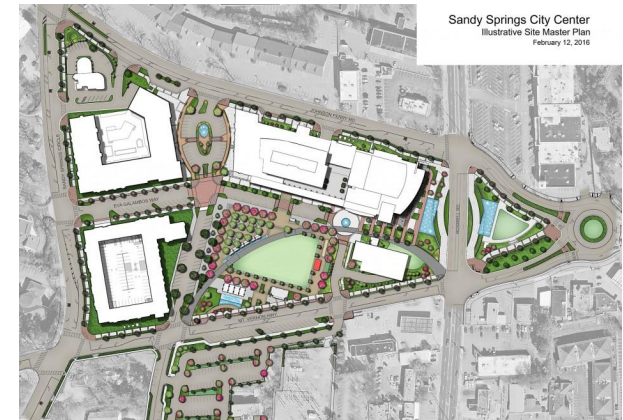
Alpharetta, GA

- Master planning process
- Zoning rewrite
- Public resistance
- Shared parking
- Traffic considerations
- Civic space



Sandy Springs, GA

- Form based code
- Public perception
- Underground shared parking
- Multi-use trail and civic space



Atlantic Station, GA

- Bike share
- Transit passes
- Transit shuttle connection
- Transportation Management Association participation
- Annual mode split monitoring and reporting



Summary of Success Stories

- Leadership and staff buy-in
- Vision and tools developed through intentional planning effort
- One size does not fit all
- Prescriptive process
- Pedestrian #1 priority
- Public Investment
- Community space
- Bicycle and pedestrian amenities
- Limited / shared parking
- Alignment of parking policy with mobility goals

Potential Outcomes

- Increased property values
- New jobs, residents and visitors
- Increased tax base
 - Leverage for state and federal grants
 - Means to pay for aging infrastructure
- Active lifestyles
- Lower carbon emissions and energy consumption
- Community brand and pride
- Lower crime rates

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